

## The Role of Artificial Intelligence in Promoting Entrepreneurship Among People with Disabilities

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### Abstract:

This article examines the role of Artificial Intelligence (AI) in promoting entrepreneurship and economic empowerment among people with disabilities through a descriptive-analytical review of the literature. It highlights how AI technologies can enhance accessibility, develop entrepreneurial skills, improve business decision-making, and expand access to digital markets. The study also analyzes the technological, economic, legal, and ethical challenges that hinder the effective adoption of AI, particularly in developing countries. It concludes that AI has significant potential to foster inclusive entrepreneurship and economic independence, provided that supportive policies, accessible technologies, digital skills development, and appropriate institutional frameworks are established.

**Keywords:** Artificial Intelligence; Entrepreneurship; People with Disabilities; Economic Empowerment; Digital Accessibility.

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## **1. Introduction**

The level of attention given to people with disabilities is widely regarded as a key indicator of a nation's progress, civilization, and commitment to fundamental human rights. Ensuring their full participation in society requires comprehensive and inclusive support. The right to a free and dignified life is not a privilege or an act of charity but a fundamental human right protected by international laws and human rights conventions. Accordingly, educational and social institutions have the responsibility to provide safe, accessible, and inclusive environments that uphold human dignity, foster independence, and enable people with disabilities to realize their full potential without discrimination or exclusion.

The scope of human rights and social aspirations extends beyond the provision of traditional healthcare and educational services. It also encompasses the right to work, employment, entrepreneurship, and business creation, which constitute essential pillars of the economic and social empowerment of people with disabilities. These opportunities transform them from individuals who may depend on others into productive and active contributors to sustainable development. In this regard, integrating the concepts of self-employment and entrepreneurship into the philosophy of early rehabilitation for people with disabilities is of paramount importance. Such integration helps cultivate a generation capable of innovation and of establishing and managing small-scale, intelligent enterprises that address their unique needs while aligning with the evolving knowledge-based economy.

Within this context, and in light of the ongoing digital revolution and the rapid advancement of modern technologies, the integration of Artificial Intelligence (AI) applications into entrepreneurship has become a strategic necessity for achieving digital empowerment and maintaining competitiveness. Intelligent algorithms and advanced virtual environments provide unprecedented tools for market analysis, service personalization, and decision support, enabling people with disabilities and the professionals responsible for their rehabilitation to manage entrepreneurial ventures with greater efficiency, precision, and effectiveness. The incorporation of AI into entrepreneurial ecosystems opens broad opportunities for innovation, empowerment, and economic participation by overcoming many traditional physical and psychological barriers. Technology thus becomes a reliable bridge toward financial independence, professional autonomy, and sustainable inclusion.

Nevertheless, this ambitious and forward-looking approach is accompanied by significant challenges that may hinder its practical implementation. Among the most pressing issues are the persistent digital divide among institutions, the high financial costs associated with AI technologies and

smart entrepreneurial systems, and the legal and ethical concerns surrounding the protection of children's personal data and clinical privacy. Additional obstacles include institutional resistance to change, inadequate technological infrastructure, and a shortage of qualified professionals capable of integrating special rehabilitation with modern entrepreneurial competencies. Furthermore, concerns related to technological dependency and the absence of comprehensive regulatory frameworks continue to pose serious challenges. These issues underscore the need for in-depth analytical and comparative research to identify these barriers and develop practical strategies for overcoming them, thereby ensuring the effective use of AI in promoting entrepreneurship and economic empowerment for people with disabilities.

## **2. Research Problem**

The modern era is characterized by unprecedented transformations driven by the digital revolution and the rapid advancement of Artificial Intelligence (AI), which is reshaping educational, social, and economic sectors. Within this context, special education and the rehabilitation of people with disabilities have become key areas for AI integration, particularly for individuals with Autism Spectrum Disorder (ASD) and intellectual disabilities, who face significant challenges in social interaction, information processing, and independent living (Mahmoud, 2024, n.p.). Although recent research emphasizes the potential of intelligent systems, virtual environments, and adaptive learning to improve rehabilitation outcomes, a considerable gap remains between theoretical advances and practical implementation in rehabilitation centers (Makari & Ajwa, 2023). This gap is primarily attributed to inadequate technological infrastructure, limited institutional digital readiness, and the lack of systematic programs integrating AI into entrepreneurship and economic empowerment initiatives.

Attention to people with disabilities—particularly children and individuals with developmental disorders, intellectual disabilities, and various physical and health impairments—is widely regarded as a key indicator of a society's level of development and its commitment to social justice and human rights. Contemporary perspectives no longer limit disability services to medical treatment or primary care; instead, they embrace a rights-based and developmental approach aimed at ensuring the full participation of individuals with disabilities in economic, social, and professional life. Within this framework, economic empowerment, employment, and entrepreneurship have become fundamental pillars for promoting independence and self-reliance, in alignment with the Sustainable Development Goals (SDGs), which advocate that no group should be excluded from opportunities for development and productivity (Kharchi & Zawawi, 2021).

