

From Job Displacement to Human–AI Collaboration: Rethinking Employment and the Future of Work in Pakistan

Muhammad Haroon Khalid

Department of Management Sciences, AIOU, Islamabad, Pakistan

Email: muhammadharoonjutt8@gmail.com

Abstract

Artificial intelligence (AI) is rapidly transforming global production, employment, and economic activity. While much of the contemporary debate focuses on the potential of AI to automate occupations and displace workers, the effects of artificial intelligence in developing economies are considerably more complex. In countries such as Pakistan, AI may simultaneously eliminate certain routine tasks, augment human capabilities, create new occupations, reshape existing professions, and generate new opportunities to participate in global digital markets. The central challenge is therefore not simply whether AI will create or destroy jobs, but whether developing economies possess the institutional, educational, technological, and policy capacity to manage the transition. This paper examines the implications of artificial intelligence for employment and the future of work in Pakistan. Using a qualitative secondary-data and policy-analysis approach, the study synthesizes international literature, Pakistani policy documents, economic reports, labour-market evidence, and developments in Pakistan's information and communication technology (ICT) sector. The analysis identifies five major areas of transformation: occupational displacement, job augmentation, emergence of AI-enabled employment, changing skill requirements, and widening inequalities between workers with different levels of digital and cognitive capital. The paper argues that Pakistan should not approach AI primarily as an automation challenge. Rather, AI should be treated as a structural transformation of the country's labour market and development model. Pakistan's rapidly expanding ICT exports, freelance economy, large youth population, and National AI Policy provide opportunities to position the country within emerging global AI-enabled value chains. However, inadequate digital infrastructure, unequal access to education, weak industry–university linkages, limited AI literacy, gender disparities, informality, and the concentration of low-value digital work create substantial risks. The paper proposes a human-centred AI employment strategy based on national reskilling, AI-integrated education, support for AI-enabled entrepreneurship, social protection, gender-inclusive digital participation, and movement from low-cost outsourcing toward higher-value knowledge-intensive services.

Keywords: Artificial Intelligence; Future of Work; Employment; Pakistan; Digital Economy; Automation; Skills; Reskilling; Human–AI Collaboration; Developing Economies

Introduction:

Artificial intelligence has moved from being a specialized technological field to becoming a major force influencing economic production, public administration, education, finance,

healthcare, manufacturing, and employment. Generative AI systems, machine learning, intelligent automation, robotics, and algorithmic decision-making are increasingly capable of performing tasks that were previously considered dependent upon human cognitive labour. The transformation is particularly significant for developing economies. For countries with large young populations and expanding service sectors, artificial intelligence presents a paradox. On one hand, AI can increase productivity, reduce transaction costs, improve access to knowledge, facilitate entrepreneurship, and enable workers to participate in global markets. On the other hand, automation can reduce demand for routine administrative, clerical, customer-service, coding, translation, data-entry, and other digitally mediated activities.

Pakistan represents an important case through which to examine this tension. The country's economy is characterized by a large working-age population, substantial informal employment, uneven educational attainment, persistent unemployment and underemployment, and a rapidly developing digital economy. At the same time, Pakistan has emerged as an increasingly significant provider of ICT services and freelance digital labour. The State Bank of Pakistan reported that ICT services exports increased by 18.3 percent during FY2025 to approximately US\$3.8 billion. Software consultancy and freelancing remained important contributors to this growth. The Pakistan Economic Survey 2024–25 also reported that ICT services exports reached US\$2.825 billion during July–March FY2025 and that freelancers generated approximately US\$400 million in remittances during that period.

These developments demonstrate that digital employment is no longer peripheral to Pakistan's economic future. It is increasingly connected with foreign exchange earnings, youth employment, entrepreneurship, and export diversification. However, the rapid development of generative AI creates a new question: Can Pakistan's existing digital employment model survive the transition from human-centred outsourcing to AI-enabled service production? This question is especially important because a substantial proportion of Pakistan's digital workforce operates in relatively low-cost segments of global value chains. If international clients can substitute human labour with AI tools, the traditional comparative advantage of inexpensive labour may weaken. Conversely, workers who learn to use AI as a productivity-enhancing technology may become more valuable rather than less valuable. The future of work in Pakistan will therefore depend not simply on the number of jobs that AI creates or eliminates but on the country's capacity to shift workers from AI-exposed tasks toward AI-complementary occupations.

