Beyond the Borders: Assessing the Impact of the EU AI Act on India's Labour Market

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Certificate

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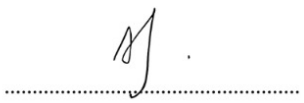

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Acknowledgement

Before moving on, I would like to sincerely thank my teachers and mentors for their guidance, feedback, and encouragement during the course of this research. I would like to specifically acknowledge Ms. Manvi Gupta, Assistant Professor, ISBF. Her insights greatly contributed to the development of my analytical approach. I am also grateful to the researchers, institutions, and organisations whose published work informed this study. Lastly, I acknowledge the importance of independent reading, discussion, and reflection in shaping the ideas presented in this paper.

Declaration

"I, Nishnk De, hereby declare that this paper is my original work and has not been copied from any source. All references used have been acknowledged."

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1) Introduction

1.1) Global Overview of Artificial Intelligence

Artificial Intelligence (AI) has rapidly evolved from a niche technology to a globally pervasive general-purpose tool, with adoption accelerating sharply over the past few years. Worldwide, the proportion of organisations adopting AI reached **78% in 2024**, rising from **55% in 2023** (Microsoft, 2025). OpenAI's ChatGPT surpassed one million users within **five days** of its launch in November 2022 and grew to **400 million users by February 2025** (Microsoft, 2025).

A 2025 dataset aggregating global AI usage reports that approximately **900 million people worldwide** actively use AI tools, indicating that about one in ten individuals interacts regularly with AI in work, education, creativity or daily life (Resourcera, 2025). Enterprise adoption mirrors this momentum. As of 2025, around **78% of global organisations** report using AI in at least one business function,up significantly from early-decade levels, where adoption was just **55% in 2023** (All About AI, 2025). This shift reflects the transition from experimental AI use to mainstream operational integration across industries.

Beyond broad adoption numbers, newer research offers granular insights. Microsoft's **"AI User Share" metric**,a population-normalised measure of the share of a country's

working-age population that actively uses AI, reveals sharp cross-country variations (Microsoft, 2025). While uptake is high in developed economies, there remains "substantial latent demand" in lower-income countries as digital access improves (Microsoft, 2025).

Global projections further illustrate AI's economic significance. China's AI sector is forecasted to contribute **26.1% to national GDP by 2030**, driven by rapid adoption in healthcare (76%) and manufacturing (57%), alongside the world's largest AI patent portfolio (All About AI, 2025). The EU, holding 15% of the global AI market, is projected to influence **43% of global AI governance**, particularly through frameworks like the **EU AI Act** and the **Digital Markets Act** (European Commission, 2024).

1.2) Overview of AI in India

India stands out as an emerging global AI powerhouse. AI could contribute **15.7% to India's GDP (USD 1.3 trillion)** by 2030, supported by a **47% CAGR in AI services exports** and a **35% expansion in AI talent pools** (All About AI, 2025). With these trends, the global economy is moving toward a **U.S.–China AI duopoly**, while regions such as the EU, India, Israel and South Korea collectively hold 35% of global AI value through specialisation and governance (All About AI, 2025).

The growing scale of AI adoption heightens the urgency for strong governance. When nearly a billion individuals and four-fifths of global firms use AI, unregulated deployment risks systemic harms, including privacy violations, safety failures, biased outcomes, unequal access, concentration of power and cross-border digital spillovers. Microsoft's "AI User Share" data also highlights deep inequalities in global access (Microsoft, 2025). Without regulation, such disparities may widen.

1.3) Overview of the EU AI Act

Recognising this, the **European Union introduced the EU AI Act**, the world's first comprehensive, risk-based AI regulatory framework (AI Act Overview, 2024; European Commission, 2024). The Act classifies AI into four categories,**unacceptable risk, high risk, limited risk and minimal risk**,based on potential societal harm. Unacceptable-risk systems, such as manipulative AI, social scoring or harmful biometric categorisation, are banned entirely (AI Act Overview, 2024; European Commission, 2024).

High-risk systems,those used in healthcare, transport, education, judicial processes, biometrics, public benefits or credit scoring,require strict compliance measures. These include risk assessments, data governance, technical documentation, audit logs, cybersecurity standards and human oversight (AI Act Overview, 2024; European Commission, 2024).

Limited-risk AI, such as chatbots or generative models, must meet transparency requirements, including disclosure that users are interacting with AI. Generative AI providers must ensure AI-generated content is identifiable (AI Act Overview, 2024; European Commission, 2024). Minimal-risk AI remains largely unregulated. Importantly, the Act applies extraterritorially: any organisation whose AI system is *used within the EU* must comply, regardless of origin (AI Act Overview, 2024; European Commission, 2024).

To enforce compliance, the Act establishes supervisory authorities, market surveillance and mandatory EU-wide registration for high-risk systems. Penalties for non-compliance are substantial, making adherence essential for market access (AI Act Overview, 2024; European Commission, 2024). In effect, the Act offers a global blueprint for responsible AI development, balancing innovation with the protection of rights, safety and trust.

European economies such as Germany, France, the Netherlands and the Nordic countries are already adapting to this framework. **63% of European firms plan to increase spending on AI governance between 2025 and 2027** (DESI Report, 2025; ORF, 2025). The EU's regulatory leadership is shaping global supply chains and digital trade.

2) Literature Review

The global expansion of artificial intelligence has created economic and regulatory transformations, raising urgent questions about how countries will adapt to the governance frameworks emerging in major markets. As AI usage increases across sectors, international bodies, national governments and private firms attempt to balance automation with safety and accountability.

The **European Union's Artificial Intelligence Act** is the world's first comprehensive, binding regulatory framework for AI. Since the EU is a major actor in global digital trade, its standards carry spillover effects far beyond Europe's borders. For countries like India, whose economy is deeply integrated with global IT and AI service markets, the EU's regulatory choices represent structural forces that may shape labour markets, investment patterns and

domestic governance models in the years ahead. This literature review therefore, examines *why AI governance has become a global priority*, *how the EU AI Act is interpreted in existing research and what current scholarship suggests about the implications for trade-dependent, emerging AI economies*. By understanding these debates, the review establishes the conceptual foundations for analysing India's position within a rapidly evolving international AI order.

The last few years have seen both the promise and peril of AI. A report by the Organisation for **Economic Co-operation and Development (OECD)** claims that as AI dependence increases in sectors like health, transportation, finance and public services, the potential for **"algorithmic bias, opacity, lack of accountability, unequal access and concentration of power"** grows sharply. Thus, the OECD calls for coordinated governance frameworks that ensure **transparency, human oversight, data-governance standards and periodic auditing** (OECD, 2023).

International organisations researching on policies also point out that the unregulated way of deploying advanced AI systems could possibly endanger our democratic system and create instability in our societies. According to an article published by the **Center for Strategic and International Studies (CSIS),** technologies based on artificial intelligence could create further economic disparities among marginalized populations. Furthermore, many of the advanced AI technologies today provide very little or no privacy for users' personal information. In addition, the use of artificial intelligence technologies creates **opaque processes,** creates potentially **discriminatory outcomes** and could potentially create a lack of trust between contributing parties, therefore, the **lack of enforceable safeguards may cause harm to underprivileged communities** (Sayler, 2023). Thus, to protect our society's basic rights and values, a comprehensive governance framework for all uses of artificial intelligence **(mandatory governance, transparency requirements and accountability frameworks)** will be required.

But these same sources mention that poorly designed regulation risks stifling innovation. In a study exploring regulatory compliance costs, researchers note that heavy obligations (audit logs, testing, documentation) may raise fixed costs, create entry barriers for small firms and start-ups and concentrate AI capability in large firms that can absorb compliance overhead. (Johnson, Shriver, & Goldberg, 2022).

