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AI WORKFORCE READINESS AS AN ECONOMIC STABILIZER: A FRAMEWORK FOR GROWTH INTEGRATION IN EMERGING MARKETS

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ABSTRACT

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The research deals with the variables of how AI workforce readiness is considered as an economic stabilizer and a framework for growth integration in emerging markets. It examines the impact of AI integration on economic growth, which is mediated by workforce adaptation and moderated by business stakeholders. The data for study were collected from secondary source and were qualitatively synthesized and discussed under themes. The paper found that Data, Research, and Evaluation; Manpower Development and Education; Social Safety Nets; and Place-based and Industry-Level Interventions can be adopted as framework for growth integration in emerging markets. The paper concluded with calling for leveraging on private sector data sources to fill critical gaps through Public-Private-Partnerships mechanisms; development and expansion of outcome-based “talent finance” models for workforce development that can help people access quality programmes without fully bearing the costs and risks of doing so; modernization of workforce training programmes to meet the labour market demands of the AI-driven emerging market economy, and the understanding and incorporation of human-centered dimensions of AI adoption, like beliefs and emotions into emerging economy training.

Keywords: Artificial Intelligence, Growth Integration, Economic Growth, Workforce Development, Emerging Markets.

Introduction

Proactive development of labour policies addressing artificial intelligence (AI) is increasingly imperative to protect workers' dignity, sustain economic prosperity, and avert potential social instability. Given the scale, complexity, and rapid pace of AI-driven transformation in the labour market, reactive policy responses are unlikely to be sufficient. While contemporary AI policy debates have largely focused on technological innovation, market efficiency, and global competitiveness, concrete and comprehensive strategies for managing labour market disruptions remain underdeveloped (Lee et al., 2025).

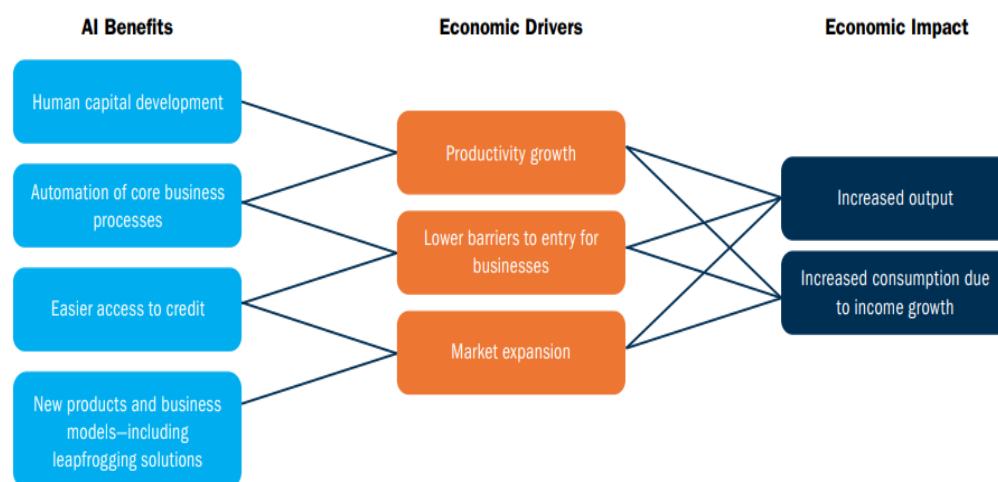
The diffusion of AI technologies continues to reshape the structure and dynamics of the labour force, confronting policymakers with the dual challenge of mitigating workforce displacement while simultaneously harnessing AI's potential to boost productivity and economic growth. These challenges are further compounded by looming demographic shifts in the United States. According to projections by the Congressional Budget Office (CBO, 2025), deaths are expected to exceed births by 2033, accompanied by a marked deceleration in population and employment growth over the next decade. The U.S. fertility rate has persistently remained at a historic low of 1.6 well below the replacement threshold of 2.1 intensifying economic pressures to enhance labour productivity through automation and AI-enabled solutions (Lee et al., 2025).