Problem Statement:

The dominant discourse surrounding artificial intelligence and employment frequently presents the issue as a binary choice between technological progress and job destruction. Such a framework is insufficient for developing economies. AI does not necessarily replace entire occupations. In many cases, it replaces or transforms individual tasks within occupations. A lawyer may use AI to conduct preliminary legal research while retaining responsibility for interpretation and judgement. A teacher may use AI to generate learning materials while retaining responsibility for pedagogy and student engagement. A software developer may use generative AI to produce code while becoming increasingly responsible for system architecture, verification, cybersecurity, and problem definition.

The key question is therefore not: Will AI replace Pakistani workers? Rather, the more important question is: Which Pakistani workers and tasks are likely to be displaced, which will be augmented, and what institutional mechanisms can enable workers to transition into higher-value

AI-complementary employment? Pakistan currently faces this question without possessing a fully developed national system for continuous workforce reskilling. The challenge is intensified by educational inequality, weak industry–university collaboration, limited research and development capacity, gender disparities in labour-force participation, and the predominance of informal employment. The country consequently risks experiencing a form of digital polarization, in which highly educated workers who can use AI effectively experience productivity and income gains while lower-skilled workers face declining demand for routine tasks.

Research Objectives:

This study has five objectives:

- i. To examine the potential effects of artificial intelligence on employment in Pakistan.
- ii. To identify occupations and sectors that are particularly vulnerable to AI-driven task automation.
- iii. To examine how AI can augment employment and generate new forms of work.
- iv. To assess the skills and institutional capabilities required for Pakistan's AI-driven labour-market transition.
- v. To propose a policy framework for achieving inclusive and human-centred AI-enabled economic development in Pakistan.

Research Questions:

The study addresses the following research questions:

- i. RQ₁: How is artificial intelligence likely to transform employment patterns in Pakistan?
- ii. RQ₂: Which occupational tasks and sectors in Pakistan are most exposed to AI-driven automation?
- iii. RQ₃: What new employment and entrepreneurial opportunities can AI create for Pakistani workers?
- iv. RQ₄: What skills will Pakistani workers require to remain competitive in an AI-enabled economy?
- v. RQ₅: How can government, universities, industry, and civil society collaborate to ensure that AI contributes to inclusive employment rather than widening inequality?

Literature Review:

From Automation to Augmentation: Early technological debates often assumed that automation would primarily eliminate human labour. Contemporary research presents a more nuanced picture. Autor (2015) argues that technological change does not necessarily eliminate occupations because human labour retains comparative advantages in tasks involving problem-solving, interpersonal interaction, flexibility, creativity, and judgement. This perspective is particularly relevant to AI. Artificial intelligence can perform certain cognitive tasks remarkably well but still depends upon humans for contextual interpretation, ethical judgement, accountability, social interaction, and

complex decision-making. The appropriate analytical distinction is therefore between task automation and occupational replacement. AI may automate a task without eliminating the occupation in which that task occurs.

Generative AI and Labour Markets: The emergence of generative AI has intensified the debate because large language models can perform tasks involving writing, coding, translation, summarization, customer support, research assistance, and information processing. The International Labour Organization has argued that generative AI is more likely to transform many occupations than completely eliminate them, with clerical and administrative occupations among the most exposed. This distinction is especially relevant for Pakistan because a significant proportion of emerging digital employment consists of activities that can be delivered remotely and are increasingly susceptible to AI assistance.

AI in Developing Economies: The effects of AI in developing economies differ from those in advanced economies. Developing countries often have: lower labour costs; larger informal sectors; weaker social protection systems; limited technological infrastructure; lower levels of digital literacy; substantial educational inequality; fewer high-skilled employment opportunities. Consequently, AI may produce both a productivity opportunity and a distributional threat. A country with abundant low-cost labour may lose competitiveness if AI makes labour-intensive digital services cheaper to automate. However, the same country can potentially benefit enormously if its workforce becomes capable of operating, supervising, integrating, and developing AI systems.

Theoretical Framework:

This study combines three theoretical perspectives. The first one, the task-based approach suggests that technology affects individual tasks rather than entire occupations. Tasks can be classified as: automatable tasks, AI-augmented tasks, human-complementary tasks, and emerging AI-enabled tasks. This framework is particularly useful for analysing Pakistan because the same occupation may contain both vulnerable and resilient tasks.

The second one, human capital theory, suggests that education and skills increase workers' productivity and economic value. In an AI economy, however, traditional education alone may not be sufficient. The relevant concept becomes AI-augmented human capital. This includes: digital literacy; AI literacy; analytical reasoning; data literacy; communication; creativity; critical thinking; domain expertise; ethical reasoning; problem-solving.