This friction between the need for governance to protect rights and the risk of over-regulation preventing innovation is the key tension in AI governance.

Against this backdrop, the **EU Artificial Intelligence Act's (EU AI Act)** risk-based architecture, banning **"unacceptable risk"** applications, strictly regulating **"high-risk"** systems and demanding transparency for **"limited-risk"** systems, receives academic support as an attempt to reconcile AI's benefits with societal risks (European Commission, 2021).

According to Engler and Renda (2022) suggests that while the Act aims to improve safety and accountability, it may inadvertently disadvantage smaller innovators and consolidate market power among larger technology firms with deeper compliance resources. A technical piece published by a European data-policy think tank argues that the Act's vagueness (in definitions of **"high-risk" or "acceptable trade-offs"**) could lead to uneven enforcement or legal uncertainty, potentially discouraging cross-border collaboration (Renda, 2022).

This line of critique suggests that the EU regulation may reshape the global AI sector in ways that disadvantage agility, innovation and smaller players.

Another branch of literature concerns what happens when a region's regulation reaches far beyond its borders. Known under the term **"regulatory spillover,"** this phenomenon describes how firms globally align to the strictest regime (especially when the regulator represents a large market) to access that market. Studies of prior **regulatory regimes** (environmental law, data privacy) show that compliance pressures often lead to **reshoring, offshore-to-onshore relocation of services** or the creation of new **"compliance service"** businesses in lower-cost jurisdictions (Bradford, 2020; Peukert, Batikas, Bechtold, & Kretschmer, 2022).

Applying this logic to the EU AI Act, several policy and industry analyses indicate that Indian IT/ITES and AI-service providers working with European clients will face pressure to adopt stronger compliance, data-governance and audit mechanisms.

A **2023 NASSCOM-Deloitte report** has stated that EU digital regulations, including the GDPR, Digital Services Act and now the AI Act, are driving the creation of **"compliance pull effects"**. Indian service exporters need to improve their documentation practices, develop systems for managing risk and conduct technical audits before they can access European markets.

Empirical studies on spillovers from GDPR show companies, outside of the EU, were forced to change their data handling & vendor management systems to comply with European standards (Peukert, et Al, 2022), implying that Indian companies providing services such as AI development, model testing or deployment support must invest in systematic documentation and compliance tools to compete effectively.

The reduced demand resulting from over-regulation may lead to EU clients considering compliance to be too great a cost and therefore sole reliance on AI or even utilizing in-house AI development, will reduce the volume of tasks outsourced. This risk is especially acute for smaller Indian firms with tight margins.

Given the literature, there is no simple "good regulation = good outcome" or "regulation = stifling" dichotomy. Rather, the outcomes are conditional on how regulation is implemented, how firms adapt and how governance-markets evolve globally.

The paper's contribution lies in this middle ground: with the right domestic policy support and global partnerships, India can transform the EU-driven compliance requirement into a strategic opportunity. Indian firms can become global suppliers of auditable AI services, leveraging lower costs, skilled labour and multinational experience. At the same time, because India is itself developing AI infrastructure (through national AI missions, public-private R&D and collaborations with western and global partners), it can also build a domestic regulatory and governance framework tailored to it.

This synthesis draws strength from empirical data (OECD's AI adoption and risk reports, trade-flow studies), from policy-regulation theory (spillover and compliance economics) and from India's real economic position.

3) Research Gap

By doing so, the paper seeks to fill a gap in existing literature: the relative absence of studies on how **extraterritorial AI regulation affects labour markets, investment flows and compliance-based service economies in the Global South,** especially in large, export-oriented, AI-capable economies like India.

4) Research Question

This paper addresses the following research question.

"How does the EU AI Act affect Indian labour trade and investment flow in the IT Sector?"

(This paper uses secondary data, regulatory analysis, and labour-market theory to assess expected impacts rather than measuring realised outcomes.)

5) Importance of understanding Indian Labour Trade and investment flow in the IT Sector

The significance of examining the flow of labour and capital into and out of India's IT industry is particularly important since the digital economy contributes not only directly to India's GDP but also serves as the foundation for India's incorporation into the global economy. The projected **IT export volume of US$224.4 billion in Fiscal Year 2025** will represent over **65% of the total IT services** output from India and thus gives India its **largest single export sector** for generating foreign economic relationships. (IBEF, 2024)

Given the magnitude of the contribution of employment, foreign exchange reserve growth and the investment appeal of India to global investors connected to the international demand for Indian IT services, any event that disrupts the existing regulatory framework for a major client market will have a massive macroeconomic impact on India as a whole. The EU AI Act shifts from a foreign compliance law to that of a structural force in the transformation of the Indian labour markets.

The European Union (EU) has a significant presence in the Indian economy as an important source of high-skill digital labor. Should EU businesses require AIs to comply with EU specific risk, transparency, documentation and audit requirements, there is no way the Indian IT industry will be able to maintain its current position of passivity regarding its workforce. The flow of labor (including the skill types, wages paid and the nature of outsourced tasks) will be influenced directly by these regulatory preferences. Certain existing job types (e.g. lower-skill annotation, modular coding) will decrease, whereas, the high-skill governance jobs associated with risk assessment, model explainability and auditing of AIs will increase. This change will impact the overall quantity and quality of labor and change the way in which those labor resources are classified in terms of hierarchy and pricing.

The manner in which investment will be affected will likewise follow the same pattern as labor flows. Foreign investors are beginning to view a business' ability to demonstrate regulatory compliance' as a component of the company's overall competitiveness. If Indian

companies are not able to demonstrate their ability to comply with the EU AI Act, then much of the foreign investment in those companies will more than likely relocate to countries that have an existing robust AI governance ecosystem or companies within them. Likewise, however, if Indian businesses have the ability to demonstrate and maintain a credible system of regulatory compliance for AIs, then they will be in a position to compete for much of the very high-value investment that will come from businesses that are focusing their efforts on creating trustworthy AIs and providing support services associated with auditing AIs and mitigating digital risks.

Thus, the EU AI Act has the ability to identify which Indian companies are going to be "future-ready," and which companies are going to be "at-risk" of losing competitiveness due to their inability to maintain compliance with the EU AI Act. And it will reward those that can successfully demonstrate regulatory compliance and, at the same time, punish those that cannot.

The research has both significant theoretical implications and practical applications for the global economy as India's continuing role as a major source of IT talent and services will depend on how well it aligns its labour force and investment framework with the changing regulatory landscape in Europe, especially as EU regulations evolve to necessitate compliance for IT services entering Europe. The research also reveals that should India fail to recognise and adapt to these trends, it could see millions of jobs tied to digitally imported services move to EU countries, possibly through ancient, sometimes disruptive, positive legislative changes, automation and/or the restrictions imposed by the EU. On the other hand, should India use these changing regulations to its advantage by intelligently coordinating its labour force to become an edict of EU standards, the largest source of artificial intelligence governance and risk-compliant digital labour for the entire world, then India would have a substantial and growing international market for AI-Governance and Risk Compliant Digital Labour. The growth of this market is further supported by the EU AI Act.

In summary, understanding the labour trade and investment streams will be crucial to protect India's competitiveness in international trade and to support India's potential to be a large source of high-value jobs, avoid marginalisation from technology and to create new economic opportunities from global regulatory changes.

6) Basics of Labour Market

Labour economics studies how the interaction between workers (supply of labour) and firms (demand for labour) determines the number of people employed, the amount of pay that they receive for their work, and the extent of job security or stability in the economy.
In other words, the study of labour economics includes the analysis of labour as a factor of production to either produce goods or services.

