

# SOCIOECONOMIC EMPOWERMENT OF MARGINALIZED COMMUNITIES THROUGH AI-DRIVEN INTERVENTIONS

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## ABSTRACT

One of the most important issues facing the world today is economic marginality, which demonstrates as restricted market participation, limited access to resources, and ongoing income inequality. Our traditional treatments frequently fall short of offering scalable and long-term solutions that deal with the underlying reasons of marginalisation. The rapid advancement of Artificial Intelligence (AI) presents unprecedented opportunities in bridging the economic gaps through its various targeted data-driven, and sustainable interventions. The capacity of artificial intelligence to analyse large databases makes it possible to precisely identify populations that are neglected which in turn makes resource distribution more efficient. Furthermore, by giving marginalised business owners access to digital payment systems, e-commerce channels, and cross-border trade prospects, AI-powered platforms can lower barriers to market entrance. Sustainability needs to be considered from social and environmental perspectives in addition to economic ones. For example, AI-powered agricultural advice systems can encourage climate-resilient farming methods while increasing small-scale farmer's production. In the same way AI-enabled healthcare solutions can increase workforce readiness by lowering the disease burden in areas that are economically fragile. Artificial intelligence can also improve human agency by providing marginalised individuals with the important resources, networks and information that is actually required to become self-sufficient. This paper further examines the use AI for a diagnostic and prescriptive tool to deal with the issues of economic marginalisation in the heterogeneous population. The structural barriers can be converted into opportunities by incorporating AI into sustainable models that blend the technical innovation with local empowerment tactics. The paper critically assesses the various ethical issues regarding AI like algorithmic bias, data privacy, and the potential for exacerbating already-existing disparities. This study promotes a base for the intellectual discussion and policy formation as well by providing a multifaceted framework for deploying AI-driven sustainable upliftment models in a range of socioeconomic circumstances.

**Keywords:** Artificial Intelligence, Digital inclusion, Economic upliftment, Marginalised communities, Sustainable development.

## I. INTRODUCTION

One of the most enduring worldwide issues of the twenty-first century continues to show economic inequality. The World Bank estimates that more than 700 million people are still living in severe poverty<sup>1</sup>, and millions more are caught in cycles of social exclusion, limited market access, and underemployment. Apart from the lower income the structural disadvantage that limits access to possibilities for meaningful economic engagement as well as to healthcare, education, and financial resources, is often called as economic marginality.<sup>2</sup> The traditional methods of poverty reduction frequently fall short in providing adaptable and long-term solutions. Artificial intelligence's rapid advancement has unmatched opportunities to transform the field of economic empowerment. Its capacity to manage massive databases enables precise marginalised group identification, socioeconomic trend forecasting, and the creation of solutions that are actually affordable. Various applications of AI in this field

<sup>1</sup> World Bank. (2023). Poverty and shared prosperity 2023: Ending poverty on a livable planet. Washington, DC: World Bank. <https://www.worldbank.org/en/publication/poverty-prosperity-and-planet>

<sup>2</sup> United Nations. (2022). World social report 2022: Leaving no one behind in an ageing world. Department of Economic and Social Affairs. <https://desapublications.un.org/publications/world-social-report-2022>

include farming advisory systems, AI-enabled e-commerce solutions that connect small-scale business owners to global markets, the personalised upskilling platforms that prepare marginalised workers for new job markets, AI-powered microfinance tools that provide credit to people without formal collateral and predictive poverty mapping for focused policymaking.<sup>3</sup> These technologies along with providing income, also improve social and environmental sustainability. However artificial intelligence should always be used with caution in economically unstable environments. The uncontrolled implementation of it can lead to various issues such as algorithmic bias, the digital gap and data privacy risks.<sup>4</sup> Therefore an inclusive design with responsible governance and community involvement becomes mandatory to make sure that AI is acting as a unifying force and not a dividing one. This study investigates the possibilities of inclusion of AI into sustainable models for economic growth. It explores the reasons and aspects of economic marginalisation and evaluates AI-powered sector-wide interventions. It examines the ethical and governance issues and also suggests a multi-stakeholder framework for inclusive and scalable economic empowerment.