This shift represents a fundamental transformation in the philosophy of disability support, moving from a traditional welfare model toward one centered on economic and social empowerment. Nevertheless, in many developing countries, this transformation remains largely theoretical. People with disabilities continue to encounter limited employment opportunities, insufficient economic inclusion programs, and a lack of policies capable of transforming individual capabilities into sustainable entrepreneurial ventures. These challenges underscore the urgent need to identify innovative mechanisms that can overcome such barriers.

Support for people with disabilities is therefore no longer confined to providing healthcare, psychological assistance, or educational services. It now extends to ensuring their right to participate in the labor market, encouraging them to establish small and medium-sized enterprises (SMEs), and fostering entrepreneurial mindsets as a pathway toward economic independence and improved quality of life. This orientation has become increasingly important given the limited availability of traditional employment opportunities. Entrepreneurship offers a strategic alternative that enables individuals with disabilities to capitalize on their abilities while benefiting from modern technological tools that reduce disability-related constraints (Hamad Hadoth, 2026, p. 104; Makari & Ajwa, 2023).

Recent literature further emphasizes that entrepreneurship for people with disabilities is not merely a means of generating income; it also serves as a mechanism for enhancing self-confidence, strengthening self-efficacy, and promoting social inclusion. However, the success of entrepreneurial initiatives depends on the availability of an integrated support system that includes training, financing, technical assistance, and continuous mentoring. Unfortunately, these essential components remain underdeveloped in many developing countries, resulting in comparatively lower success rates for entrepreneurial ventures initiated by people with disabilities.

Against the backdrop of the accelerating digital revolution and the remarkable progress in Artificial Intelligence, new opportunities have emerged to redefine entrepreneurship for people with disabilities. AI technologies—including machine learning algorithms, intelligent agents, virtual environments, and smart assistance systems—offer significant potential for personalizing training, simplifying administrative procedures, analyzing markets, preparing business plans, and supporting informed decision-making. These capabilities reduce many of the barriers that have traditionally hindered the participation of people with disabilities in entrepreneurial activities and enhance their competitiveness within the contemporary digital economy (Mahmoud, 2024, n.p.).

Despite these unprecedented technological advantages, the application of AI to support entrepreneurship among people with disabilities remains an emerging field of research, particularly within the Arab world. Existing studies rarely examine the direct relationship between AI, entrepreneurship, and the economic empowerment of people with disabilities. Most research has focused primarily on the educational or therapeutic applications of AI, while its economic and entrepreneurial dimensions have received comparatively little scholarly attention. This represents an important research gap that calls for further scientific investigation.

Moreover, despite the promising capabilities of AI, its implementation in entrepreneurship presents several complex challenges. These challenges are associated not only with the nature of different disabilities but also with the cognitive and behavioral characteristics of certain disability groups. Additional obstacles include the complexity of AI systems, the requirement for advanced digital skills that may not be possessed by individuals with disabilities or by those responsible for their training, and the fact that many AI applications continue to be designed primarily for the general population without adequately considering the accessibility needs of users with diverse disabilities. Consequently, the ability of people with disabilities to fully benefit from these technologies remains limited (Abu Zeid & Nasrat, 2026).

This situation reveals an important paradox: technologies that are intended to reduce the gap between people with disabilities and the labor market may, if not designed according to principles of accessibility and universal design, become new sources of digital exclusion. This reality necessitates a reconsideration of technological policies to ensure that they accommodate the cognitive and functional characteristics of individuals with disabilities and guarantee equitable, user-friendly access to AI-enabled services.

These challenges are particularly pronounced in developing countries, where weak digital infrastructure, the high cost of advanced technologies, limited financial resources, and shortages of AI specialists hinder the effective integration of AI into entrepreneurial ecosystems. Furthermore, government initiatives supporting entrepreneurship among people with disabilities remain limited. The persistent digital divide between developed and developing countries further exacerbates disparities in access to AI technologies, thereby reducing opportunities for the economic empowerment of people with disabilities and limiting the translation of technological innovation into tangible developmental outcomes (Latrash, 2024, p. 367).

The persistence of these barriers threatens to widen existing developmental and economic inequalities, restricting the benefits of Artificial Intelligence to technologically advanced societies. Consequently, the successful integration of AI into entrepreneurship depends not only on the availability of advanced technologies but also on the existence of supportive legislative, financial, and institutional environments, as well as the promotion of digital literacy and the development of human capital capable of effectively utilizing AI-driven technologies.