Firms create demand for labour by generating output, which is created from the demand for goods and services that they produce. On the other hand, individuals provide their labour in exchange for wages to support their income when they are not working. Therefore, the supply of labour reflects the decisions made by an individual to provide their labour in exchange for wages.

Wages are determined by the interaction of the supply and demand for labour in the marketplace. The demand for labour is a derived demand and thus it depends on further things (like skills, experience etc.) and the supply of labour is also dependent on the amount of skills, experience and minimum salary that the employer is willing to pay.

Thus, they reach an equilibrium (balance point) depending on current economic conditions. In the real world, there are institutional and structural factors (e.g. minimum wage legislation, technological advancements, and various government interventions) that cause labour markets not to reach their equilibrium level of wages and employment levels. These factors may lead to unemployment being caused by three distinct sources: frictional, structural, and cyclical.

Governments are key players when it comes to determining how workers will fare by implementing regulations, social security systems, and initiatives that are designed to help ensure that workers are protected from the risk of income instability. If we are to gain a better understanding of what has been and will be the impact on labour markets due to various forms of external disruption (for example, the development of new technologies, and changes in regulatory framework), we must then utilise the information provided in this article to develop a model through which to study the potential impact of the governance of AI (e.g.,

the EU's proposed AI legislation) on the dynamics of labour, skill demand, and employment trends within India's IT industry.

With this basic understanding of how labour markets work, the rise of artificial intelligence can be seen as a major change in how work itself is organised. AI is not only automating tasks but also reshaping what skills are valued, where work is performed and how jobs are regulated across countries. As AI becomes central to everyday business operations, rules governing its use are beginning to influence employment patterns just as strongly as wages or market demand. This is especially true of the European Union's Artificial Intelligence Act, which applies even to companies based outside Europe if their AI systems are used within the EU. For countries like India, whose IT sector relies heavily on European clients, this means that foreign regulation can directly affect domestic jobs, skills and investment decisions. This paper therefore explores how the EU AI Act may shape India's IT labour market and investment flows, focusing on how global AI rules translate into real economic outcomes for workers and firms.

7) Analysis

7.1) Investment flow in India

The EU is India's **second-largest trading partner** and the **largest destination for Indian IT-ITES exports**, accounting for nearly **23% of sectoral revenue** (IBEF, 2025). More than **200,000 Indian professionals** service AI, cloud, analytics and automation contracts for European clients. With the EU AI Act in force, many Indian firms that design, test or maintain AI systems for European clients may now qualify as "providers" or "deployers." This requires maintaining conformity assessments, transparency logs, bias-testing protocols, technical documentation and human-oversight mechanisms aligned with EU standards (ORF, 2025).

Investment patterns are changing accordingly. India's private AI investment,USD **7.8 billion in 2023**,is projected to grow **18–22% annually** until 2030, driven largely by external regulatory demand from regions like the EU (Reuters, 2024). The Government of India's **₹10,371-crore IndiaAI Mission** announced in 2024 aligns with these shifts (IndiaAI, 2024).

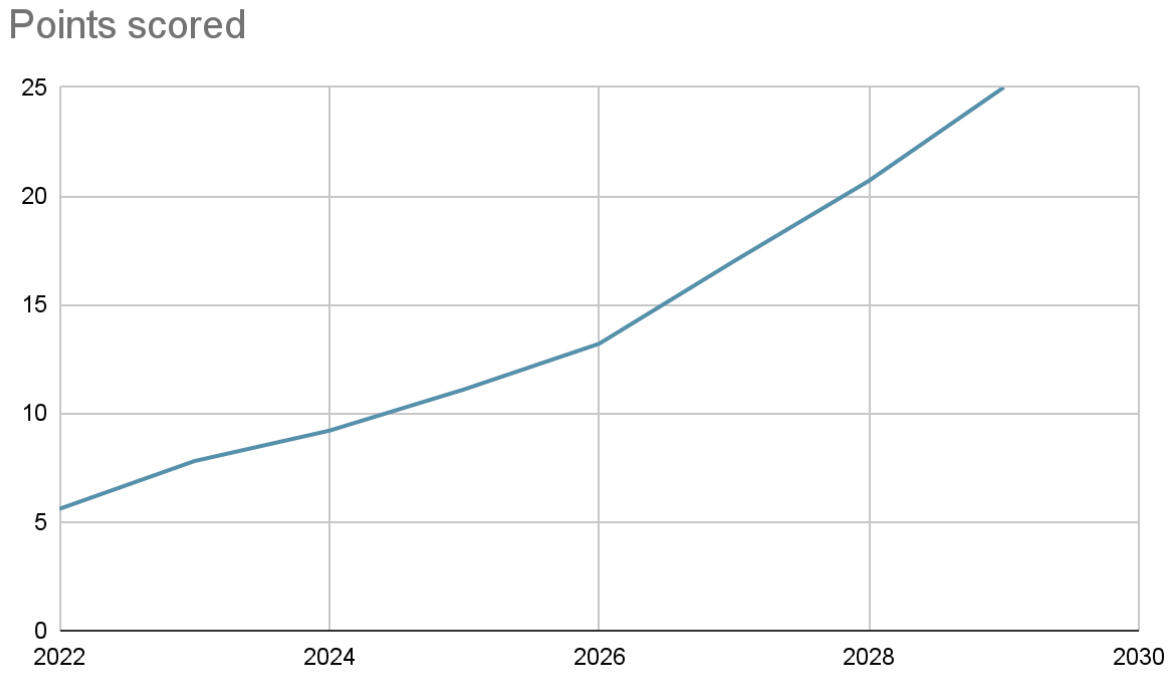

Figure 1: Projected investment in AI by the Indian Government

{Formula used CAGR=(Vi/Vf)^(1/n)−1} (Kotak Mahindra Bank)

Domestically, India is beginning to integrate AI into governance, with courts piloting AI-assisted transcription and policy bodies exploring AI-enabled legislative drafting. Therefore, establishing an Indian AI regulatory framework similar to the EU's is increasingly inevitable. International partnerships, including the **India–EU Trade and Technology Council**, **US–India iCET** and **Japan–India Digital Partnership**, provide opportunities for India to co-shape global AI norms.

Ultimately, the EU AI Act influences India not only as an exporter of AI services but also as an emerging regulator. As India develops its own AI governance model, the relationship between India's **labour market**, its **AI service exports to Europe** and the **incentives created by the EU AI Act** will be central. Understanding this relationship is crucial for forecasting future outcomes if India adopts a structured AI regulatory architecture.

7.2) Indian Labour Market

7.2.1) Structural Overview of India's IT Labour Market

Currently India has a large pool of service workers in technology that is integrated into the global market and considered one of the largest pools of service workers (NASSCOM, 2024; IBEF, 2025). The way the labor market functions today results from a longstanding relationship between global demand for digital services, domestic education systems, firm-level organizational strategies and India's place within the international division of digital labor (Autor, Dorn, & Hanson, 2016; Peukert et al., 2022). Additionally, because the IT sector is primarily service export-driven, India has no large domestic consumption or capital-intensive production therefore all aspects of employment in the IT sector have been developed based on these parameters (IBEF, 2025; NASSCOM, 2024). The following describes the structural characteristics of India's IT labor force, as defined by its market behavior in equilibrium (Acemoglu & Autor, 2011).