## II. BACKGROUND OF ECONOMIC MARGINALITY

The idea of marginality appeared in sociology in the early 20th century, especially in Robert E. Park's "marginal man" theory (1928) for the first time. It defines marginality as people or groups that were positioned between two cultures or socioeconomic systems who frequently felt excluded from both.<sup>5</sup> This phrase has also come to refer to institutional disadvantages in decision-making, resource access and involvement in mainstream economic life. Economists like Gunnar Myrdal (1970) extended the use of this concept to explain South Asia's ongoing poverty and social isolation by presenting marginalisation as both a cause and an effect of uneven development.<sup>6</sup> By the late 20th century, the topic of marginality had taken centre stage in discussions of global development. This was often used by international agencies like the United Nations and World Bank to describe communities disadvantaged due to geography, ethnicity, caste, gender, or economic structure.<sup>7</sup>

The various studies in different subjects like political science, human geography and development studies further strengthened its spread. It emphasised the ways in which contemporary market systems and past injustices combine to sustain exclusion. The caste system, tribal seclusion, and long-standing female inequality in India have all contributed to marginalisation. Historically, Scheduled Tribes (Adivasis) experienced economic exclusion because of their distant location and forced relocation from their ancestral lands and they were also denied access to various facilities like education, ownership of property and social mobility. The colonial era also enhanced marginality through plantation economies and exploitative land revenue schemes like the Permanent Settlement. It took advantage of tribal labour without providing fair benefits. Various Constitutional safeguards were also tried for curbing this systemic exclusion. Even after providing such reservations in public employment and education, the socioeconomic gaps still continued to exist. The skilled workers in urban areas disproportionately benefited from globalisation in 1990. The people in rural and informal sectors saw new forms of marginalisation. The government is also working to help marginalised communities with programs like Digital India, Skill India, and Stand-Up India. In spite of this the issues like digital exclusion, climate vulnerability and systemic disparities still prevent equitable participation in economic progress.<sup>8</sup>

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<sup>3</sup> Ahmed, N. (2025). Human-AI collaboration for inclusive growth and sustainable development. In SBS Research Monograph (Chapter 9). SBS Swiss Business School. <https://doi.org/10.70301/SBS.MONO.2025.1.9>

<sup>4</sup> Sadowski, J. (2019). When data is capital: Datafication, accumulation, and extraction. *Big Data & Society*, 6(1). <https://doi.org/10.1177/2053951718820549>

<sup>5</sup> Park, R. E. (1928). Human migration and the marginal man. *American Journal of Sociology*, 33(6), 881–893. <https://doi.org/10.1086/214592>

<sup>6</sup> Myrdal, G. (1970). *Asian drama: An inquiry into the poverty of nations*. New York, NY: Pantheon.

<sup>7</sup> United Nations. (2016). *Leaving no one behind: The imperative of inclusive development*. UN Department of Economic and Social Affairs. <https://www.un.org/esa/socdev/rwss/2016/key-findings.pdf>

<sup>8</sup> Thorat, S., & Dubey, A. (2012). Has growth been socially inclusive during 1993–94–2009–10? *Economic and Political Weekly*, 47(10), 43–53. <https://www.jstor.org/stable/41419932>

### III. UNDERSTANDING THE ECONOMIC MARGINALITY

The economic marginality is the social and economic exclusion of people or groups from full participation in the economic activities of their society. It is not just the result of individual failure but it deeply rooted from societies' structural barriers and systemic inequalities. Therefore it becomes crucial to understand the root causes and dismantling the institutional policy barriers to create an inclusive and equitable economic systems.