Based on the foregoing discussion, the central research problem of this study emerges from the existence of a clear gap between the considerable theoretical potential of Artificial Intelligence (AI) to promote entrepreneurship and economic empowerment among people with disabilities and the limited practical implementation of these capabilities, particularly in developing countries that face numerous technological, institutional, and economic constraints. The problem is further reflected in the absence of a comprehensive scientific framework that explains the relationship between AI applications and entrepreneurship for people with disabilities, while identifying the mechanisms through which these technologies can evolve from mere digital tools into effective instruments for economic inclusion and sustainable development.

Accordingly, this study extends beyond simply describing the advantages of AI or outlining the challenges encountered by people with disabilities. Instead, it seeks to analyze the complex relationship between AI technologies and economic empowerment from an entrepreneurial perspective, while identifying the existing theoretical and empirical research gaps in this field. In doing so, the study aims to contribute to the development of a conceptual framework that can inform future research and assist policymakers in designing strategies and policies that promote digital entrepreneurship and economic inclusion for people with disabilities.

From this perspective, the main research question guiding this study is formulated as follows:

To what extent can the use of Artificial Intelligence applications enhance entrepreneurship and economic empowerment among people with disabilities, and what are the major technological, institutional, and legislative challenges that limit the effectiveness of this role, particularly within the context of developing countries?

### **3. Significance of the Study and Its Scientific and Practical Justifications**

This study derives its significance from its direct intersection with the principles of human rights, sustainable development, and the transition toward a knowledge-based economy. Its importance can be highlighted through the following dimensions:

- **Human Rights and Social Inclusion Dimension:** The growing attention devoted to people with disabilities is founded on the principle that the right to a free and dignified life is neither a privilege nor an act of charity, but a fundamental constitutional and internationally recognized human right. International conventions and human rights frameworks oblige governments and institutions to create inclusive and accessible environments that safeguard human dignity and ensure the active participation of people with disabilities in all aspects of society (Kharchi & Zawawi, 2021).
- **Economic Empowerment and Entrepreneurship Dimension:** Contemporary approaches extend beyond the traditional provision of healthcare and psychological support to encompass the right to employment, self-employment, entrepreneurship, and the establishment of small and smart business ventures. This perspective seeks to transform people with disabilities from passive recipients of assistance into productive contributors to economic development by enabling them to establish and manage entrepreneurial projects supported by intelligent technologies that accommodate their individual capabilities (Makari & Ajwa, 2023; Hamad Hadoth, 2026, p. 104).
- **Technological and Strategic Dimension:** Artificial Intelligence represents a powerful strategic tool for overcoming many of the physical, psychological, and cognitive barriers encountered by people with disabilities. Through adaptive algorithms, intelligent agents, augmented reality (AR), virtual reality (VR), and other AI-driven technologies, it becomes possible to design personalized training pathways and entrepreneurial programs tailored to each individual's learning pace, cognitive characteristics, and functional abilities. These technologies contribute significantly to improving accessibility, enhancing entrepreneurial competencies, and fostering economic independence (Latrash, 2024, p. 370).

### **4. Objectives of the study**

This article aims to achieve the following interconnected scientific and practical objectives:

- To examine the theoretical foundations and the role of Artificial Intelligence (AI) in promoting entrepreneurship among people with disabilities.

- To analyze how rehabilitation and support programs can be integrated with self-employment skills and digital entrepreneurship to foster sustainable business ventures and enhance financial and professional independence.
- To identify the major technological, financial, legislative, ethical, and data privacy challenges that hinder the effective integration of AI into entrepreneurship for people with disabilities and to examine their implications for successful AI-driven entrepreneurial initiatives.

### **5. Research Methodology and Analytical Framework**

To achieve the objectives of this study and address its research questions with scientific rigor and in accordance with established academic standards, the article adopts the descriptive-analytical approach, which is considered one of the most appropriate research methodologies for examining complex educational and social phenomena.

The descriptive-analytical method facilitates a comprehensive and systematic examination of the current state of Artificial Intelligence (AI) applications in rehabilitation centers serving people with disabilities. It also enables an in-depth analysis of the requirements for integrating AI technologies into entrepreneurial and business development pathways, thereby providing a clearer understanding of both the opportunities and the challenges associated with their implementation (Kharchi & Zawawi, 2021).

In addition, the study is grounded in a literature review approach, involving the systematic examination, analysis, and critical evaluation of previous research, theoretical frameworks, and empirical studies related to special education, disability rehabilitation, Artificial Intelligence, and entrepreneurship. Particular attention is given to psychological and educational theories that inform the support and empowerment of people with disabilities. This review serves to identify existing knowledge gaps, synthesize key findings, and establish a robust theoretical foundation for the study. Furthermore, it supports the development of practical recommendations and a conceptual framework that can guide future policies, rehabilitation programs, and AI-driven entrepreneurial initiatives aimed at promoting the economic empowerment of people with disabilities (Latrash, 2024, p. 366; Makari & Ajwa, 2023).