The basic underpinnings of the Indian IT labor force revolve around three central pillars: (a) it is inherently export-oriented; (b) it is service-driven and (c) it has a hierarchical wage structure (NASSCOM, 2024; IBEF, 2025). Most labor demand comes from customers located outside of India, with the vast majority of demand being generated by companies located in both North America and Western Europe, which is primarily responsible for the outsourcing of software development, systems maintenance, data processing and related services (Peukert et al., 2022; WTO, 2023). Therefore, labor demand is much more correlated to the global cycle of technology spending and the resulting expansion and reduction of outsourcing, than it is with demand resulting from innovation generated locally within India (OECD, 2023; Autor et al., 2016). The export orientation of the sector is a defining characteristic of the size, structure and stability of employment in this sector (NASSCOM, 2024).

Scale and Composition of Employment

The IT–ITES sector employs several million workers and represents one of the largest organised private-sector labour markets in India (NASSCOM, 2024; IBEF, 2025). Employment spans software services, business process outsourcing (BPO), engineering services, data analytics, cloud computing and AI-adjacent activities (IBEF, 2025). Despite this apparent functional diversity, occupational structures across sub-sectors remain relatively uniform, reflecting the dominance of standardised service delivery models designed for scale (Peukert et al., 2022; Acemoglu & Autor, 2011).

Employment growth in the sector has historically followed patterns of offshore demand expansion rather than domestic technology adoption (NASSCOM, 2024; OECD, 2023). Periods of global economic growth and digital transformation have translated into rapid hiring, while downturns in international markets have led to synchronised hiring freezes or layoffs (Autor et al., 2016; WTO, 2023). This pattern highlights the sector's dependence on external demand conditions and its limited insulation from global volatility (OECD, 2023).

Pyramidal Workforce Structure

India's IT labour market is characterised by a large number of entry-level workers, a smaller number of experienced professionals and a very small number of highly specialised workers, commonly referred to as 'pyramidal' (NASSCOM, 2024). Entry-level workers are typically recent graduates of engineering or related disciplines who perform routine tasks such as coding, software testing, application maintenance, data handling and providing technical support (IBEF, 2025). Entry level and junior roles are highly standardised, with close supervision throughout their duration (Acemoglu & Autor, 2011).

The middle tier of professionals consists of team leaders, experienced engineers and project managers who coordinate workflow processes, translate client requirements into technical specifications and manage delivery schedules (NASSCOM, 2024). The middle-tier professionals serve as an intermediary between junior-level employees performing routine work and senior technical leaders who provide direction to the entire organisation (OECD, 2023). The high-level professionals include senior architects, domain specialists and strategic managers, who are engaged in system design, complex problem-solving for customers and long-term client management (IBEF, 2025). Senior-level professionals are comparatively few in number and comprise only a small proportion of total jobs in the IT workforce (NASSCOM, 2024).

The majority of jobs in the IT industry are concentrated in a few urban centres that specialize in technology (IBEF, 2025). Specifically, Bengaluru, Hyderabad, Pune, Chennai, Gurugram and Noida provide large numbers of workers so that companies can easily move their employees around to work on different projects (NASSCOM, 2024). For employers, having a large pool of available workers in one city reduces recruiting and coordination costs, while making it much easier to move workers between companies within the region (OECD, 2023).

Accordingly, the labour market is very fluid in these cities, leading to high rates of movement of employees between different companies (NASSCOM, 2024).

The clustering of urban areas is made possible by complementary support systems, such as engineering colleges, training institutes, talent agencies and multinational subsidiaries (IBEF, 2025). These support systems produce a constant supply of new and replenished talent and skills for the IT industry, supporting the rapid growth of the sector (NASSCOM, 2024). The concentration of workers in urban centres results in a high degree of uniformity in the skill sets of employees and the employment practices of employers within the sector (Acemoglu & Autor, 2011). This is because workers within urban areas have very similar educational backgrounds and have often worked on similar types of projects (OECD, 2023).

Project-Based Employment

The employment structure in India's IT sector is characterized by a project-based approach in which labour is acquired through distinct client agreements and not based on long-term domestic market expansion or production strategies (NASSCOM, 2024; Peukert et al., 2022). As a result, firms hire employees and allocate them according to their forecasts for future projects (OECD, 2023). This system has the effect of linking continued employment with the amount of time that an employee can charge clients for their work (Autor et al., 2016).

Employees in this system are typically assigned to specific clients/projects and their ability to remain employed will depend on reassignments, contract renewals and obtaining work from new clients (NASSCOM, 2024). However, while employees do have formal employment contracts, the basis of these contracts is the concept of "rolling engagement," meaning that an employee's services are continuously matched to employers' fluctuating external demands (OECD, 2023). Therefore, while this system allows firms to remain agile, it introduces uncertainty regarding the long-term employment prospects of workers (Autor et al., 2016).

Project-based employment also influences skill development among IT workers (Acemoglu & Autor, 2011). Workers acquire skills related to the technologies used by their clients and the standards established by their industries rather than developing skills specific to their employer's business strategy or innovation agenda (OECD, 2023). As a result, workers possessed transferable skill sets that can be utilized at various employers within the context of the predominant outsourcing framework in which they reside (NASSCOM, 2024).

Wage Structures

Wage determination in India's IT labour market reflects its position within the global hierarchy of digital labour (Autor et al., 2016). Compensation levels are significantly lower than those in advanced economies for comparable technical roles, This wage differential gives India a comparative advantage in IT services and remains central to its role in global outsourcing (IBEF, 2025; WTO, 2023).

Within the sector, wages vary systematically by experience and role complexity (NASSCOM, 2024). Entry-level wages are modest relative to educational requirements, mid-level wages increase gradually and senior or niche roles command higher premiums (OECD, 2023). However, overall wage dispersion remains narrower than in innovation-driven technology ecosystems (Autor et al., 2016).

Skill Formation, Training and Labour Mobility

Skill formation in the IT labour market is characterised by continuous upskilling and frequent role transitions (OECD, 2023). Firms invest heavily in internal training programmes to align worker capabilities with evolving client requirements, supplementing formal education with short-term certifications and proprietary tools (NASSCOM, 2024). Workers regularly shift between technologies, programming languages and functional roles as projects change (Acemoglu & Autor, 2011).

Historically, development has prioritised implementation, testing and maintenance rather than design, governance or oversight capabilities (OECD, 2023). Labour mobility is high, with frequent inter-firm movement driven by wage differentials, project availability and career progression strategies (NASSCOM, 2024). While mobility enhances individual employability, it also reinforces homogeneity in skill profiles across firms (Autor et al., 2016).

Firm Typologies

The IT labour market comprises a range of firm types, from large multinational service providers to small and medium-sized enterprises (SMEs) and start-ups (IBEF, 2025). Large firms dominate employment, benefiting from diversified client portfolios, established delivery frameworks and the ability to maintain labour benches (NASSCOM, 2024). This enables them to absorb demand volatility more effectively (OECD, 2023).

SMEs and start-ups operate with leaner staffing models and narrower client bases, making their employment capacity more volatile (Peukert et al., 2022). Workers in these firms face greater exposure to project risk but may experience broader role responsibilities (OECD, 2023). Despite these differences, employment strategies across firm types are shaped by scalability, cost control and responsiveness to client demand (NASSCOM, 2024).

Export Dependence, Structural Exposure and Regulatory Asymmetry

A majority of employment in India's IT labour market is ultimately linked to foreign demand (NASSCOM, 2024; WTO, 2023). Domestic consumption of advanced IT services, while growing, remains secondary in determining overall labour absorption (IBEF, 2025). Employment growth therefore tracks global technology investment cycles rather than domestic economic conditions (Autor et al., 2016). This creates a condition of structural exposure, defined as the systematic sensitivity of domestic employment outcomes to external economic and institutional developments (OECD, 2023).