The third one, the capability perspective, emphasizes whether individuals possess meaningful opportunities to participate in economic and social life. From this perspective, AI policy should not be evaluated solely through GDP or productivity. A successful AI economy should also increase people's ability to: obtain meaningful employment; develop skills; start businesses; participate in digital markets; access education; benefit from technological progress. This perspective is particularly important for Pakistan because unequal access to technology may otherwise transform AI into an instrument for reproducing existing social inequalities.

Pakistan's Emerging AI and Digital Economy:

Pakistan has already established a substantial digital-services ecosystem. The Pakistan Economic Survey 2024–25 reported more than 30,000 IT and IT-enabled services companies registered with SECP as of March 2025. ICT services exports reached US\$2.825 billion during

July–March FY2025, representing a 23.7 percent increase over the same period in the previous year. The State Bank subsequently reported ICT services exports of approximately US\$3.8 billion for FY2025.

This expansion is strategically significant because it demonstrates that Pakistan already possesses several foundations required for participation in the AI economy: a large young population; universities producing technology graduates; an expanding software sector; a growing freelance workforce; increasing international demand for Pakistani digital services; improving digital infrastructure; government support for IT exports. Pakistan's government has also moved beyond general digitalization toward explicit AI policy. The National Artificial Intelligence Policy was approved in 2025 and seeks to develop an ecosystem for responsible AI adoption, skills, innovation, and economic transformation. The policy transition is therefore occurring at an important moment. The important observation is that AI exposure does not necessarily equal job loss. A high-exposure occupation can actually experience increased demand if workers learn to use AI productively (Table 1).

Table 1: AI Exposure Across Major Pakistani Employment Sectors

Sector	AI Exposure	Likely Effect	Main Risk	Opportunity
Banking	High	Automation + augmentation	Routine job reduction	AI-based financial services
Call centres	Very High	Automation	Customer-service displacement	AI-supervised support
Software development	High	Strong augmentation	Low-value coding displacement	AI engineering
Freelancing	Very High	Polarization	Declining low-value gigs	Higher-value services
Education	Medium	Augmentation	Poor AI adoption	AI-supported teaching
Healthcare	Medium	Augmentation	Unequal access	AI diagnostics/support
Manufacturing	Medium–High	Automation	Routine labour displacement	Smart manufacturing
Agriculture	Medium	Augmentation	Digital divide	Precision agriculture
Legal services	Medium	Augmentation	Junior task displacement	AI-assisted legal research
Media	Very High	Automation + augmentation	Content commoditization	Creative AI production
Government	Medium–High	Automation	Administrative displacement	Digital public services
Retail	High	Automation	Routine employment reduction	E-commerce and analytics

The Pakistani Freelance Economy; Opportunity and Vulnerability:

Pakistan's freelance sector provides perhaps the clearest illustration of the contradictory effects of AI. Freelancing has enabled Pakistani workers to bypass domestic labour-market constraints and directly access international clients. Pakistan's IT exports have expanded rapidly, and freelancers remain an important component of this ecosystem. However, AI introduces a structural vulnerability. Services such as basic graphic design, simple content writing, data entry, basic website development, transcription, translation, simple digital marketing, and routine customer support are increasingly exposed to AI automation.

Consequently, Pakistan cannot rely indefinitely on the traditional model of: low-cost labour + global outsourcing = digital employment growth. The emerging model needs to become: high-skilled human capital + AI productivity + specialized knowledge + global market access = higher-value digital employment. This represents a fundamental transformation in Pakistan's comparative advantage.

From Low-Cost Labour to AI-Augmented Human Capital: Pakistan's traditional economic advantage has frequently been associated with relatively inexpensive labour. AI challenges this model. If a foreign company previously needed ten workers to perform a set of routine digital tasks, but AI allows three workers to accomplish the same work, labour-cost advantages become less decisive. Pakistan therefore needs to shift its competitive strategy from cheap labour to AI-augmented expertise. For example: The traditional model is Client → Pakistani outsourcing company → large number of low-cost workers, and the emerging model is Client → Pakistani AI-enabled specialist → small team + AI infrastructure → higher-value output. The second model can produce higher wages, greater productivity, and stronger export earnings.