AI capabilities have advanced at an unprecedented rate in recent years. Broadly defined, AI refers to systems capable of performing tasks that typically require human intelligence, including pattern recognition, decision-making, learning from experience, and the generation of

novel outputs (Lee et al., 2025). The trajectory of AI development has shifted from traditional machine learning models—primarily optimized for predictive tasks using historical data to Generative AI technologies capable of producing new content. The public release of ChatGPT in late 2022 marked a turning point, accelerating the integration of Generative AI, particularly Large Language Models (LLMs), into everyday life and workplace practices (Lee et al., 2025).

This technological evolution has intensified debates about the implications of AI for labour. Early concerns regarding AI-induced job displacement focused on occupations centered on predictive and routine analytical tasks, where machine learning systems increasingly outperformed human workers (Agrawal et al., 2018). However, the rise of LLMs has expanded these concerns to professions involving writing, editing, coding, and content creation—domains once considered relatively insulated from automation. More recently, AI systems have demonstrated growing proficiency in creative fields such as art and design, as well as in research and development activities, further broadening the scope of potential labour disruption. The emergence of Agentic AI represents the latest phase in this evolution, introducing models capable of autonomously executing complex tasks such as web-based research, schedule management, reservations, and potentially a wide range of computer-mediated work functions (Dominski & Lee, 2025; Lee et al., 2025).

Figure 1: Channels to Economic Development Supported by AI Technologies



Source: IFC (2019)

The rapid advancement of Artificial Intelligence (AI) technologies has sparked intense debates regarding their economic and employment implications (Tambe, 2025). As AI systems become increasingly sophisticated that are

capable of performing complex tasks ranging from natural language processing to predictive analytics concerns about large-scale job displacement have grown (Brynjolfsson and McAfee, 2014). A 2023 report by the

World Economic Forum estimates that by 2025, AI and automation could displace 85 million jobs globally, while simultaneously creating 97 million new roles; a net positive gain of 12 million jobs (WEF, 2023). This paradoxical dynamic underscores the need for a nuanced understanding of AI's impact on labour markets (Tambe, 2025). While some economists warn of potential workforce disruptions, particularly in routine-based occupations such as manufacturing, data entry, and customer support (Frey and Osborne, 2017), others emphasize AI's role as a productivity multiplier that enhances human capabilities rather than replacing them entirely (Acemoglu & Restrepo, 2019). Historical precedents from previous industrial revolutions portray that technological disruption, while initially destabilizing, ultimately leads to job transformation rather than pure elimination (Autor, 2015). For instance, the rise of ATMs in the 1970s did not eliminate bank tellers but instead shifted their roles toward customer service and financial advisory functions (Bessen, 2019 cited by Tambe, 2025).

In a period where technological advancements and economic disruptions constantly reshape job markets, Artificial Intelligence (AI) and the Gig Economy have emerged as transformative forces in education and workforce development (Wadhwani and Mirza, 2025). The traditional employment landscape is shifting, giving rise to gig educators, freelance instructors leveraging digital platforms to deliver skill-based learning. While these educators played a crucial role in post-pandemic economic recovery, their impact is now being further amplified by AI-driven innovations.

Growth Integration in Emerging Markets

Artificial Intelligence (AI) designates "the science and engineering of making machines intelligent, especially intelligent computer programs," with intelligence defined by the AI100 Panel at Stanford University as "that quality that enables an entity to function appropriately and with foresight in its environment" (Moor, 2006; Stanford University, 2016). Other experts define AI as a computerized system that can think and act like humans. More comprehensive definitions consider AI to mean all computer systems that can continuously scan their environment, learn from it, and take action in response to what they sense, as well as to human-defined objectives (Nilsson, 2010). AI combines large volumes of data with computing power to simulate human cognitive abilities such as reasoning, language, perception, vision, and spatial processing. Strusani and Hounghonon (2019) identified the following three types of AI applications that can be based on cognitive abilities that are simulated and automated.