India's domestic regulatory framework for advanced digital technologies has historically been characterised by a light-touch approach (ORF, 2025). Compliance with foreign regulatory requirements has therefore been mediated primarily through private contracts rather than domestic law (Peukert et al., 2022). This produces regulatory asymmetry, defined as the divergence between domestic regulatory obligations and those imposed by foreign jurisdictions on the same economic activity (Bradford, 2020). While regulatory asymmetry has enabled operational flexibility and cost competitiveness, it also embeds latent vulnerability to changes in foreign governance regimes (OECD, 2023).

7.2.2) The EU AI Act as a Labour-Market Shock to Indian IT Employment

The EU AI Act significantly impacts the global digital labour market and as such, it will impose an exogenous labour-market shock on the Indian IT sector. This shock will lead to changes in labour demand, skill value and job stability caused by the imposition of the EU AI Act's legally binding obligations, which will lead to the re-evaluation of the acceptable methods of AI creation, use and management within the framework of the law. The way that the EU AI Act affects jobs in Indian IT is through India's inclusion in the European AI value chain via cross-border provision of services, rather than through domestic law. The EU AI Act does not represent a technological change emanating from firms through internal factors; rather, the EU AI Act establishes legally binding requirements for AI development,

deployment and governance, which function as conditions of access for European businesses and do not give direct orders to foreign nations or companies. Therefore, jobs in the Indian IT sector will be affected by European companies' need to comply with the EU AI Act by making changes to their contractual arrangements, organisational structure and task distribution (Bradford, 2020; European Commission, 2024; OECD, 2023).

The European Union Artificial Intelligence Act creates an overall approach to governing and controlling artificial Intelligence Systems, while also including a risk classification model based on potential severity and placing fine-grained requirements on "High-Risk" Artificial Intelligence Applications (European Commission, 2024).

The Act does not just apply to organisations with a presence in the European Union but also covers all other companies that develop AI systems intended for use in the EU Market or provide labour to develop AI System Outputs that will affect individuals within the European Union (European Commission, 2024).

Therefore, the extraterritorial application of the EU AI Act also means that Indian IT Companies and therefore Indian IT Workers will fall under the functional reach of the EU AI Act whenever they work on Developing AI Systems for the European Market (Bradford, 2020; ORF, 2025).

In addition, workers in the roles of Developing/Testing/Maintaining/Supporting Models may find themselves indirectly covered by the EU AI Act's regulations without any corresponding changes to Indian law (ORF, 2025; OECD, 2023).

Thus, the EU AI Act operates externally to Indian IT Employment Regulations, based on how Indian IT Companies participate in the European Market and thus "Employment" is shaped by the contractual relationship between European clients and Indian Service Providers (Bradford, 2020; WTO, 2023).

First, the Act increases the labour intensity of AI-related projects. Compliance with risk assessment, documentation, bias evaluation and monitoring requirements expands the volume and duration of work required per project. This alters labour demand quantitatively and qualitatively, as greater emphasis is placed on tasks that ensure regulatory conformity (European Commission, 2024; OECD, 2023).

Second, the Act reshapes task composition within outsourced work. Activities that were previously peripheral, such as documentation, audit preparation and validation, become central components of project execution. Conversely, certain low-margin, execution-only tasks become less attractive to outsource if compliance overheads erode cost advantages. This task reconfiguration directly affects which categories of labour are demanded (Peukert et al., 2022; OECD, 2023).

Third, the Act redistributes legal and reputational risk along AI supply chains. Indian firms may be required to assume greater responsibility for compliance failures, either explicitly through contracts or implicitly through operational expectations. This reduces tolerance for error and increases demand for workers capable of ensuring regulatory alignment throughout the AI lifecycle (Bradford, 2020; European Commission, 2024).

Together, these channels constitute a regulatory transmission process, whereby a foreign legal regime generates domestic labour-market effects without direct legislative enforcement (OECD, 2023; WTO, 2023).

The EU AI Act functions as a skill-biased regulatory shock, meaning that it disproportionately affects workers based on the complexity, judgment intensity and governance relevance of their tasks (Acemoglu & Autor, 2011; OECD, 2023). Workers engaged primarily in routine or execution-oriented AI tasks, such as basic data processing, model tuning or standard testing, face heightened displacement risk as firms reassess the cost-effectiveness of outsourcing such functions under stricter regulatory conditions (Peukert et al., 2022).

In contrast, the Act increases demand for labour capable of integrating regulatory requirements into technical workflows. This includes roles involving risk classification, bias assessment, system documentation, audit coordination and the implementation of human oversight mechanisms. These functions require hybrid competencies that combine technical expertise with regulatory literacy and contextual judgment (European Commission, 2024; OECD, 2023).

The result is not a uniform reduction in employment but a recomposition of labour demand that favours governance-oriented, higher-skill roles over standardised execution work. This recomposition alters career pathways, skill premiums and access to stable employment within the sector (Acemoglu & Autor, 2011; OECD, 2023).

A central question raised by the EU AI Act concerns whether its labour-market impact on Indian IT employment is primarily contractionary or transformational. Increased compliance costs may lead European firms to reduce outsourcing volumes, delay AI deployments or internalise certain functions, particularly for smaller or lower-margin projects. These adjustments create contractionary pressures on segments of Indian IT employment tied to routine AI services (Peukert et al., 2022; WTO, 2023).

At the same time, compliance requirements generate new categories of labour demand that are difficult to automate and must be performed continuously. Governance, monitoring and audit-related activities are inherently labour-intensive and may create new employment opportunities for Indian firms capable of supplying such services at scale. The labour-market impact of the Act is therefore asymmetric, involving contraction in some segments and upgrading or expansion in others (OECD, 2023; European Commission, 2024).

Whether the net effect is positive or negative depends on firms' capacity to reposition their service offerings and on workers' ability to acquire the requisite skills. Importantly, this transformation is not automatic and entails adjustment costs that are unevenly distributed across the workforce (Acemoglu & Autor, 2011; OECD, 2023).

The labour-market effects of the EU AI Act vary significantly across firm types. Large Indian IT firms with diversified client portfolios, established compliance infrastructure and greater financial resources are better positioned to absorb regulatory costs and redeploy labour into compliance-intensive roles. These firms can invest in training, governance frameworks and internal audit capabilities, enabling them to retain workers even as task composition shifts (NASSCOM, 2024; OECD, 2023).

Smaller firms and start-ups face higher relative compliance costs, which may lead them to exit certain AI-related markets or reduce hiring. As a result, employment volatility is likely to be greater among smaller providers, reinforcing labour-market concentration within large firms. This dynamic mirrors earlier regulatory episodes, where increased compliance burdens led to consolidation and reduced participation by smaller actors (Aridor et al., 2020; Peukert et al., 2022).

The skill-biased nature of the EU AI Act has implications for wage structures within the IT labour market. Workers possessing scarce, compliance-relevant skills are likely to command wage premiums as demand for their expertise rises. Conversely, workers in routine execution

roles may experience wage stagnation or increased job insecurity (Acemoglu & Autor, 2011; OECD, 2023).

The EU AI Act exemplifies regulatory spillover, defined as the cross-border impact of domestic regulation on foreign labour markets. Empirical evidence from GDPR provides a strong precedent for such regulatory spillovers. Firms subject to GDPR increased hiring in compliance-intensive roles while simultaneously reducing lower-skill data-handling positions, leading to labour consolidation within larger firms (Peukert et al., 2022).

Aridor, Che and Salz (2020) show that privacy regulation raised fixed compliance costs, disproportionately affecting smaller service providers and altering global data-service employment patterns (Aridor et al., 2020).

Similar spillovers were observed following the implementation of the EU's General Data Protection Regulation (GDPR), which reshaped data-handling practices and employment patterns in non-EU IT service sectors. Evidence from such episodes suggests increased demand for compliance-related roles, labour consolidation within large firms and reduced participation by smaller providers (Peukert et al., 2022; OECD, 2023).