### **5. Theoretical and Conceptual Framework of Artificial Intelligence and Entrepreneurship for People with Disabilities**

#### **5.1 Concept of Artificial Intelligence and Its Major Applications**

Artificial Intelligence (AI) is defined as an advanced technological system capable of simulating human cognitive processes such as learning, reasoning, decision-making, and problem-solving. Through

sophisticated computational models and algorithms, AI enables machines to perform tasks that traditionally require human intelligence, thereby enhancing efficiency, accuracy, and automation across various domains.

In the context of disability rehabilitation and support services, AI encompasses a wide range of applications, including machine learning algorithms, intelligent agents, virtual environments, and smart assistive systems, all of which contribute significantly to personalizing training programs, simplifying administrative processes, and improving learning and rehabilitation outcomes (Mahmoud, 2024, n.p.). Furthermore, AI applications extend to virtual reality (VR) technologies and rehabilitation robots specifically designed to address the cognitive, sensory, and social interaction challenges experienced by people with disabilities, thereby enhancing their independence and participation in educational and professional settings (Mahmoud, 2024, n.p.).

## **5.2 Concept of Entrepreneurship for People with Disabilities**

Entrepreneurship for people with disabilities represents a strategic pathway toward achieving financial independence, social inclusion, and professional self-reliance. Contemporary perspectives no longer view individuals with disabilities solely through the lens of healthcare or social welfare. Instead, emphasis has shifted toward economic empowerment, employment, and entrepreneurial participation as essential components of inclusive development (Kharchi & Zawawi, 2021).

Entrepreneurship enables individuals with disabilities to capitalize on their talents, skills, and personal capabilities by establishing and managing small and medium-sized enterprises (SMEs). Supported by modern digital technologies, these entrepreneurial ventures help reduce disability-related barriers while fostering creativity, innovation, self-confidence, and an entrepreneurial mindset. Consequently, entrepreneurship serves not only as a source of income but also as a mechanism for enhancing social participation and improving quality of life (Hamad Hadoth, 2026, p. 104; Makari & Ajwa, 2023).

## **5.3 Economic Empowerment of People with Disabilities Through Entrepreneurship and Self-Employment**

Contemporary development literature no longer conceptualizes disability merely as a social welfare issue; rather, it is increasingly understood within a rights-based and economic framework that promotes the full participation of people with disabilities in all aspects of society, particularly in employment and economic activities. Economic empowerment has become a fundamental strategy for facilitating this

transition by enabling individuals with disabilities to move from dependence on social assistance toward productive economic participation through employment opportunities, vocational training, and entrepreneurial initiatives tailored to their individual abilities and potential (International Labour Organization [ILO], 2015, pp. 5–7).

Entrepreneurship and self-employment constitute strategic alternatives for promoting economic independence, particularly in light of the persistent barriers that continue to limit the full integration of people with disabilities into traditional labor markets. These barriers include restricted employment opportunities, inaccessible work environments, and negative societal perceptions regarding the productive capacities of individuals with disabilities. According to the International Labour Organization, supporting people with disabilities in establishing their own businesses can serve as an effective means of enhancing financial independence, developing professional competencies, and promoting economic and social participation, provided that adequate support systems—including training, financial assistance, and technical guidance—are available (International Labour Organization, 2015, pp. 12–14).

International research further emphasizes that small and medium-sized enterprises (SMEs) play a pivotal role in fostering the social inclusion of people with disabilities. Beyond generating sustainable income, entrepreneurial ventures contribute to the development of professional identity, increased self-confidence, and a stronger sense of autonomy. Likewise, the World Bank argues that the economic inclusion of people with disabilities requires a shift from a welfare-based model toward an investment-oriented model focused on human capabilities. This transformation involves eliminating barriers to labor market participation while ensuring equitable access to technology, innovation, financial services, and entrepreneurial opportunities (World Bank, 2022, pp. 34–36).

Within this context, integrating entrepreneurship with modern digital technologies—particularly Artificial Intelligence—creates new opportunities for people with disabilities to establish flexible businesses within the digital economy. AI enables entrepreneurs to overcome mobility limitations and workplace accessibility challenges while improving productivity, business management, and market competitiveness. Consequently, economic empowerment should not be viewed merely as the provision of employment opportunities but rather as a comprehensive process that develops individuals' capacity to produce, make informed decisions, manage enterprises, and actively contribute to sustainable economic and social development.

#### **5.4 The Importance of Integrating Artificial Intelligence into Entrepreneurial Ventures**

The strategic importance of integrating Artificial Intelligence into entrepreneurial ventures designed for people with disabilities lies in its capacity to reduce barriers to entry into the digital economy while enhancing business efficiency and competitiveness. AI technologies facilitate market analysis, business planning, administrative automation, customer relationship management, financial forecasting, and data-driven decision-making, thereby enabling entrepreneurs with disabilities to manage their businesses more effectively (Mahmoud, 2024, n.p.).