The Skills Crisis: The principal constraint on Pakistan's AI transition may not be technology itself. It may be human capital. The Pakistan Business Council has highlighted concerns about the employability of IT graduates and the vulnerability of low-value freelance services to AI disruption. Its recent analysis argues that Pakistan's digital sector needs to move toward higher-value and more AI-resilient capabilities. This suggests that the country should reconsider the meaning of employability. A university degree in computer science alone may not be sufficient. The future employee may require a combination of: Domain knowledge + AI literacy + communication + analytical thinking + creativity. This creates an opportunity for Pakistan's universities to redesign curricula.

AI and the Future of Pakistani Education: Pakistan's higher-education system should not simply create more graduates. It must create graduates capable of working with intelligent machines. Universities should therefore introduce AI competencies across disciplines. For example: Business students with AI analytics, automation, predictive modelling, AI-supported supply-chain management; Economics students with AI-based forecasting, econometrics, data analytics; Psychology students with AI-assisted behavioural analysis, digital mental-health systems, human–AI interaction; Law students with AI-assisted legal research, regulatory technology, digital evidence; Medical students with AI-supported diagnostics, medical data interpretation, health informatics; and Humanities students with AI-assisted research, digital humanities, computational analysis, content strategy. This would create a model of AI literacy across the university, rather than restricting AI education to computer-science departments.

Gender and AI Employment: The gender dimension of AI requires particular attention in Pakistan. Women face significant barriers to labour-force participation, including: mobility restrictions; care responsibilities; limited access to formal employment; workplace constraints; social norms; unequal access to digital resources. AI-enabled remote work could potentially reduce some of these barriers. Women could participate in: remote consulting; online education; digital entrepreneurship; AI-assisted freelancing; e-commerce; research services; digital marketing; professional services. However, this opportunity will materialize only if women have access to reliable internet, devices, digital financial services, skills training, and safe online environments. AI could therefore either reduce gender inequalities or reproduce them, depending on policy choices.

The Risk of AI-Driven Inequality: The most significant employment danger may not be mass unemployment. it may be income polarization. Consider two Pakistani workers: worker A performs routine content writing and basic data processing. Worker B uses generative AI, data analytics, strategic communication, and specialized industry knowledge. AI may reduce demand for worker A while increasing the productivity and income potential of worker B. This creates a widening gap between AI-complementary workers and AI-substitutable workers. The challenge for Pakistan is therefore to ensure that millions of workers can move from the second category toward the first.

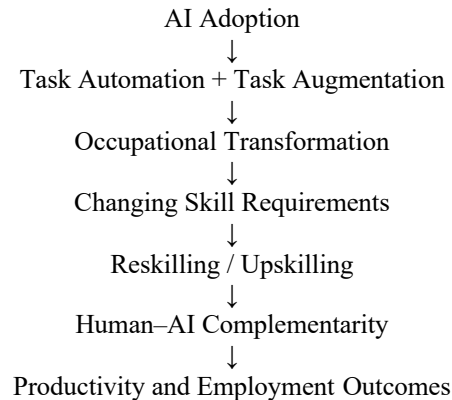


Figure 1: Proposed Conceptual Model

The study proposes the conceptual relationship (Figure 1) moderated by: education; digital infrastructure; gender; income; institutional quality; industry structure; access to finance; government policy. The employment effects of AI in Pakistan will depend less on AI adoption itself than on the country's capacity to convert AI exposure into human–AI complementarity through education, reskilling, institutional adaptation, and inclusive digital access.

Based on the conceptual framework, the study proposes:

- i. Higher exposure to AI-enabled automation will be associated with greater displacement of routine occupational tasks in Pakistan.
- ii. AI adoption will increase productivity in occupations requiring analytical, creative, interpersonal, and domain-specific capabilities.
- iii. AI-related reskilling will moderate the negative employment effects of automation.
- iv. Workers with higher digital and cognitive skills will derive greater economic benefits from AI adoption.
- v. Unequal access to digital infrastructure will increase the distributional effects of AI.
- vi. AI adoption will create greater employment opportunities in high-value digital services than in low-value outsourcing activities.
- vii. Gender-inclusive digital policies will strengthen the positive employment effects of AI for women.

Methodology:

This study employs a qualitative secondary-data research design based on documentary analysis and analytical synthesis. The research draws upon four categories of evidence: International academic literature on AI and employment; Pakistani government policy documents, Pakistani economic and labour-market reports, and Evidence relating to Pakistan's ICT, freelance, and digital-services sectors. Key institutional sources include the State Bank of Pakistan, Ministry of IT and Telecommunication, Pakistan Economic Survey, Pakistan Software Export Board, Planning Commission, UNDP, and international organizations concerned with employment and technological transformation. The study does not claim to generate primary causal estimates of AI-related employment effects. Instead, it develops a Pakistan-specific analytical framework for understanding how AI may influence employment and how policy can shape these outcomes. Future empirical research should test the proposed propositions using firm-level and worker-level data.