Basic AI embeds cognitive abilities such as memory, attention and language, as well as some executive functions like anticipation and decision-making with

limited reference to the past. It is typically used to enhance the performance of business analytics solutions and to improve the functioning of digital platforms. Examples include credit scoring, online matching, chatbots, and smart speakers. In emerging markets, existing services include AI-enabled credit scoring in Madagascar (M-Kajy), Kenya (M-Shwari), Egypt (ValU, Fawry Plus), and India (Aye Finance).

Advanced AI goes further in the simulation of human cognitive abilities such as perception, vision, and spatial processing. It closely mimics the human mind and enables the analysis of unstructured data such as texts, images, and audio data. Immediate application domains include facial and speech recognition, medical diagnoses, transportation, and urban planning, as well as logistics, security, and safety.

Autonomous AI is expected to become self-aware with the ability to interact with human beings and learn on its own, thereby augmenting humans at home, outside the home, or in work environments. Autonomous AI is still far from widespread commercial use due to limitations in handling irregular objects, biased decision-making involving value judgment, and an inability to learn from a few examples. Prototypes from Fetch Robotics, Boston Dynamics, and Hanson Robotics are early examples of autonomous AI.

Notwithstanding potential disruptions, AI also offers substantial opportunities to boost labour productivity and relieve workers from repetitive, arduous tasks. Furthermore, Lee et al (2025) say AI can provide avenues for workers to upgrade their skills and transition into emerging roles, highlighting the importance of robust training systems aligned with employer needs. They added that whether workers ultimately benefit from AI or experience displacement or wage reductions depends substantially on their ability to adjust and adapt effectively. Successful adaptation may occur through on-the-job learning which, enables workers to complement and leverage AI technologies through proactive skill acquisition prior to experiencing displacement or wage decline. Ideally, workers initially at risk of substitution by AI would transition into roles where their skills are augmented by these technologies. The capacity to adapt successfully will vary significantly across occupations, industries, and workforce demographics, especially by age and education level.

Employers will also be pivotal in shaping these adaptation processes; some may actively assist their workers, while others might offer minimal support. Lee et al (2025) maintained that the degree of AI-driven task displacement will further influence employer incentives. They cited the example that, partial displacement (20-30% of tasks) could encourage active employer engagement in worker adaptation, whereas extensive

displacement (70-80%) may substantially weaken such incentives. Employer biases based on education, race, gender, or age may also influence decisions regarding worker assistance. Moreover, the current tax system inherently favors investments in new capital (like AI systems) over supporting existing labour, further complicating this landscape (Acemoglu et al. 2020). Simultaneously, as AI integration accelerates and reshapes job roles, the U.S. economy will face significant demographic challenges, including a dramatic slowdown in population and employment growth. The latest Congressional Budget Office (CBO, 2025) projections anticipate deaths surpassing births by 2033, coupled with substantially reduced average monthly employment growth over the coming decade. With the U.S. fertility rate persistently at a historic low (Lee et al, 2025).

A Discourse of the Framework for Growth Integration in Emerging Markets

When people view AI as something that complements their strengths rather than competes with them, they are more willing to experiment, adapt, and find creative ways

to integrate it into their workflows. However, training must meaningfully engage the skeptics and not just the early adopters. Some skeptics are wary of the real risks: misinformation, bias, privacy breaches, or just plain job loss. Brushing aside these concerns or offering unfettered optimism backfires. Instead using transparency acknowledging AI's limitations, naming the tradeoffs, and making space for dialogue builds trust (Lee et al, 2025).

According to Adewuyi et al, (2020), Artificial Intelligence (AI) enhanced market intelligence models offer a transformative approach to addressing these challenges by enabling data-driven, predictive, and context-sensitive expansion strategies. Traditional market intelligence relies heavily on manual analysis, historical data, and static indicators, which are often insufficient for high-stakes investment decisions in dynamic emerging markets (Yu and Shichao [nd]; Malik, 2013). In contrast, AI-driven models can integrate diverse data streams ranging from satellite imagery and social media analytics to real-time economic indicators and infrastructure heat maps to provide actionable insights for strategic planning.