Moreover, AI-powered technologies contribute to bridging the gap between theoretical aspirations and practical implementation by offering adaptive and personalized solutions that address physical, cognitive, and communication-related challenges. These intelligent systems improve accessibility, strengthen entrepreneurial competencies, increase self-efficacy, and enhance the long-term sustainability of entrepreneurial ventures in an increasingly digital and knowledge-based economy. By promoting innovation, inclusion, and economic resilience, AI serves as a key enabler of digital entrepreneurship and sustainable economic empowerment for people with disabilities (Latrash, 2024, p. 372; Makari & Ajwa, 2023).

#### **6. Artificial Intelligence and Entrepreneurship: Reshaping Business Models and Expanding Entrepreneurial Opportunities**

Artificial Intelligence (AI) is no longer merely a supportive technological tool for business organizations; rather, it has become one of the principal drivers of business model innovation and transformation. AI enables organizations and entrepreneurs to move beyond traditional business models that rely primarily on limited human expertise toward data-driven models characterized by predictive analytics, intelligent automation, and the capacity to adapt rapidly to changing market conditions. Today, entrepreneurial startups increasingly leverage AI technologies to identify emerging investment opportunities, analyze customer behavior, and detect unmet market needs. These capabilities allow entrepreneurs to design products and services that are more closely aligned with consumer preferences, thereby enhancing innovation, competitiveness, and long-term business performance (Iansiti & Lakhani, 2020, pp. 37–40).

Moreover, AI contributes significantly to reducing the costs associated with establishing and operating entrepreneurial ventures by automating numerous activities that traditionally required substantial financial and human resources. These activities include data analysis, digital marketing,

customer relationship management, administrative processes, and internal operations. Such efficiencies are particularly valuable for entrepreneurs who encounter barriers to entering the labor market, including people with disabilities. AI-powered tools facilitate the creation of flexible, digitally based enterprises that minimize the impact of physical, environmental, or organizational constraints while enabling entrepreneurs to manage their businesses more independently and efficiently (Davenport & Ronanki, 2018, pp. 108–111).

In addition, AI provides sophisticated support for entrepreneurial decision-making through its ability to process vast amounts of structured and unstructured data, forecast market trends, assess business opportunities, and evaluate potential risks before investment decisions are made. Consequently, the true value of AI in entrepreneurship extends far beyond the automation of routine tasks. Its greatest contribution lies in strengthening entrepreneurs' strategic capabilities by enabling evidence-based decision-making, fostering innovation, and supporting the development of businesses that are more competitive, resilient, and sustainable within the contemporary digital economy (Iansiti & Lakhani, 2020, pp. 61–64).

Furthermore, AI facilitates the development of highly personalized business strategies by enabling entrepreneurs to understand customer preferences in real time, optimize resource allocation, improve operational efficiency, and rapidly respond to changing market demands. These capabilities are particularly important in the digital economy, where agility, innovation, and data-driven decision-making have become essential determinants of entrepreneurial success.

Accordingly, the integration of Artificial Intelligence into entrepreneurship represents a fundamental shift from conventional business models toward intelligent, data-driven, and innovation-oriented enterprises. This transformation creates substantial opportunities for people with disabilities to establish more autonomous, competitive, and sustainable entrepreneurial ventures that actively participate in the digital economy. However, realizing this potential requires the availability of comprehensive digital training, accessible AI technologies, continuous technical support, and supportive legislative and institutional frameworks that promote inclusive entrepreneurship and ensure equal access to technological innovation.

## **7. Contributions of Artificial Intelligence to Enhancing Entrepreneurship Among People with Disabilities**

The contemporary world is undergoing a profound transformation toward a knowledge-based digital economy, in which Artificial Intelligence (AI) has emerged as a fundamental driver of innovation, productivity, and economic development. Within this context, AI is redefining approaches to disability by shifting the focus from traditional models of medical care and social assistance toward comprehensive models of entrepreneurial empowerment and economic inclusion for people with disabilities (Kharchi & Zawawi, 2021). Through intelligent technologies, AI helps overcome many cognitive, physical, and environmental barriers, enabling individuals with disabilities to maximize their abilities, strengthen their professional independence, and participate more actively in the digital economy. The principal contributions of AI to entrepreneurship for people with disabilities are discussed below.

### **7.1 Improving Access to Employment Opportunities and Markets**

AI-powered digital platforms significantly reduce the geographical and physical barriers that have historically limited the participation of people with disabilities in economic activities. By facilitating remote work, digital commerce, and online entrepreneurship, these technologies enable entrepreneurs with disabilities to access both local and international markets without the need for extensive physical mobility (Makari & Ajwa, 2023).

Moreover, AI-based data analytics and market intelligence tools assist entrepreneurs in identifying consumer preferences, analyzing market trends, detecting unmet customer needs, and evaluating business opportunities with greater precision. These capabilities allow entrepreneurs with disabilities to develop innovative products and services that better match market demands while improving their competitive advantage and long-term sustainability (Mahmoud, 2024, n.p.).

