Navigating the Future of Work: How AI Will Reshape Job Markets in Bangladesh and Beyond

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Source: LinkedIn

Introduction

The rapid evolution of artificial intelligence (AI) is reshaping industries and job markets across the globe. From automation in manufacturing to advanced analytics in decision-making, AI's transformative potential has Conducted in a new era of possibilities and challenges. As countries

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grapple with the implications of this technological revolution, the conversation increasingly shifts towards preparing for a future where human and machine collaboration becomes the norm.

In Bangladesh, the job market is at a pivotal crossroads. The nation's economy, driven by labor-intensive sectors such as garments, agriculture, and manufacturing, is beginning to witness the early effects of automation and AI integration. Emerging trends in automation, digitalization, and AI adoption are redefining traditional roles, creating new opportunities while displacing others. The need for a strategic response to this technological shift has never been more urgent.

This commentary explores AI's transformative role in reshaping job markets in Bangladesh and beyond, examining the dual-edged impact of AI. While AI offers unprecedented opportunities to improve productivity and unlock new industries, it also presents significant challenges, particularly for labor markets in developing economies like Bangladesh.

The Global Impact of AI on Job Markets

Source: The Financial World

AI and Automation Trends

Artificial intelligence (AI) and automation are among the innovative technologies that are contributing to the evolving nature of work in a variety of industries. Manufacturing is utilizing robots and AI-assisted processes in place of monotonous tasks which leads to enhanced work output and less reliance on human workers. In connection with this, AI is promoting the automation of tasks such as scheduling appointments, developing tailored medical interventions, as well as shortening image acquisition and interpretation times, translating into unique opportunities for development within the healthcare industry.[2] Likewise, the contribution of information technology in AI applications for app development or upgrade, cyber security, and data management has also transformed the IT sector by introducing automated processes

Job Displacement vs. Job Creation

AI has drawn criticisms from all directions since it is the new face of disruption in the labor market. Economically, there lies a significant danger with automation that will see people lose their jobs due to rule-based actions that are performed repeatedly. It is estimated that, in the growing decades, AI will wipe out millions of jobs all over the world and it is the industries of manufacturing, retail and transport that will be particularly hard hit.[3]

On the contrary, AI is also responsible for fostering job creation. Global studies show that the demand for specialized roles in data analytics, AI, and machine learning, as well as the demand for digital transformation, is on the rise due to AI. Moreover, AI technologies create new jobs for the industries of telemedicine, precision agriculture and alternative energy.

Skill Gap and Reskilling Needs

As AI reshapes job markets, the skill gap between existing workforce capabilities and evolving job requirements has widened significantly. Traditional skill sets are becoming obsolete, necessitating a shift toward digital literacy, critical thinking, and technical expertise in AI-related fields. Reskilling and upskilling initiatives are vital to prepare workers for the future of work.
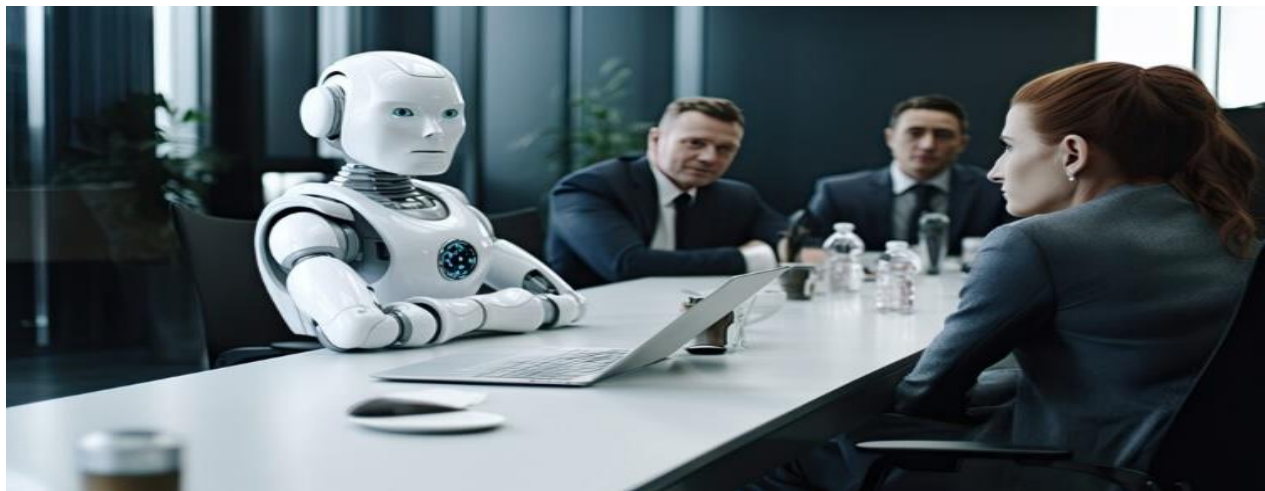
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[2] Jumaev, Giyosjon. "The Impact of AI on Job Market: Adapting to the Future of Work." *Modern Science and Research* 3, no. 1 (2024).