Table 1: Selected Development Opportunities and Risks from AI in Emerging Markets

Opportunities	Risks
• New products and business models—including leapfrogging solutions, solutions for bottom of pyramid individuals, and easier access to credit • Automation of core business processes—leading to lower product costs • Human capital development • Innovation in government services	• Obsolescence of traditional export-led path to economic growth • Increased digital and technological divide • Transformation of job requirements and disruption of traditional job functions • Privacy, security, and public trust

Source: IFC (2019).

In emerging markets, AI offers an opportunity to lower costs and barriers to entry for businesses and deliver innovative business models that can leapfrog traditional solutions and reach the underserved (Strusani and Hounbonon, 2019). With technology-based solutions increasingly important to economic development in many nations, the goals of ending poverty and boosting shared prosperity may become dependent on harnessing the power of AI (Strusani and Hounbonon, 2019). While emerging markets are already using basic AI technologies to solve critical development challenges, much more can be done, and private sector solutions will be critical to scaling new business models, developing new ways of delivering services, and increasing local markets' competitiveness. All of these solutions require innovative approaches to expand opportunities and mitigate risks associated with this new technology. Further to the above, we adopt the postulation of Lee et al (2025) on as AI workforce readiness that stabilizes the

economy and growth integration of the emerging markets. These are:

Data, Research, and Evaluation

Policymakers should have timely and quality data to address the labour market challenges that AI brings. Enhanced data collection can enable policymakers to better monitor and understand AI's labour market impacts, while enabling them to better forecast and respond to rapid change. Statistical agencies can improve on existing government data collection efforts by making data systems more timely, granular, and flexible. Several databases that this paper suggests improving include the Standard Occupational Classification (SOC) system, O*NET, the Occupational Requirement Survey (ORS), and the Business Trends and Outlook Survey (BTOS).

New government data initiatives, especially ones tracking individual workers long-term to better study the impacts of AI and policy interventions, can also help improve policymaking. Policymakers should also work on improving institutional capacity at statistical agencies to maximize effectiveness and impact. Improving data system integration, coordinating agencies and standard setting, and appropriately funding cross-agency data collection are several ways to help with this effort. Further, AI can be used for better data collection and management, so agencies should work on ways to best leverage the technology.

Manpower Development and Education

Education and workforce training must significantly adapt to meet the challenges AI brings and empower workers. If they are effective, they can vastly improve work productivity and competitiveness in the AI-driven economy while ensuring that workers share in these benefits. Policymakers should modernize the educational system to incorporate AI literacy. K-12 education, Career and Technical Education (CTE), and higher education should incorporate AI literacy and skills that complement AI (such as critical thinking, creativity, social interactions and judgment) into their curriculum, which will enable AI to augment their productivity rather than replace them (Sidhu et al, 2024).

In addition to identifying quality programmes for delivering this learning, such as apprenticeships, policymakers should also focus on financing mechanisms and developing portable “skill wallets.” Finally, these programmes should be regularly tested and evaluated for cost-effectiveness and impact.

Social Safety Nets

Social safety net programmes can provide considerable support for displaced workers and will likely be critical in the face of job displacement from AI. However, policymakers have philosophical differences about the size and role of social safety nets as well as concerns about their fiscal costs and potentially negative impacts on employment. Policymakers have multiple options on how to reform the social safety net programmes that will in part be based on their political views and beliefs in how severe they expect job disruption from AI to be.

Policymakers can lean on various safety net programmes to address job displacement and its impacts. Unemployment insurance, wage insurance, tax credits (like the Earned Income Tax Credit and Child Tax Credit), subsidized jobs, and health insurance programmes are various tools that can be leveraged to manage the downsides of job disruption, each with its benefits and drawbacks. Further, since many technologists have argued that job displacement will be more extreme than

many economists have predicted, more dramatic measures (such as basic income programmes) should be critically evaluated to understand their benefits and downsides if these extreme scenarios play out.