In this sense, the EU AI Act represents not an isolated intervention but part of a broader pattern in which powerful regulatory jurisdictions shape global labour-market outcomes through market access conditions rather than direct control (Bradford, 2020; WTO, 2023).

7.2.3) Skill Formation, Reskilling and Human Capital Adjustment in India's IT Labour Market

7.2.3.1) Regulatory-Induced Skill Recomposition under the EU AI Act

With the advent of the EU AI Act, it appears that there is a major shift in the way "relevant skill" is defined within Europe's AI market (European Commission, 2024; OECD, 2023). Human capital development in India's Information Technology (IT) sector has historically placed a significant emphasis on the development of technical proficiency, i.e., via specific programming languages, systems and architecture (the latter two being used mostly for databases), as well as through the use of various approaches to Machine Learning (ML) (NASSCOM, 2024; IBEF, 2025). However, the manner in which human capital has been created and valued within this sector has been primarily an output-oriented focus, with little

emphasis on procedural governance or legal liability for anything created or produced (OECD, 2023). The EU AI Act alters the existing model of human capital creation in that it incorporates regulatory compliance as part of the "skill set" required for the employability of individuals working with AI systems that are intended for use in Europe (European Commission, 2023).

The Act provides for the regulation of AI systems that meet high risk criteria and requires that these systems comply with a number of regulatory obligations regarding data governance, risk management, transparency, human oversight and post-market monitoring (European Commission, 2024). Therefore each of these obligations requires individuals whose skill sets allow for the execution of a variety of technical activities but who also have the ability to interpret, operationalise and document the compliance requirements (OECD, 2023). Consequently, demand for skilled workers has evolved from narrowly constructed technical skills towards hybrid human capital which combines AI engineering skills, regulatory compliance and documentation skills and ethical risk assessment skills (OECD, 2023; European Commission, 2024).

Most of the research related to human capital theory (Becker, 1964) follows a transition whereby there has been a movement away from generalised technical capability and toward specialised capabilities related to specific firms and regulations (Acemoglu & Autor, 2011). The capabilities required by firms or regulatory bodies (in regulated markets such as the EU) have less transferability between member states but greater actual value in terms of employment (OECD, 2023). Consequently, for Indian workers employed within the information technology (IT) sector, there is an emerging division between what will be considered "highly employable" versus "poorly employable" based on regulatory alignment as opposed to norms or expectations held within their home labour market (Autor, Dorn, & Hanson, 2016; OECD, 2023).

Evidence from the EU’s General Data Protection Regulation (GDPR) demonstrates that extraterritorial regulation can reshape labour demand outside the EU. Firms subject to GDPR increased hiring in compliance-intensive roles while reducing lower-skill data-handling positions, leading to labour-market consolidation among larger firms (Peukert et al., 2022).

OECD empirical findings (2023) have confirmed that jobs related to artificial intelligence (AI) require additional skill sets that are complementary to technical capabilities. These

non-technical skill sets include risk analysis, compliance management and effective communication across a variety of disciplines (OECD, 2023). The trend associated with export-based labour markets is particularly strong, with the regulatory requirements for employment largely being imported instead of created domestically (WTO, 2023). Therefore, in the Indian context, the EU AI Act will impose EU-specified levels of skill sets into the Indian labour market and thus will influence educational programmes, training needs and the hiring process of prospective employees (OECD, 2023; European Commission, 2024).

7.2.3.2) Reskilling Dynamics and Unequal Adjustment Capacity

The capacity of Indian IT workers to reskill is extremely dispersed amongst its workforce whereas the demand for new advanced/hybrid skills is increasing due to initiatives such as the EU AI Act (NASSCOM, 2024; OECD, 2023). The larger Indian IT companies are likely to internalise the costs of reskilling employees by establishing a globally accepted training structure, through the use of in-house staff, strategic partnerships with certification agencies and structured training programmes (NASSCOM, 2024). Larger firms are not expected to participate in large-scale lay-offs but rather retrain current employees in the EU interface due to the critical nature of these roles (OECD, 2023).

However, a significant proportion of Indian IT staff is presently working in mid-sized firms, outsourcing contractors and service vendors that do not have sufficient training infrastructure to support the development of an employee's advanced/hybrid skills (NASSCOM, 2024). For these types of businesses, reskilling will likely lead to a significant capital expenditure for an uncertain or immeasurable return on investment, as they will have to comply with the requirements of complex regulatory changes (OECD, 2023). Mid-sized firms in IT are therefore expected to be selective in their upskilling efforts and thereby retain a limited pool of employees in their workforce that are able to fulfil the requirements of different projects, while allowing the remaining workers to exit the EU business entirely (Peukert et al., 2022; OECD, 2023).

According to the literature in labour economics regarding the effects of skill-biased change in regulatory policy, the adjustment patterns caused by the aforementioned dynamics are polarised between high-skill workers that experience an increase in remuneration and job security, while mid- and low-skill workers are displaced or face down-skilling opportunities (Acemoglu & Autor, 2011). The velocity at which firms are implementing the new

regulations is significantly faster than the rate at which Indian IT workers are acquiring new skills (OECD, 2023). As such, the risk of displacement will be more prevalent for mid-skilled and less-skilled workers in India than the risk for high-skilled workers in the future (Autor et al., 2016).

GDPR-related changes provide evidence of this issue. Peukert et al. (2022) found that companies subject to strict EU regulations invested heavily in compliance roles requiring higher education levels and simultaneously reduced the number of lower-skill positions supporting data handling functions (Peukert et al., 2022). Therefore, the way firms govern AI is similar - workers who are not reskilled will have unequal access to opportunity, largely based on how many people work at their company and how much power they have in the market compared to the competition and what level of education they had when they started working for their firm (OECD, 2023; Autor et al., 2016).

The unequal adjustment of workers to their jobs as a result of regulatory differences exposes them to a new type of vulnerability – skill mismatch caused by a regulatory requirement (OECD, 2023). Workers may still possess technical skills that make them viable candidates for employment in an AI based company but they will not have enough familiarity with regulatory compliance processes to perform successfully when the compliance workplace requirements increase dramatically (European Commission, 2024). Unlike the slow process of becoming technologically obsolete, a regulatory mismatch can create an immediate risk of job loss when compliance requirements become mandatory (Acemoglu & Autor, 2011; OECD, 2023).

7.2.3.3) Long-Term Human Capital Implications and Labour Market Stratification

In terms of long-term implications, the EU AI Act should lead to long-lasting change for the human capital formation systems in India (OECD, 2023; European Commission, 2024). Currently, educational institutions, professional certification organizations and training programs conducted by large multinational corporations have already incorporated topics such as AI ethics, governance and regulatory compliance as part of their technical training curriculum (OECD, 2023; NASSCOM, 2024). Although this adaptation helps these institutions align with the global standards outlined in the EU AI Act, it also continues to reinforce labour market stratification based on who has access to this type of training (Autor et al., 2016; OECD, 2023).

From a structural perspective, the EU AI Act creates an incentive for the development of a regulatory elite within the IT workforce through the creation of highly specialised roles whose skills are directly tied to the development and implementation of EU-compliant AI systems; therefore, this sector of the IT workforce is less substitutable (OECD, 2023; European Commission, 2024). In fact, professionals in this sector will command significantly higher wages, as well as greater long-term job security, than other individuals employed in generic IT roles (OECD, 2023). This finding is supported by evidence recently published by the Organisation for Economic Co-operation and Development (OECD) (2023) regarding the emergence of governance-intensive roles in the digital environment.