Suggested Empirical Model for Future Research:

A future quantitative study could estimate: $\text{Employment Outcome} = \beta_0 + \beta_1 \text{AI Exposure} + \beta_2 \text{AI Skills} + \beta_3 \text{Education} + \beta_4 \text{Digital Access} + \beta_5 \text{Industry} + \beta_6 \text{Gender} + \varepsilon$. Where: Employment Outcome = employment security, wages, productivity, or job creation; AI Exposure = proportion of tasks susceptible to AI; AI Skills = worker-level AI competency; Education = educational attainment; Digital Access = internet/device/connectivity availability; Industry = sector-specific characteristics; Gender = gender-related labour-market differences. A survey of Pakistani workers could use Likert-scale measures to assess perceived AI threat; AI adoption; AI literacy; reskilling; job insecurity; productivity; career adaptability; intention to remain in the occupation. This would allow the conceptual argument developed in this paper to be empirically tested.

Policy Implications:

- i. **Establish a National AI Reskilling Mission:** Pakistan should establish a coordinated national programme for AI reskilling involving: universities; NAVTTC; HEC; industry; technology companies; provincial governments; private training providers. Training should focus not only on programming but also on AI applications across business, education, healthcare, agriculture, manufacturing, logistics, finance, and public administration. Pakistan has already begun moving in this direction. In 2026, an eight-week competency-based AI training initiative was announced with a focus on generative AI, agentic AI, AI productivity tools, automation, and sector-specific applications. Such initiatives should be institutionalized rather than treated as isolated projects.
- ii. **Transform Universities into AI-Enabled Institutions:** Universities should introduce AI literacy across disciplines. Every graduate should possess a basic ability to: use AI responsibly; evaluate AI-generated information; understand data; identify algorithmic bias; protect digital privacy; verify AI outputs.
- iii. **Move Beyond Low-Value Freelancing:** Pakistan should deliberately transition from data entry → software outsourcing → AI-enabled knowledge services. Potential high-value areas include: AI model evaluation; data annotation and synthetic data; cybersecurity; health informatics; financial technology; AI-assisted

- engineering; enterprise automation; AI consulting; specialized research services; AI-enabled supply-chain management.
- iv. **Developing Pakistan's AI-Enabled Export Strategy:** Pakistan's ICT exports demonstrate that international demand for its digital services already exists. The next objective should be to increase value per worker, rather than simply increasing the number of workers. The country's strategy should therefore shift from: “How many freelancers can Pakistan produce?” to “How much high-value digital and AI-enabled economic activity can each Pakistani professional generate?” This distinction is fundamental. The recent growth in ICT exports demonstrates the potential of Pakistan's digital sector, while the increasing importance of AI means that future competitiveness will depend on moving toward higher-value capabilities.
 - v. **AI, Social Protection, and Labour-Market Transition:** Technological transformation inevitably creates winners and losers. Pakistan's social-protection framework must therefore begin considering technology-induced employment transitions. Potential measures include: unemployment support; subsidized reskilling; portable social-security accounts; protection for platform workers; minimum standards for digital employment; regulation of algorithmic management; lifelong-learning accounts. This is especially important for workers in informal employment who may have limited capacity to absorb sudden income shocks.
 - vi. **AI and the Pakistani State:** The public sector represents another major area of opportunity. AI could improve: tax administration; public-health surveillance; agricultural forecasting; traffic management; disaster response; public-service delivery; education administration; fraud detection; customs management. However, government adoption must be accompanied by transparency; accountability; privacy protection; human oversight; cybersecurity; mechanisms for correcting algorithmic errors. Pakistan's National AI Policy 2025 explicitly frames AI as part of the country's transition toward a knowledge-based economy and emphasizes responsible and ethical AI adoption. The policy challenge is now to translate strategic ambition into measurable implementation.