Social safety Net programmes have faced major stresses in the past, such as during the COVID-19 pandemic, which led to significant inefficiencies and problems. AI job disruption can similarly cause major stress to these programmes and would benefit from early efforts to improve their operational efficiency through efforts such as modernizing their technology and fraud detection infrastructure.

Place-based and Industry-Level Interventions

The disruptions from AI can impact certain regions or industries especially hard, worsening existing economic disparities or mismatches between the availability of and demand for workers. This is because workers and industries cluster, and AI is expected to have uneven effects. However, it should be noted that the best programmes are difficult to scale and require expensive support services. In regions that are economically depressed or lagging, economic development should be a higher priority. Economic development is complicated and difficult in practice, so quality data and research about what could work in a specific region are critical. Regional “Tech Hub” programmes can be studied and evaluated as a potential model for industrial strategies.

Concluding Remarks

Artificial Intelligence is fundamentally reshaping the workforce through a dual dynamic of job creation and skill transformation, marking a pivotal shift in the future of work. While automation poses legitimate challenges to traditional job roles particularly in routine-based occupations like manufacturing, data entry, and administrative support which emerging evidence underscores that AI is a net job creator. The World Economic Forum (2023) projects that AI will generate 97 million new jobs. To effectively steer the transformative effects of AI, organizations’ stakeholders must adopt proactive, evidence-based strategies that prioritize agility, equity, and sustainable workforce adaptation. Ultimately, coordinated and informed actions with stakeholders which include governments, educational institutions, businesses, and communities that will determine how successfully society navigates the transformative age of AI, securing both economic prosperity, social stability, and worker dignity.

Suffice to categorically conclude that AI is essential to safeguard workers' dignity and economic prosperity, as well as to prevent potential societal instability. Reactive approaches alone may fall short given the scale,

complexity, and rapid pace of AI-centred changes in the labour market. Although AI policy discourse has largely centered on technological innovation, market dynamics, and global competition, concrete strategies for labour market disruption remain underdeveloped. To address these kinds of inefficiencies and inequities, policymakers should consider place-based or industry-level interventions (such as those deployed by the CHIPS Act) in these scenarios. In regions with strong growth but a shortage of appropriately trained workers, place-based and industry interventions should focus on workforce capacity development and better matching workers with local firms and industries. This can be done through expanding quality sectoral training programmes and partnerships between regional employers and skill providers. Therefore, it is recommended that:

1. Private sector data sources should be leveraged to fill critical gaps through public-private partnerships that develop mechanisms for secure and ongoing collaboration between government and industry,
2. There should be development and expansion of outcome-based “talent finance” models for workforce development (such as income-share agreements or outcome-based loans) that can help people access quality programmes without fully bearing the costs and risks of doing so,
3. Policymakers should embark on the modernization of workforce training programmes to meet the labour market demands of the AI-driven emerging market economy. This is calling for the support of quality workforce training programmes through the renewal of the Workforce Innovation and Opportunity Act (WIOA) and extending the US Federal Pell Grant program (beyond recent legislative changes) to cover more high-quality short-term training programmes,
4. Human-centered dimensions of AI adoption, like beliefs and emotions, should also be understood and incorporated into training. Policymakers should finally focus on building lifelong learning infrastructure, and
5. Finally, policymakers should promote the operational readiness of our major social safety net programmes.

Contributions to Knowledge

This study adds to the developing research on AI workforce readiness as an economic stabilizer and the framework for growth integration in emerging markets. The research discussed the AI-powered strategic planning by offering a replicable, scalable, and ethically grounded model for digital infrastructure expansion to boost economic development in the emerging markets. The work closes the gap between emerging technologies

and infrastructure policy, providing a pathway toward more informed, resilient, and inclusivity adoption of digital economies. It challenges future study to make an extension to dissect the application of the AI structure to other sectors of the economy like renewable energy, smart rural, semi-urban and urban development plans. Further research is required to explore the long-term socio-economic impacts of AI-informed investment decision-making in emerging markets.

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