#### Causes Of Economic Marginality

The various factors which contribute to economic marginalization of communities are given below:

##### 1. Historical Inequality and Discrimination

Many marginalised groups such as women, Indigenous peoples and ethnic minorities have long been denied access to wealth, land, education and employment due to discrimination. These past disadvantages perpetuate current economic disparities.

##### 2. Unequal Access to Education and Skills Development

Education plays a major role in determining financial potential. Marginalised populations are less prepared to participate in the labour market because they often do not have access to high-quality education and vocational training.<sup>9</sup>

##### 3. Geographic Isolation

People who live in remote and isolated places may have fewer job possibilities. They are equipped with poor infrastructure and less public services because of their physical distance from economic centers (UNDP, 2020).<sup>10</sup> This spatial marginalisation exacerbates economic isolation.

##### 4. Labor Market Discrimination

Disenfranchised people may experience prejudice in employment, compensation and advancement even if they are qualified. Equal economic participation may be hampered by various elements such as unfavourable stereotypes, racial profiling and gender bias.<sup>11</sup>

##### 5. Informal Employment and Job Insecurity

It is more common for marginalised people to work in low-wage, unregulated or precarious jobs with no benefits and minimal legal protections. They are therefore vulnerable to exploitation and economic instability.<sup>12</sup>

#### Structural Barriers to Economic Inclusion

Following are some of the structural barriers that contribute to economic exclusion of the marginalized population:

##### 1. Unequal Distribution of Capital and Resources

Land, finances and technology are examples of productive resources that are frequently skewed in favour of powerful social or economic groups. Underprivileged groups cannot completely participate in entrepreneurial or revenue-generating activities without these resources. It is common for dominant social or economic groups to have a disproportionate amount of access to productive resources like land, credit, and technology. Marginalised communities are unable to fully engage in income-generating or entrepreneurial endeavours without such resources.

##### 2. Policy Gaps and Poor Governance

Poor public policy and governance can exacerbate marginalisation. For instance, the most marginalised populations are not able to receive aid programs due to political will, corruption, or bureaucratic inefficiency (OECD, 2019).<sup>13</sup>

##### 3. Social Exclusion and Stigma

<sup>9</sup> International Labour Organization. (2021). World employment and social outlook: Trends 2021. <https://www.ilo.org/publications/world-employment-and-social-outlook-trends-2021>

<sup>10</sup> UNDP. (2020). Human development report 2020: The next frontier – Human development and the Anthropocene. United Nations Development Programme. <http://hdr.undp.org/en/2020-report>

<sup>11</sup> Pager, D., & Shepherd, H. (2008). The sociology of discrimination: Racial discrimination in employment, housing, credit, and consumer markets. *Annual Review of Sociology*, 34(1), 181–209. <https://doi.org/10.1146/annurev.soc.33.040406.131740>

<sup>12</sup> World Bank. (2018). World development report 2018: Learning to realize education's promise. <https://www.worldbank.org/en/publication/wdr2018>

<sup>13</sup> OECD. (2019). Inclusive growth: The pathway to sustainable development. <https://www.oecd.org/inclusive-growth/>

Social stigma and cultural norms are also some of invisible barriers. Labels given to them like "lazy" or "undeserving" can further discourage their participation, impair self-esteem and exclude marginalised groups from economic institutions.

#### IV. CASE EXAMPLES FROM LOCAL AND GLOBAL CONTEXTS

##### **Case Study 1: Deindustrialisation and Artisan Marginalisation in Colonial India**

India has a long history of economic marginalisation. During the British colonial rule the traditional artisan livelihoods were destroyed by deindustrialisation. Once a thriving sector driven by local handloom weavers, the textile industry saw an impending collapse when British policy brought machine-made items to Indian markets. Millions of skilled artisans were driven into low-productivity agriculture by this systemic displacement, which increased income instability and produced excess rural labour. Industrial employment decreased from 21.1 to 12.9 million between 1900 and 1931, while agricultural employment increased from 71.7 to 100.2 million.<sup>14</sup> These changes were not solely the result of the market; rather, they were planned by unfair colonial trade agreements and predatory pricing schemes that gave preference to British business over Indian labour. One of the earliest prevalent examples of structural economic exclusion in South Asia was the social and economic marginalisation of formerly economically independent craftspeople.