Simultaneously, those that are unable to access or afford reskilling pathways will risk being marginalised into the less regulated and lower value parts of IT (IT's domestic and non-EU export markets) (NASSCOM, 2024). This bifurcation is also consistent with global employment structural trends whereby high-quality jobs are created for a limited number of workers based on their participation in highly regulation-intensive value chains (Autor, Dorn, & Hanson, 2016).

Importantly, this stratification is not technical skill-based. It is institutionally mediated as well (OECD, 2023). Workers in large companies, located in large urban centres and holding formal credentials will have a higher probability of being able to adapt than workers in peripheral labour markets (Autor et al., 2016). Therefore, the impact of the AI Act on skill formation will be interrelated with existing inequalities within India's workforce in IT; This will likely continue to reinforce existing inequalities over a period of time (OECD, 2023; Autor et al., 2016).

8) Policy Recommendation

This paper discusses the impact of an external regulatory stimulus on the Indian Information Technology (IT) industry resulting from the implementation of the European Union (EU) Artificial Intelligence (AI) Act. Since the EU is India's primary market for IT services, the extraterritorial application of the Act places significant pressure on all Indian companies to conform to various requirements regarding documentation, risk assessment, transparency, and human oversight. Consequently, investment patterns are changing as more capital is being invested into the development of AI infrastructure that is compliant with the requirements of

the Act. Government initiatives, such as the IndiaAI Mission, have also been implemented to ensure that domestic capabilities are aligned with the global regulatory landscape.

In terms of workforce impacts, the Act is expected to create a skill-biased transformation rather than a uniform decline in the number of workers employed in the IT sector. While many of the lower-skilled, repetitive-type jobs associated with traditional software development and information technology services will be adversely affected by the Act, new opportunities will be created for employees with hybrid technical/regulatory capabilities. As a result, there will be increased demand for those with governance-related roles, including AI auditing, bias assessment, regulatory documentation, and lifecycle monitoring. This shift in the composition of employment in the IT sector will result in structural changes, such as wage disparity and increased job security for individuals with hybrid skills.

Adjustment capacity in response to the changes prompted by the AI Act is likely to be uneven across the IT sector. Large companies have a greater capacity to absorb the costs of compliance with the Act as well as to train and retrain employees. Smaller companies may struggle to absorb the costs of compliance with the Act, and employees with mid-range skill sets may be most vulnerable to losing their jobs as a direct consequence of the AI Act. The EU AI Act may either lead to the marginalization of Indian IT labour or reposition India as a global hub for compliant AI services.

Given in light of the existing policies, the following section covers certain policy suggestions which can make India potentially a giant in the AI world.

Starting with the first one, to **promote responsible AI development and deployment,** India needs to create a **formal risk-based governance model** that aligns with best practices used internationally (including the EU framework) but reflects the economic and institutional structures of India. The governance framework must provide a risk-level based classification of AI technologies along with compliance obligations that are proportionate to the identified risks, as well as provide direction on the following AI governance aspects: (1) Data governance (2) Transparency (3) Human Oversight (4) Monitoring up to Deployment and (5) Post-deployment monitoring.

Finally, there needs to be a definition around who has legal responsibility and liability for actions taken at each level in the AI value chain from development through deployment and service delivery, and a principal regulatory authority needs to be established for coordinating enforcement, certification and guidance. More importantly, the governance framework must focus on providing regulatory clarity instead of assuming a one-size-fits-all regulatory approach to all AI technologies so that innovative and new low-risk AI applications can continue without undue limitations.

The case for this type of policy is found in the fact that it reduces the asymmetry that exists between India and its largest export markets for AI technologies (the EU). Indian firms must comply with EU regulatory requirements; however, they do not have a comparable level of regulatory support available domestically to create an equivalent legal and regulatory context to allow them to comply with EU regulations domestically. Therefore, having an Indian formally established governance framework would enable Indian firms to be able to ensure compliance through domestic processes, prepare their workforce for compliance and ensure credibility as a result of having an established regulatory environment in place.

Among the probable outcomes are increased stability in investments, access to new and improved markets for Indian AI providers, and a growing recognition of India as a reliable jurisdiction for developing AI applications. Eventually, these benefits will lead to more highly skilled jobs, a strengthened capacity for negotiating in the international governance of AI, and a reduced chance of being excluded from important digital marketplaces due to regulatory measures.

Another significant issue that India would need to overcome to find success in the AI market is in **skill development**. In terms of the labour market, skill development is about developing the skills and experience of an individual to enable her to perform their job more specifically in real-life occupational situations, rather than simply to hold an educational qualification that allows for employment in those positions. Furthermore, new skill development frameworks are stressing the vocational aspect of skills through the development of practical ability, enhanced learning adaptability and specific task productivity, in contrast to abstract and general knowledge acquired through formal schooling. However, skill development in India has historically not aligned with vocational training. Additionally, in India, the Academic Learning System operates without any connection to Hands-on Training, exposure to Industries or real-world experience or relevance resulting in many graduates that are formally

educated but functionally unprepared for the workforce (The Hindu 2024). As the current economy transforms with new technologies and methods, the gap between academics and vocational training is increasingly becoming one of the most significant barriers to having a ready workforce.

Despite ongoing public investment, skilling outcomes in India have not improved as expected. Evaluations of national skilling initiatives have revealed that training programmes are generally supply-driven, certification-based and that there is not a sufficient fit between training supply and actual labour market requirements. A review of the skilling policies, or the skilling architecture of India, has indicated that many of the existing programmes have a primary focus on enrolment and completion metrics instead of employability outcomes, creating a misalignment between placement rates and the use of skills (Vajiram & Ravi, 2024). This misalignment has been particularly pronounced within high-skill industries such as information technology and artificial intelligence. As AI technology has become increasingly productive, the way we do business has changed: companies are now requiring a higher level of competency with applied competencies, such as compliance documentation, system auditing, ethical risk assessment and regulatory reporting. As the global AI marketplace moves toward stricter regulatory governance, such as with the EU AI Act, vocationally-grounded, regulation-aware competencies have become increasingly necessary to maintain a competitive advantage within the global marketplace. Training that is solely theoretical or solely focused on coding cannot provide companies with the skills that they require to remain competitive in the future.

In light of this, the creation of an Indian AI governance framework needs to be looked at not merely as a regulatory requirement, but also as an opportunity to improve the way in which skills are developed domestically. The establishment of an Indian AI governance framework will provide India with a domestic risk-based system of guidelines that will establish requirements for compliance within the AI industry, outline who has responsibility throughout the AI value chain, and most importantly, identify the skills required for various types of AI work. Currently, Indian companies and individuals are developing skills reactively through the influence of foreign regulations, and are developing skills for compliance in a manner that is not consistent or systematic. The development of a domestic AI governance structure will enable skill development to occur in an anticipatory fashion, turning the pressure from foreign regulations into a tool for developing the internal capacity

of Indian companies to comply with those regulations. As a result, Indian technology workers will be more prepared to enter the global marketplace, and Indian companies will incur lower costs to adjust to compliance requirements and have a better reputation for compliance with those requirements in international regulated markets.

In view of this, governments should back reskilling and workforce transition initiatives that merge targeted technical AI skills with vocational training on the governance, ethics and risk management side.

A number of studies conducted in regard to India's skilling system show that it is common for workers to have some baseline technical competence levels based on an overall knowledge of technologies; however, they lack applied competency skills, which are required to transition into a rapidly evolving labour market (Vajiram & Ravi, 2024). As such, a government-backed reskilling initiative that includes the participation of industry partners and is designed specifically around compliance processes will allow individuals to transition into emerging governance roles, rather than being displaced by current methods of employment.