As a result, barriers to entering self-employment and entrepreneurial ecosystems are substantially reduced. Small businesses established by people with disabilities can evolve from locally oriented initiatives into competitive enterprises integrated within global digital value chains. This transformation reinforces their internationally recognized right to employment, economic participation, and a dignified standard of living while promoting social inclusion and equal opportunity (Kharchi & Zawawi, 2021).

### **7.2 Developing Skills and Supporting Entrepreneurial Decision-Making**

Adaptive learning systems and intelligent tutoring technologies represent some of the most valuable AI applications for developing entrepreneurial competencies among people with disabilities.

These systems deliver personalized education and training programs tailored to each learner's cognitive abilities, learning pace, and individual needs, particularly for children and young people with disabilities. Such personalization helps bridge the gap between theoretical instruction and practical skill development within rehabilitation and vocational training centers (Latrash, 2024, p. 374).

AI-powered business support tools also simplify many complex administrative and financial tasks, including strategic planning, accounting, budgeting, financial forecasting, and business management. Consequently, entrepreneurs with disabilities can operate their businesses more efficiently while focusing greater attention on innovation, customer engagement, and business growth (Mahmoud, 2024, n.p.).

Furthermore, AI-based decision support systems analyze large datasets to predict market fluctuations, identify emerging business opportunities, and assess potential risks before critical investment decisions are made. These predictive capabilities provide entrepreneurs—and the professionals who mentor and support them—with evidence-based insights that reduce business uncertainty, improve operational performance, and increase the likelihood of entrepreneurial success (Abu Zeid & Nasrat, 2026).

### **7.3 Supporting Innovation and Economic Independence**

Digital entrepreneurship powered by Artificial Intelligence constitutes a strategic alternative to the limited employment opportunities often available within conventional labor markets. AI enables people with disabilities to transition from dependence on social assistance toward active participation in productive economic activities by creating innovative, technology-driven enterprises that capitalize on their knowledge, creativity, and individual talents (Hamad Hadoth, 2026, p. 104).

Beyond financial benefits, entrepreneurial initiatives supported by AI contribute to rebuilding self-confidence, strengthening self-efficacy, and fostering professional autonomy. These outcomes enhance social integration by empowering individuals with disabilities to participate as independent economic actors rather than passive recipients of assistance (Kharchi & Zawawi, 2021).

However, ensuring the sustainability and scalability of such innovations requires addressing several critical challenges. Governments, educational institutions, and technology providers must work collaboratively to overcome technological, financial, and legislative barriers while establishing comprehensive regulatory frameworks that protect personal data, guarantee digital accessibility, and prevent technological exclusion. Ensuring that AI systems are designed according to principles of universal

accessibility and inclusive innovation is essential for maximizing their benefits for people with disabilities (Makari & Ajwa, 2023; Abu Zeid & Nasrat, 2026).

#### **7.4 The Digital Economy and Digital Entrepreneurship in the Era of Artificial Intelligence**

The global economy is rapidly evolving toward a Digital Economy, in which data, digital technologies, and Artificial Intelligence have become among the most valuable productive assets and sources of competitive advantage. Within this environment, entrepreneurship is no longer determined primarily by financial capital or physical resources. Instead, entrepreneurial success increasingly depends on the effective use of digital technologies to develop innovative products and services, analyze markets, optimize operations, and create flexible business models capable of adapting to rapidly changing economic conditions.

According to the Organisation for Economic Co-operation and Development (2020), digital transformation has given rise to new forms of entrepreneurship centered on digital platforms, open innovation, and big data analytics. These developments have created unprecedented opportunities for individuals and organizations to access global markets with significantly lower entry costs than those associated with traditional business models (pp. 18–21).

Artificial Intelligence is one of the principal drivers of this transformation because of its ability to improve operational efficiency, stimulate innovation, and support strategic decision-making through advanced data analytics and predictive modeling. AI also automates numerous administrative, marketing, and financial functions, allowing entrepreneurs to devote more resources to innovation, product development, and value creation instead of routine operational tasks. As a result, AI substantially enhances the competitiveness, resilience, and sustainability of entrepreneurial ventures within the digital economy (World Economic Forum, 2025, pp. 28–33).

The digital economy is particularly significant for people with disabilities because it enables them to overcome many of the limitations associated with traditional workplaces. Through e-commerce, remote work, digital platforms, cloud computing, and AI-powered applications, entrepreneurs with disabilities can establish and manage businesses while minimizing mobility and accessibility constraints. Consequently, digital entrepreneurship serves as a strategic mechanism for promoting economic inclusion by expanding market access, increasing customer reach, and creating opportunities to establish knowledge-based enterprises that rely more on innovation than on extensive physical or financial resources (Organisation for Economic Co-operation and Development [OECD], 2020, pp. 45–48).