[3] Vochozka, Marek, Tomas Kliestik, Jana Kliestikova, and Gratiela Sion. "Participating in a highly automated society: How artificial intelligence disrupts the job market." *Economics, Management, and Financial Markets* 13, no. 4 (2018): 57-62.

Governments, educational institutions, and private organizations must collaborate to design training programs that address these emerging needs, ensuring that workers can transition into new roles and thrive in an AI-driven economy.

The global impact of AI on job markets highlights the urgency of proactive adaptation. While AI offers unparalleled opportunities for growth and innovation, its successful integration depends on addressing workforce challenges and equipping individuals with the skills needed to navigate an ever-evolving employment landscape.

The Current Landscape of AI and Job Markets in Bangladesh

Source: Talent Canada

State of AI Adoption

Bangladesh is currently in the process of incorporating artificial intelligence (AI) into a variety of sectors. The government has recognized AI's potential and, through the ICT Division, has drafted a National AI Policy to address adoption and implementation challenges.[4] This policy spans ten sectors, including telecommunications, data governance, environment, energy, and climate

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[4] Popoola, Oladapo Adeboye, Michael Oladipo Akinsanya, Godwin Nzeako, Excel G. Chukwurah, and Chukwuekem David Okeke. "The impact of automation on maritime workforce management: A conceptual framework." *International Journal of Management & Entrepreneurship Research* 6, no. 5 (2024): 1467-1488.

change, and proposes establishing a National AI Center of Excellence and a High-Level National AI Advisory Council to facilitate and regulate AI services.[5]

Despite these initiatives, AI adoption remains limited, primarily due to infrastructure constraints, policy gaps, and a workforce that is not fully prepared for this technological shift. The International Monetary Fund's AI Preparedness Index indicates that Bangladesh scores 0.38, significantly below developed nations and some regional peers, highlighting substantial gaps in digital infrastructure, human capital, and regulatory frameworks necessary for widespread AI adoption.[6]

Key Affected Sectors:

Ready-Made Garments (RMG) Industry

The RMG sector is a cornerstone of Bangladesh's economy, accounting for about 80% of the country's export earnings and employing approximately four million workers. However, the industry faces challenges such as rising labor costs, low productivity, and global competition. To address these issues, many RMG factories are adopting automation and digital technologies to enhance efficiency and competitiveness. For instance, about 47.37% of large businesses and 25% of medium companies in the RMG sector use automation and other advanced technologies to meet strict lead-time requirements from foreign retailers.

Agriculture and Precision Farming

Agriculture remains a vital sector in Bangladesh, employing a significant portion of the population. The potential to enhance productivity and sustainability is present with the implementation of AI-driven precision farming techniques, including automated irrigation systems and data analytics for agricultural monitoring.[7] However, the adoption of these technologies is still in its early stages, hindered by limited access to technology and a lack of awareness among farmers.

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[5] Efa, Farhan Sadik. "The employment landscape for accounting graduates in Bangladesh." (2024).
[6] Hossain, Rashed. "Adopting Industry 4.0: A strategic solution for transforming Smart Bangladesh: Prospective connections, opportunities, and challenges." *Pakistan Journal of Life and Social Sciences* 22, no. 1 (2024): 3304-3323.
[7] Rahman, Md Ashiqur, and Rawnaq Ara Parvin. "Bangladesh's Digital Evolution: Drivers, Impacts, and Future Opportunities." (2024).