Discussion:

The evidence suggests that the future of work in Pakistan should not be conceptualized as a simple transition from human labour to machine labour. Instead, Pakistan is likely to experience occupational restructuring. Some jobs will shrink. Some jobs will be redesigned. Some jobs will become more productive. New occupations will emerge. The key determinant of whether this transition benefits Pakistan will be the speed at which workers, firms, and institutions adapt. Pakistan possesses several advantages: a large youth population; expanding ICT exports; an established freelance ecosystem; growing technology entrepreneurship; increasing government attention to AI; a large English-speaking professional population; geographical proximity to major technology markets. However, these advantages can become liabilities if the country remains concentrated in low-value digital services. The emerging international economy increasingly rewards knowledge intensity rather than labour intensity. Therefore, Pakistan's AI strategy must be integrated with its broader economic strategy. AI should not be treated as merely a Ministry of

IT issue. It is simultaneously: an education issue; an employment issue; an industrial-policy issue; a trade issue; a gender issue; a social-protection issue; a national-development issue.

A Strategic Framework for Pakistan:

This paper proposes the PAK-AI Future of Work Framework consisting of six pillars.

- i. Pillar₁: AI Literacy: Ensure that every graduate possesses basic AI competencies.
- ii. Pillar₂: Workforce Reskilling: Create continuous learning pathways for existing workers.
- iii. Pillar₃: AI-Enabled Industry: Encourage Pakistani firms to adopt AI to increase productivity rather than merely reduce labour costs.
- iv. Pillar₄: High-Value Digital Exports: Move from low-cost outsourcing toward specialized AI-enabled services.
- v. Pillar₅: Inclusive Digital Employment: Expand participation by women, rural populations, low-income workers, and marginalized groups.
- vi. Pillar₆: Responsible AI Governance: Develop strong standards for privacy, transparency, accountability, cybersecurity, and human oversight.

Conclusion:

Artificial intelligence represents one of the most significant structural changes facing Pakistan's labour market in the twenty-first century. The principal danger is not necessarily that machines will eliminate work. The greater danger is that Pakistan may remain concentrated in those segments of the global economy where human labour is easiest to automate. At the same time, AI creates a historically significant opportunity. Pakistan already possesses an expanding ICT sector, a substantial freelance workforce, a large young population, and growing government commitment to artificial intelligence. ICT exports have reached record levels, demonstrating that Pakistani workers can compete in global digital markets. The next stage must be qualitatively different.

Pakistan must move: from labour arbitrage to knowledge arbitrage; from low-cost outsourcing to high-value digital services; from computer literacy to AI literacy; from job preservation to career adaptability; and ultimately, from human-versus-machine thinking to human-AI collaboration. The central policy objective should therefore not be to prevent technological change. Such an approach would neither be feasible nor desirable. Instead, Pakistan should ensure that technological change increases the capabilities of its people. The future of work in Pakistan will ultimately be determined not by artificial intelligence alone, but by the country's ability to prepare its workforce to work with artificial intelligence. The strategic question for Pakistan is consequently not whether AI will change employment. It will. The decisive question is whether Pakistan will allow AI to displace its comparative advantage—or use AI to transform that comparative advantage into a higher-value, knowledge-driven economy.

References

Acemoglu, D., & Restrepo, P. (2018). Artificial intelligence, automation and work. In A. Agrawal, J. Gans, & A. Goldfarb (Eds.), *The economics of artificial intelligence*. University of Chicago Press.

- Autor, D. H. (2015). Why are there still so many jobs? The history and future of workplace automation. *Journal of Economic Perspectives*, 29(3), 3–30.
<https://doi.org/10.1257/jep.29.3.3>
- International Labour Organization. (2023). *Generative AI and jobs: A global analysis of potential effects on job quantity and quality*. International Labour Office.
- Ministry of Finance, Government of Pakistan. (2025). *Pakistan Economic Survey 2024–25: Information technology and telecommunications*. Government of Pakistan.
- Ministry of Information Technology and Telecommunication. (2025). *National Artificial Intelligence Policy 2025*. Government of Pakistan.
- Ministry of Planning, Development and Special Initiatives. (2025). *AI-powered future: National taskforce sets roadmap for sectoral transformation and national development*. Government of Pakistan.
- Organisation for Economic Co-operation and Development. (2023). *OECD employment outlook 2023: Artificial intelligence and the labour market*. OECD Publishing.
- Pakistan Business Council. (2026). *Expanding Pakistan's IT footprint*. Pakistan Business Council.
- State Bank of Pakistan. (2024). *Annual report 2023–24: Chapter 6—External sector*. State Bank of Pakistan.
- State Bank of Pakistan. (2025). *Annual report 2024–25: Chapter 5—External sector*. State Bank of Pakistan.
- United Nations Development Programme Pakistan. (2025). *Artificial intelligence: Transforming the future*. UNDP Pakistan.
- World Economic Forum. (2025). *The future of jobs report 2025*. World Economic Forum.