Despite these promising opportunities, realizing the full benefits of the digital economy requires supportive institutional and legislative frameworks. These include strengthening digital skills, improving technological infrastructure, expanding access to advanced digital technologies, and ensuring equitable participation in digital innovation. Therefore, integrating Artificial Intelligence into entrepreneurship should not be viewed merely as a technological upgrade but rather as a structural transformation in economic development that promotes digital innovation, sustainability, and social inclusion in accordance with the Sustainable Development Goals (SDGs) and the principles of a knowledge-based economy.

### **8. Challenges and Future Development Prospects**

Despite the tremendous potential of Artificial Intelligence (AI) to redefine entrepreneurship and promote the economic empowerment of people with disabilities, the practical integration of these technologies into entrepreneurial ecosystems remains accompanied by significant challenges that require careful evaluation and strategic intervention (Mahmoud, 2024, n.p.). These challenges encompass technological, economic, legal, and ethical dimensions, highlighting the need for comprehensive policies and innovative solutions that maximize the benefits of AI while ensuring equitable access and sustainable implementation. The major challenges and future development prospects are discussed below.

#### **8.1 Technological and Economic Challenges**

Several technological challenges stem from the nature of different disabilities and the diverse cognitive, behavioral, and functional characteristics of people with disabilities. Individuals with Autism Spectrum Disorder (ASD), intellectual disabilities, or other cognitive impairments may experience difficulties interacting with sophisticated AI systems that require advanced digital literacy or complex user interfaces. Similarly, many educators, rehabilitation specialists, and support professionals responsible for training these individuals may lack the specialized knowledge required to effectively implement AI-based technologies.

Furthermore, many existing AI applications continue to be designed primarily for the general population without adequately considering the accessibility requirements of users with different disabilities. Consequently, instead of reducing inequalities, poorly designed AI systems may inadvertently create new forms of digital exclusion by limiting the ability of people with disabilities to fully benefit from technological innovation (Abu Zeid & Nasrat, 2026).

Economic barriers are particularly significant in developing countries, where inadequate digital infrastructure, high costs associated with acquiring and maintaining advanced AI technologies, and limited

funding opportunities for entrepreneurial ventures restrict the adoption of AI-based solutions. In addition, shortages of professionals with expertise in Artificial Intelligence, coupled with the limited availability of government programs specifically designed to support entrepreneurship among people with disabilities, reduce the capacity to transform technological innovation into tangible economic and developmental outcomes (Latrash, 2024, p. 369).

## **8.2 Legal and Ethical Challenges**

The integration of Artificial Intelligence into entrepreneurial initiatives for people with disabilities also raises important legal and ethical concerns. One of the primary challenges is the absence of comprehensive legislative and regulatory frameworks that adequately protect the digital rights of people with disabilities while promoting their equitable participation in AI-enabled entrepreneurial environments (Latrash, 2024, p. 377).

Ethical concerns are particularly evident in relation to the collection, storage, and processing of personal and sensitive data. AI systems frequently rely on extensive datasets to deliver personalized services and predictive analytics, making the protection of users' personal information, privacy, and confidentiality especially important for individuals with disabilities.

Moreover, national legislation in many countries remains insufficient in enforcing digital accessibility standards and universal design principles within AI systems and digital platforms. As a result, technology developers and service providers may unintentionally create products that exclude users with disabilities or make access to digital entrepreneurial services unnecessarily difficult, thereby reinforcing technological discrimination rather than promoting inclusion (Abu Zeid & Nasrat, 2026).

## **8.3 Universal Design and Digital Accessibility as Foundations for Preventing Technological Exclusion**

The rapid expansion of digital technologies and Artificial Intelligence has led to increased recognition of digital accessibility as a fundamental principle of social inclusion. Digital accessibility refers to ensuring that all individuals—including people with disabilities—can independently and effectively access, navigate, and use digital technologies, online services, and AI-powered platforms. Participation in the digital society therefore depends not only on the availability of technology but also on whether that technology is designed to accommodate the diversity of human abilities. Consequently, Universal Design has become one of the fundamental principles for achieving digital equity and reducing technological disparities (World Wide Web Consortium [W3C], 2018, pp. 4–6).

Universal Design advocates the development of products, services, and digital environments that are usable by the widest possible range of people without requiring specialized adaptations or modifications. In the context of AI applications for people with disabilities, this principle involves designing intelligent systems that accommodate sensory, cognitive, physical, and communication differences among users. Examples include simplified user interfaces, compatibility with screen readers and speech synthesis technologies, alternative input methods, customizable interaction modes, and adaptive content that responds to individual user needs (United Nations, 2006, pp. 9–10).

Digital accessibility is particularly important for entrepreneurship among people with disabilities because increasing reliance on digital platforms, e-commerce, cloud services, and AI-powered business tools has made access to technology an essential prerequisite for economic participation. If AI applications and digital business platforms are not designed in accordance with recognized accessibility standards, they may shift from being instruments of empowerment to becoming new sources of digital exclusion, limiting the ability of entrepreneurs with disabilities to establish, manage, and expand their businesses within the digital economy (World Wide Web Consortium [W3C], 2018, pp. 12–14).