Financial Services and Fintech Innovations

The financial sector in Bangladesh is gradually embracing AI to enhance services and customer experiences. Applications include AI-powered chatbots for customer service, fraud detection systems, and personalized financial products.[8] Despite these advancements, challenges such as data privacy concerns, workforce readiness, and the high costs associated with AI implementation persist.
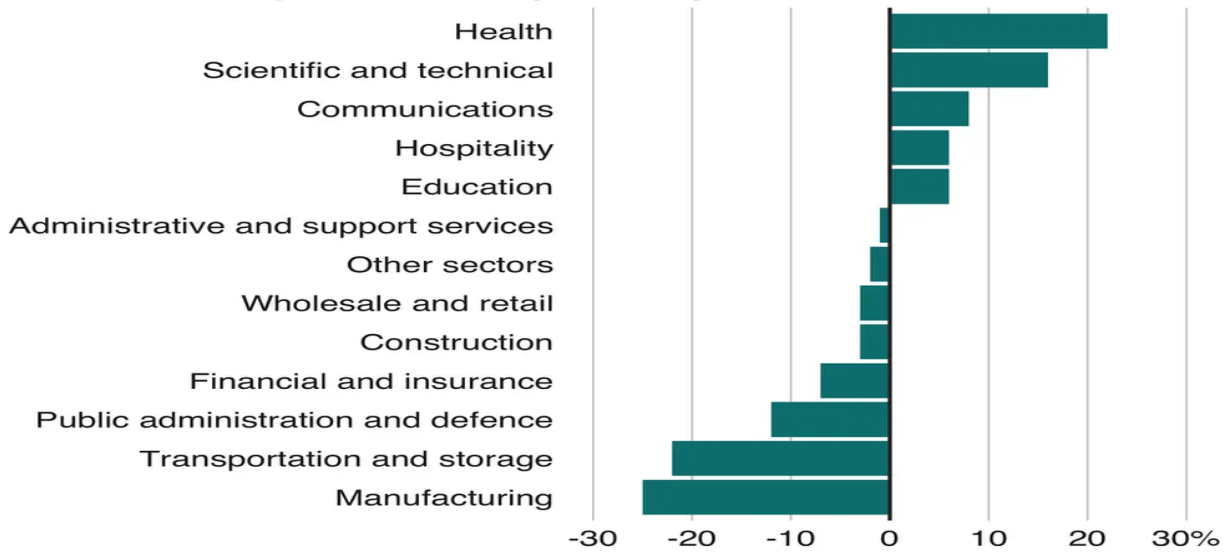
Challenges in Adoption

- Bangladesh's digital infrastructure is still developing, with limitations in internet connectivity, data storage capabilities, and access to advanced technologies. These constraints hinder the widespread adoption of AI across various sectors.
- While the government has initiated steps toward formulating AI policies, the absence of comprehensive regulations and standards poses challenges for consistent and secure AI implementation.
- There is a significant skills gap in Bangladesh's workforce concerning AI expertise. Addressing this gap requires substantial investment in education and training programs to equip individuals with the necessary skills for an AI-driven job market. Collaborations between academia and industry are essential to develop a skilled AI workforce.

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[8] Mahmud, Khaled. "Sustainable Economic Growth for Developing Countries through Fintech Ecosystem: A Case Study on Bangladesh." PhD diss., © University of Dhaka, 2024.

How AI could change the job market

Estimated net job creation by industry sector, 2017-2037

Source: PwC

BBC

Source: BBC

Opportunities Presented by AI in Bangladesh:

Emerging Job Roles

The rise of AI is creating new job opportunities that require specialized skills. Roles such as data analysts, AI specialists, machine learning engineers, and AI ethics consultants are becoming increasingly prominent. These positions demand proficiency in programming, data analysis, and critical thinking, signaling a shift in the skills valued in the Bangladeshi job market.[9]

AI for SME Growth

Small and medium enterprises (SMEs) stand to benefit significantly from AI-driven tools. Technologies such as predictive analytics, inventory management software, and customer

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[9] Shabur, Md Abdus. "The potential and implications of artificial intelligence in Bangladesh's early career planning education." *Discover Global Society* 2, no. 1 (2024): 50.

relationship management systems can enhance operational efficiency and competitiveness. [10]AI adoption can empower SMEs to scale their operations, optimize resource use, and tap into new markets, thereby driving economic growth.

Inclusivity and Accessibility

AI offers unique opportunities to bridge the urban-rural divide by enhancing access to essential services. For instance, AI-powered platforms can support rural development through precision farming, telemedicine, and digital education initiatives. Such applications can improve quality of life and create new income streams for underserved communities.

Global Outsourcing Opportunities

Bangladesh has the potential to position itself as a hub for AI-enabled services in the global outsourcing market. With a large, cost-competitive workforce, the country can attract foreign investment in sectors like AI development, data annotation, and customer service automation, boosting its export earnings and creating employment opportunities

Challenges in Navigating the AI-Driven Future:

1. The education system in Bangladesh needs significant changes to meet the demands of an AI-driven economy. It's essential to incorporate AI and digital literacy into the curriculum at all levels to develop a workforce that can thrive in future job markets.[11]

2. The lack of clear guidelines for AI use and strong legislation that supports AI is a significant barrier to its adoption. To ensure that AI is implemented responsibly and sustainably, regulatory frameworks need to focus on data privacy, cybersecurity, and accountability.[12]

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[10] Islam, Md Tariqul, Jeetesh Kumar, and Rupam Konar. "Small Steps, Big Impact: Conceptualising the Adoption of Social Media Marketing in Bangladesh's SMEs." In *AI Impacts in Digital Consumer Behavior*, pp. 217-240. IGI Global, 2024.