##### **Case Study 2: Educational Marginality Among SC/ST Students in India**

In contemporary India the Scheduled Caste and Scheduled Tribe people continue to experience economic marginalisation. They have restricted access to higher education. Moreover they frequently face enduring obstacles in spite of state-sponsored fellowships and constitutional provisions. According to a 2022 survey, just 14% of SC/ST students could afford college without government assistance and many said they were made fun of for “wasting government money” when they used fellowships to pay for necessities like clothing and food.<sup>15</sup> Their marginalisation is made worse by the bureaucratic challenges of receiving financial aid. It frequently involve intrusive surveillance and delayed disbursements. The psychological effects of navigating such systems while feeling as undeserving, further compound their exclusion from educational and career advancement. To deal with this situation the University Grants Commission in India notified the UGC (Promotion of Equity in Higher Education Institutions) Regulations 2026.<sup>16</sup> The earlier 2012 regulations sought to be replaced with more stringent legally binding mandates of the recent regulations. These regulations provides provisions to prevent discrimination on grounds such as caste, religion, gender, race, place of birth and disability. It aims to improve equity for historically marginalized groups including SC, ST, OBC’s and persons with disabilities. The key provisions of these regulations mandates all universities and colleges in India to establish Equal Opportunity Centres, Equity Committees alongwith broad representation. It also provides helplines for reporting incidents and proactive monitoring mechanisms. In case of any non compliance, the institutional heads would be held accountable with potential penalties, including withdrawal of recognition or funding for that respective institution. However, implementation of the 2026 regulations are currently stayed by the Supreme Court of India on 29 January 2026. Following the legal challenges and widespread protests these are retained till further hearing. Petitioners argued that certain provisions especially the definition of caste-based discrimination limited to SC/ST/OBC groups are vague constitutionally. They are problematic, discriminatory toward general category students and are also susceptible to misuse. The Court observed that the language could lead to social division and legal ambiguity. Therefore it directed that the 2012 anti-discrimination regulations continue to govern HEIs until further orders. A detailed hearing is scheduled for 19 March 2026 to assess the regulations’ validity and enforceability.

<sup>14</sup> Roy, T. (2007). Globalisation, Factor Prices, and Poverty in Colonial India. *Australian Economic History Review*. Retrieved from <https://doi.org/10.1111/j.1467-8446.2006.00197.x>

<sup>15</sup> Bhoi, D., & Lakra, N. R. (2022). Marginality, educational opportunity and access to higher education: Experiences of Scheduled Caste and Tribe students in India. *Contemporary Voice of Dalit*, 14(2). <https://doi.org/10.1177/2455328X221129453>

<sup>16</sup> Ahmad, M. (2026, February 6). India’s new caste bias regulations have resulted in turmoil. *Times Higher Education*. <https://www.timeshighereducation.com/opinion/indias-new-caste-bias-regulations-have-resulted-turmoil>

### **Case Example 3: Nigeria – Informal Economy and Structural Exclusion**

The Nigerian citizens continuously face economic marginalization even after the informal sector accounts for around 50% of the country's GDP and nearly 65% of all jobs.<sup>17</sup> During 1980's there happened a widespread public-sector layoffs. By the Structural Adjustment Programs (SAPs), millions of people were forced into self-employment, petty trade, and casual labour, which drove the rise of the informal sector.<sup>18</sup> The mainstay of urban survival tactics nowadays is made up of market traders, street vendors, and motorcycle taxi drivers etc. They do not often have access to financial systems, health insurance or labour safeguards. In Lagos, for instance, the government's 2020 ban on Okada motorcycles forced tens of thousands of riders to relocate by instantly removing their main source of income. The state authorities crackdowns further expose them to insecurity. In addition, the COVID-19 lockdowns in 2020 disproportionately affected informal workers. They were left without social assistance or savings due to limitations on their ability to move around and engage in street trading. This continued structural exclusion in spite of the industry's economic importance is a prime example of how Nigeria's informal labour force represents systemic economic marginality.