Accordingly, the successful integration of Artificial Intelligence into entrepreneurship for people with disabilities requires adopting a Universal Design approach from the earliest stages of AI system development. It also requires the active involvement of people with disabilities in the design, testing, and evaluation of AI technologies to ensure that these systems genuinely address their needs and preferences. Inclusive technology should not merely provide assistive tools; rather, it should foster a fair and accessible digital environment that empowers individuals with disabilities to access information, develop entrepreneurial skills, manage businesses independently, and participate fully in economic and social development. Such an approach aligns with the principles of the United Nations Convention on the Rights of Persons with Disabilities (CRPD) and supports the achievement of inclusive, sustainable, and knowledge-based economic growth.

### **9. Recommendations for Enhancing the Use of Artificial Intelligence**

To maximize the potential of Artificial Intelligence (AI) in promoting entrepreneurship and economic empowerment among people with disabilities, the following recommendations are proposed:

- Develop inclusive national technology policies that address the cognitive, sensory, and functional needs of people with disabilities while ensuring compliance with Universal Design principles and internationally recognized digital accessibility standards (Abu Zeid & Nasrat, 2026).

- Establish integrated entrepreneurial support systems that provide specialized training, flexible financing, technical assistance, mentorship, and continuous support to enhance the success and sustainability of entrepreneurial ventures.
- Strengthen collaboration among rehabilitation centers, academic institutions, research organizations, and the technology sector to bridge the gap between research and practice and foster the development of accessible AI solutions (Makari & Ajwa, 2023).
- Expand government initiatives and investment programs that support the integration of AI into entrepreneurship and self-employment projects while reducing the digital divide through improved access to AI technologies, digital infrastructure, and innovation funding, particularly in developing countries (Latrash, 2024, p. 369).

## **10. Conclusion**

This study examined the role of Artificial Intelligence (AI) in promoting entrepreneurship among people with disabilities from human rights, economic, technological, and developmental perspectives. The findings indicate that AI offers significant opportunities to enhance accessibility, personalized learning, entrepreneurial decision-making, and participation in the digital economy, thereby fostering economic empowerment and sustainable inclusion. However, its effective implementation is constrained by technological, institutional, financial, legal, and ethical challenges, particularly in developing countries. Addressing these barriers requires coordinated efforts among governments, educational institutions, technology providers, researchers, and civil society to establish inclusive policies, strengthen digital infrastructure, and ensure that AI serves as a tool for empowerment rather than digital exclusion.

### **Key Findings**

- ✓ Artificial Intelligence plays a strategic role in entrepreneurship. AI technologies—including machine learning algorithms, intelligent agents, virtual environments, and smart assistance systems—provide powerful tools for personalized training, business management, market analysis, and improved access to employment opportunities and digital markets.
- ✓ Entrepreneurship represents an effective pathway to economic empowerment. Entrepreneurial activities enable people with disabilities to establish innovative and sustainable businesses that promote financial independence, self-confidence, and meaningful social inclusion.
- ✓ A substantial gap exists between theory and practice. Despite the recognized potential of AI, many rehabilitation centers and support institutions continue to face inadequate digital infrastructure,

limited technological readiness, and a lack of systematic programs for integrating AI into entrepreneurial development.

- ✓ Multiple barriers continue to hinder implementation. The successful integration of AI is constrained by technological complexity, disability-related accessibility issues, financial limitations, insufficient institutional support, and legal and ethical concerns regarding data protection, privacy, and compliance with universal design and digital accessibility standards. These challenges are particularly severe in developing countries.

### 11. Recommendations

- Modernize national technology policies to accommodate the cognitive and functional diversity of people with disabilities while enforcing Universal Design and digital accessibility standards.
- Establish comprehensive entrepreneurship support systems that provide specialized training, accessible financing, technical assistance, mentorship, and ongoing business development services.
- Strengthen partnerships among rehabilitation centers, universities, research institutions, government agencies, and technology companies to support the implementation of AI-driven entrepreneurial initiatives.
- Expand government investment and innovation programs to promote AI integration in entrepreneurship, reduce digital inequality, and improve access to digital business opportunities for people with disabilities.

### 12. Future Research Directions

Future research should focus on the following areas:

- \* Examining research gaps on the relationship between Artificial Intelligence, entrepreneurship, and the economic empowerment of people with disabilities, particularly in Arab countries.
- \* Developing and evaluating inclusive AI models that address the psychological, cognitive, sensory, and functional needs of people with disabilities while minimizing digital exclusion.
- \* Assessing the impact of legal, ethical, and regulatory frameworks—including data protection, digital accessibility, and AI governance—on the effectiveness and sustainability of AI-enabled entrepreneurship.

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