[11] Nankervis, Alan R., Julia Connell, and John Burgess. *The future of work in Asia and beyond*. Routledge, 2020.

[12] Kumar Saha, Polin, Boon-Kwee Ng, and Hon-Ngen Fung. "Revolutionising the ready-made garments firms in Bangladesh: strategies for transformative change towards sustainable product innovation." *Asian Journal of Technology Innovation* (2024): 1-25.

3. The gap between urban and rural areas could widen due to the uneven distribution of AI benefits. Without specific interventions, rural communities might face fewer job opportunities and limited access to AI-driven advancements.

4. The ethical use of AI and the protection of data privacy present major challenges. It is crucial to ensure that AI applications are secure, transparent, and fair to avoid misuse and build trust.

Strategies for Bangladesh to Adapt to AI-Driven Job Market Changes

I. Investments in education and vocational training programs focusing on artificial intelligence (AI), machine learning, and digital literacy should be prioritized by both the government and the private sector. Skill development can be accelerated through collaborations with international institutions.

II. To create a strong AI ecosystem, it is essential for government agencies, private companies, and academic institutions to work together. These partnerships can drive innovation, build AI infrastructure, and create job opportunities.[13]

III. Funding and mentoring programs for AI-focused enterprises can foster a culture of innovation, which can drive technological advancements and entrepreneurship. Dedicated AI innovation centers can function as incubators for innovative solutions that are specifically designed to address the distinctive challenges of Bangladesh.

IV. To protect workers from being displaced, policymakers need to create frameworks that promote responsible AI development. This includes establishing social safety nets, providing incentives for reskilling, and setting guidelines for ethical AI practices to ensure a fair transition to an AI-driven economy.[14]

The Way Forward for Bangladesh

Vision for the Future: The shift towards AI in Bangladesh requires a careful balance between safeguarding human-centered job creation and leveraging AI's transformative capabilities. The

[13] Kumar Saha, Polin, Boon-Kwee Ng, and Hon-Ngen Fung. "Revolutionising the ready-made garments firms in Bangladesh: strategies for transformative change towards sustainable product innovation." *Asian Journal of Technology Innovation* (2024): 1-25.

[14] Khan, Tahsina, Md Mehedi Hasan Emon, and Saleh Ahmed Jalal Siam. "Impact of Green Supply Chain Practices on Sustainable Development in Bangladesh." *Available at SSRN 4958443* (2024).

future vision should focus on complementarity, where AI enhances human productivity instead of replacing it. To facilitate the workforce's transition into roles that AI cannot replicate—such as those requiring creativity, emotional intelligence, and complex problem-solving—policies and strategies must be put in place.

Sustainable Development Goals (SDGs): Bangladesh's commitment to the Sustainable Development Goals (SDGs) should align with the implementation of AI-driven initiatives. For instance, AI can help accelerate progress in quality education (SDG 4) by promoting the use of e-learning platforms, support decent work and economic growth (SDG 8) by fostering innovation in various industries, and reduce inequality (SDG 10) by using technology to bridge the gap between rural and urban areas.[15] A targeted approach that incorporates AI into national development strategies can maximize its positive impact.

Long-Term Prospect: Bangladesh has the opportunity to emerge as a regional leader in AI innovation.[16] By investing in infrastructure, education, and research, the country can create an environment that nurtures technological advancements, positioning itself as a hub for AI development and services. This leadership would not only boost Bangladesh's global standing but also attract foreign investment, leading to a wealth of opportunities and growth.

Conclusion

Labor markets around the world, including in Bangladesh, are on the brink of significant change due to artificial intelligence, bringing both opportunities and challenges. While AI has the potential to create new jobs, boost the growth of small and medium enterprises, and enhance inclusivity, it also poses risks such as job loss, skill mismatches, and increased socioeconomic inequality. To tackle these issues, it is crucial to make strategic investments in education, foster public-private partnerships, and implement supportive policies to ensure a smooth transition. Bangladesh stands at a pivotal moment in its journey to harness AI's potential for economic and workforce transformation. To create an AI-supported future that is inclusive and resilient, it is essential for

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[15] El-Farr, Hadi, ed. *The Changing Landscape of Workplace and Workforce*. BoD–Books on Demand, 2024.

[16] Cazzaniga, Mauro, Ms Florence Jaumotte, Longji Li, Mr Giovanni Melina, Augustus J. Panton, Carlo Pizzinelli, Emma J. Rockall, and Ms Marina Mendes Tavares. *Gen-AI: Artificial intelligence and the future of work*. International Monetary Fund, 2024.

policymakers, businesses, and educational institutions to take proactive steps. By embracing a forward-thinking approach, aligning AI initiatives with sustainable development goals, and encouraging innovation, Bangladesh can secure its place in the AI-driven global economy and empower its workforce for the future of work.