## **V. AI AS AN ENABLER OF ECONOMIC INCLUSION**

### **1. Predictive Analytics for Poverty Mapping**

AI-driven predictive analytics can create high-resolution maps of poverty by utilising a variety of datasets. Various satellite images, mobile phone usage, nocturnal light pollution and socioeconomic indicators can also be used for this purpose. These methods can help to identify areas of poverty in real time without depending entirely on expensive household surveys. For example, using machine learning models using satellite photos taken both during the day and at night, it has been possible to estimate poverty levels in countries such as Thailand and the Philippines, providing previously unheard-of precision for focused actions.<sup>19</sup> AI also surpasses traditional econometric models (like regression or factor analysis) in accounting for the multidimensional nature of poverty across different regions and cultures.<sup>20</sup>

### **2. AI in Microfinance and Credit Scoring**

AI-powered microfinance models can be trained to transform credit availability by empowering lenders to evaluate borrowers without official credit records. This can be done by utilising alternative data sources, including social media activity, transaction patterns, and mobile phone behaviour. These solutions lower default risk and operating expenses while improving lending inclusion and accuracy.<sup>21</sup> For those without traditional credit records, AI techniques have increased credit accessibility by up to 40%. The ethical issues yet includes algorithmic bias, data privacy and regulatory compliance and are therefore continue to be critical concerns.<sup>22</sup>

### **3. Personalized Learning and Upskilling**

Customised AI learning systems can adapt the course content to each student's learning preferences, speed, areas of strength & weakness. These specially designed programs can enhance skill development for marginalized communities. Significant research provide that AI can promote adaptive learning, personalised upskilling pathways and enhanced retention in adult education settings.

### **4. AI-Driven Sustainable Models**

It helps the communities in creation of resource-efficient, sustainable systems like supply chains, waste reduction and energy optimisation. AI-driven environmental monitoring systems (such as the use of satellite imagery to detect plastic pollution or forecast disasters) highlight intelligence of resource management that can promote both ecological and economic well-being.<sup>23</sup>

<sup>17</sup> International Labour Organization. (2020). Informal economy in Africa: A statistical profile. Geneva: ILO.

<sup>18</sup> Meagher, K. (2010). Identity economics: social networks & the informal economy in Nigeria (Vol. 25). Boydell & Brewer Ltd.

<sup>19</sup> Thomas, J. V. (2025). AI is reshaping the fight against poverty (ADB study). Medium.com. [https://medium.com/@zingabera\\_7320/ai-is-reshaping-the-fight-against-poverty-a13a9ead03b9](https://medium.com/@zingabera_7320/ai-is-reshaping-the-fight-against-poverty-a13a9ead03b9)

<sup>20</sup> Additional general reference: Big data and econometric tools for poverty prediction (MDPI review, 2021). Utilities of Artificial Intelligence in Poverty Prediction: A Review.

<sup>21</sup> Omokhoa, H. E., Odionu, C. S., Azubuike, C., & Sule, A. K. (2024). AI-Powered fintech innovations for credit scoring, debt recovery, and financial access in microfinance and SMEs. *Gulf Journal of Advance Business Research*, 2(6), 411–422.

<sup>22</sup> Inter-American Development Bank. (2024). Can AI technologies help expand credit access? Ideas Matter.

<sup>23</sup> Applications of artificial intelligence: Environmental monitoring [Wikipedia]. (2025). In Applications of artificial intelligence.

## 5. AI-Powered E-Commerce and Digital Market Access

These advanced e-commerce platforms can help to open up new markets for micro-entrepreneurs, craftsmen and small producers. Algorithms for personalisation pair products with potential customers, increase discoverability, simplify logistics, allow micropayments and assist small-scale online enterprises all of which significantly increase revenue prospects. AI solutions, can also assist Indian SMEs in better managing inventory. It can promote forecasting customer behaviour and providing personalised e-commerce experiences.<sup>24</sup>

## 6. Employment Matching Platforms

AI-driven employment platforms increase the accuracy of job matching by analysing candidate profiles and job descriptions. It uses machine learning, natural language processing and recommendation algorithms. They can evaluate the talents, job histories, and market demands. After such observation these platforms help to close the unemployment gap by connecting underserved individuals with suitable career opportunities, training programs and microbusiness opportunities.<sup>25</sup>

## 7. Community Health and Workforce Readiness

AI solutions can help in enhancing community health and workforce readiness. It includes various models like telehealth chatbots, skill-assessment platforms and disease outbreak prediction analytics. These platforms provide marginalised populations better navigate health systems, prepare for labour transitions and reskill for new job markets.

## 8. AI for Social Entrepreneurship and Green Businesses

Through promoting innovation in business models, improving effect measurement, optimising resource use and scaling long term solutions, artificial intelligence can stimulate social entrepreneurship. In order to assist eco-friendly value creation, green-tech businesses are integrating AI into their strategies and using it to develop sustainable business models that optimise environmental impact. According to a new study, AI helps European environmental businesses innovate their business models.<sup>26</sup>

# VI. LEGAL IMPLICATIONS AND ETHICAL GOVERNANCE OF AI

Artificial intelligence due to its revolutionary technological invention and methods, can considerably help to reduce the issue of economic marginality. However it is important to understand their limitations in ensuring as an Enabler of Economic Inclusion. It involves various ethical and legal obligations. These implications are therefore needed to be tackled so that it facilitates its responsible use. Below are given some methods like collaboration between government actors and industry participants that are necessary to establish robust and fair regulations:

### 1. Data Governance & Privacy

A strong framework for data governance which controls the collection, sharing and use of data is essential to ensuring inclusive and equitable AI results. Best practices support inclusive institutions that incorporate a range of stakeholders, particularly communities affected by AI, as opposed to elite making decisions behind closed doors. In decision-making, this promotes accountability, openness and equitable representation. Ethical principles including openness, equity, human rights and inclusivity are emphasised in AI policy and design by UNESCO, the OECD, and several international organisations. Current frameworks emphasise “privacy-by-design” across the AI system lifetime, incorporating privacy-enhancing technologies (such as differential privacy) and privacy impact evaluations to safeguard user data.

### 2. Inclusivity in Design & Ethical Standards

Assuring cultural relevance and preventing the ongoing growth of inequality are two benefits of designing AI solutions with local communities’ input. This supports the OECD’s inclusivity and environmental sustainability

<sup>24</sup> Economic Times. (2025, June). Small and Smart: How AI is powering SMEs in India’s e-commerce boom. Economic Times.

<sup>25</sup> Broecke, S. (2023). Artificial intelligence and labour market matching. OECD Social, Employment and Migration Working Papers, No. 284. OECD Publishing. <https://doi.org/10.1787/2b440821-en>

<sup>26</sup> Jorzik, P., Antonio, J. L., Kanbach, D. K., Kallmuenzer, A., & Kraus, S. (2024). Sowing the seeds for sustainability: A business model innovation perspective on artificial intelligence in green technology startups. *Technological Forecasting and Social Change*, 208, 123653. <https://doi.org/10.1016/j.techfore.2024.123653>

goals as well as UNESCO's ethical AI criteria. UN representatives emphasise maintaining national and community autonomy in determining their digital futures as a means of resisting "data colonialism," underscoring the pressing need for inclusive, equitable AI governance. Fairness, accountability and explainability in AI deployment must therefore be given top priority in policymaking, in accordance with global norms like the NIST<sup>27</sup> AI Risk Management Framework and the OECD<sup>28</sup> AI Principles.

### 3. Capacity Building & Skill Development

As with previous revolutionary changes, such as the transition from horse-and-carriage to vehicles, AI necessitates that societies acquire new skills in order to take advantage of new opportunities. Globally, including in India, governments are developing AI policies and ethical frameworks that prioritise institutional preparedness and education as a means of enhancing capability. By recognizing skill gaps, suggesting relevant content and providing real-time feedback, AI-driven adaptive learning platforms and capacity-building initiatives personalize training, improving retention, engagement and employability across a range of industries and communities.<sup>29</sup>

### 4. Ethical Governance & Regulatory Frameworks

Implementing AI inclusively necessitates legislative frameworks that strike a balance between risk reduction and innovation. A complete AI framework for the financial sector, for instance, was proposed by India's RBI. It comprises governance standards, infrastructure development, AI audits and a special fund for its ethical developments. To lessen inequity in the advantages of AI, the UN advisory council advocated for internationally coordinated AI governance, calling for institutional changes such as the establishment of a global AI fund and an international AI panel. The Human Rights Commissioner of Australia cautions that unchecked AI may exacerbate sexism and racism, emphasising the vital need for human oversight, transparency and bias testing in AI systems.

### 5. Social Equity & Bias Mitigation

AI programs that have been trained on unrepresentative data may reinforce undesirable biases. The crucial function of data diversity and inclusive benchmarks is shown by Joy Buolamwini's research, which showed that facial recognition technology had significantly greater error rates for darker-skinned women than lighter-skinned men. The broader concerns of AI, including data being reused for unintentional surveillance or control, are also discussed in academic literature, which also highlights the necessity of ethical controls and anticipatory governance.

## VII. CONCLUSION

The multifaceted approach of inclusive growth of marginalised communities is the use of AI-driven sustainable models. Their economic exclusion frequently results from various structural inequalities such as restricted access to credit, education, healthcare and digital infrastructure. These are exacerbated by systemic discrimination and policy blind spots which was evident gleaned from historical causes of marginality and current case studies. Artificial intelligence has the potential to increase access to resources and optimise service delivery. It can also facilitate participatory decision-making which can serve as a catalyst to address these disparities provided they must be implemented responsibly and effectively. The AI-powered credit scoring can enable financial inclusion for those which are without formal banking records. The agricultural decision-support technologies can assist the small farmers in increasing yields in a sustainable manner. Moreover the learning platforms driven by technology may adjust to various needs by bridging the literacy and skill gaps that exacerbate cycles of poverty. However the long-term viability of these measures largely depends on their integration into moral and legal frameworks. They can help in preventing bias from being strengthened or inequality from being exacerbated. Artificial Intelligence itself runs the risk of escalating those very inequalities that it aims to eliminate in the absence of open governance and fair access to data. Therefore, ethical requirements demand participatory governance models, so that such under-represented voices actively co-create the design and implementation of technology rather than being passive recipients of it. Using such strategy the long-term adoption and legitimacy can be strengthened. In short, AI does not replace political will, institutional change or grassroots empowerment, it can simply enhance these forces by increasing their influence. An ecosystem strategy becomes very crucial for the future integration

<sup>27</sup> National Institute of Standards and Technology. (2023). Artificial Intelligence Risk Management Framework (AI RMF 1.0) (NIST AI 100-1). Gaithersburg, MD: U.S. Department of Commerce.

<sup>28</sup> Organisation for Economic Co-operation and Development. (2024). OECD AI Principles (updated). Paris: OECD.

<sup>29</sup> International Telecommunication Union. (2025). Capacity building and next-generation digital transformation initiatives for policymakers and professionals.

of technical innovation with targeted capacity creation and investments in sustainable infrastructure. Under the right circumstances, artificial intelligence has the power to turn underprivileged groups from economic outposts into vital contributors to both domestic and international wealth. The discussion of AI and marginality must therefore continue to be grounded in human dignity, sustainability and justice so that to guarantee the fourth industrial revolution serves as a tool for true advancement rather than exclusion.

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