Such initiatives will serve to remedy the issues surrounding skills mismatches, support **labour mobility** and ensure that when the workforce in the Indian economy is **technologically upgraded**, they are not excluded from the labour market.

In addition, to sustainably alleviate the skills divide, there also has to be reform in the education pipeline itself. Beginning in Grade 11, **AI ethics, regulatory compliance and applied governance classes** should be incorporated into engineering, data science, and IT-related degree programmes (i.e. higher learning) to help close the skills divide between vocational relevance and academic instruction. As has been discussed in recent education policy discussions, it is essential to blend the two, as this will prepare students for future job roles that will require both conceptual and practical execution (The Hindu, 2024). By gaining early exposure to these levels of governance capacity, students will be able to establish the expertise in compliance as an essential part of their professionalism, thereby supporting the employability of students and reducing their training burden on the employer.

Finally, to avoid excessive consolidation of labor and market, the government ought to support small and mid-sized Information Technology (IT) and Artificial Intelligence (AI) companies through **subsidies** to build compliance infrastructure. As per completion rates of skilling for small companies, they are inefficient compared to large businesses because they

do not have access to sufficient resources to develop compliance capacity internally (Vajiram & Ravi). By providing employees with access to shared compliance platforms, providing financial support for compliance tools and an audit system developed from public funds there would be fewer barriers to enter the market and maintain proper regulatory compliance.

In addition to policies supporting skill development and increasing a company's workforce capabilities and developing workforces, policies should also recognize how companies serve as learning organizations that adapt to changes in the way their organizations operate.

Additionally, the artificial Intelligence industry- particularly new businesses- should have the ability to experiment with governance compliant AIs in a way that enables those companies to test the technology under controlled or sandbox-like environments. Regulatory Sandboxes would provide those companies' developers, engineers, and compliance personnel with opportunities to gain real-world knowledge regarding classification of potential risks associated with AI, documenting those risks and processes, conducting regular audits of AI deployments as well as opportunities for humans to review those risks and auditing processes on a continuous basis without an immediate obligation to comply with the complete set of governmental regulations governing AI deployment within an immediate efficient timeframe. Also, it is critically important for smaller companies that successfully operate within the EU to not have their technological innovations stifled or impeding progress towards the attainment of their technology goals by having to deal with excessive application of the existing governmental regulations. Therefore, treating companies as vital components in the skill development process for building better trained/skilled personnel, rather than just being passive recipients of regulations, will significantly accelerate the establishment of governance-related competencies in the organization. Furthermore, through the establishment of Governance Compliant Regulation Creation Sandbox environments, the establishment of skills and competencies will occur at a much faster rate than is currently achievable.

Ultimately we would see a greater number of companies engaged in regulated AI markets; therefore creating a larger pool of opportunities for employment among various companies while developing a much stronger, more durable AI ecosystem in India.

For the efficient implementation of the above policies, the establishment of an independent **Ministry of Artificial Intelligence** is vital to facilitate India's entry into the structured, global AI economy. Currently in India there is a lack of coherence in the regulation, skill

development, and international engagement surrounding AI created by having multiple government agencies responsible for regulating AI. Most government agencies that are responsible for overseeing AI fall under the Ministry of Electronics and Information Technology (MeitY), as AI is currently just one of several emerging technology sectors within MeitY, and has no dedicated policy unit (MeitY, 2024). While there are several government initiatives aimed at enhancing the system in India, including National Program on Artificial Intelligence and India's AI Mission, these initiatives remain scattered throughout all levels of government, creating confusion and limiting the ability of the various ministries and departments working together in creating, implementing, and regulating AI (Digital India, 2024). This type of fragmented governance resembles earlier gaps in governance that resulted in the establishment of the Ministry of Cooperation, whose purpose was to centralize all policy authority over a sector, which was previously held by several other agencies and divisions, and to create long-term, focused institutional stewardship (Ministry of Cooperation, 2021).

The establishment of a specific Ministry for Artificial Intelligence (AI) would also create one body responsible for overseeing AI regulation, workforce changes, industrial development, and coordination with other countries. The primary responsibility of this Ministry would be to develop and implement a National Governance Framework for AI; to work with governing authorities in various sectors (e.g., finance, agriculture); and represent India at international organizations that set global AI standards. A single Ministry responsible for the multiple regulatory and strategic aspects of AI would promote efficiency by eliminating regulatory fragmentation, improving collaboration between Ministries and providing greater clarity for businesses about compliance expectations. The establishment of an AI Ministry is particularly important due to the existence of foreign-AI regulatory regimes, such as the European Union (EU) AI Act, which require prompt alignment of domestic regulations and recognition of the Ministry's credibility on the international stage for Indian businesses to have access to international markets.

To support its mission, the Ministry of Artificial Intelligence would also develop publicly accredited (i.e., recognized by all governing authorities) audit/certification bodies (i.e., through public–private partnerships), which would certify AI systems developed in India to meet risk, transparency, and governance criteria consistent with the EU. Currently, Indian businesses are forced to use foreign auditors/assessors, which creates significant added costs

for compliance and loss of revenue due to the inability to enter into new markets. The establishment of domestic auditing/certification capabilities would decrease costs for Indian businesses while simultaneously creating high-skill jobs in the areas of auditing, risk assessment, and governance, thereby creating compliance capabilities within the Indian workforce.

In addition, the ministry would oversee the IndiaAI Mission with a focus on strategic governance and allocate specific funds for creating the necessary infrastructure to support such governance by developing the infrastructure required for auditing software, explainability and bias detection frameworks, automated documentation, and lifecycle monitoring systems. There should also be an establishment of a dedicated unit to track AI-related job displacement, wage polarisation and skill shortages caused by foreign regulation. The vast majority of the current AI funds are focused on developing models and increasing computational power; however, companies that engage in regulated markets will increasingly be rewarded for demonstrating compliance, traceability, and accountability across their operations. As a result, the reallocation of funds toward infrastructure technologies that enable companies to be operationally ready to manage regulatory requirements has the potential to allow Indian firms to compete based on their regulatory readiness versus merely on their cost or scale of operations.

The ministry would be instrumental in revolutionising India's AI research and development priorities. Along with developing the most advanced frontier models, it would also support research and development associated with compliance-related technologies, which include automated risk classification, human oversight systems, and regulatory reporting mechanisms. The goal would be to position India as a global hub for responsible and governable artificial intelligence. The shift in the institutional approach to AI governance will convert AI governance from a compliance necessity to a competitive advantage, enable India to maintain the greatest share of AI's value within the country, enhance its international competitive position, and have a greater impact on determining the emerging global rules governing AI (Digital India, 2024; MeitY, 2024).

There is a further structural risk for the India AI & IT labour market resulting from an increase in skilled workers outward migration. Growing global demand for Indian technical and skilled labour is creating a problem for India, where it may have a shortage of workers within the country as the total number of people who have jobs is increasing; the value of

exports of skilled workers from India is becoming one of the highest in the world; and it is also being driven by 1) wage differences, 2) regulatory requirements and 3) international mobility opportunities (Terratern 2024). Furthermore, long-term projections suggest that by 2047, due to the demographic transition, skill mismatches by industry and unequal opportunities in the labour market, India may have significant labour shortages, despite currently having a demographic advantage (Economic Times HR 2024). Therefore, when you consider outward migration, you should not simply view it as Remittance or Soft-Power Gains, but also as a constraint on domestic supply of labour, especially in highly-skilled sectors (e.g. AI & IT services).

Regulatory changes such as the EU AI Act will heavily impact these pressures and will most likely lead to further increases in the compliance costs needed to comply with the law, as well as an increase in the types of skill sets required to do compliance work. Some segments of IT personnel may not only find themselves at risk of losing their jobs due to these increased compliance requirements, but may also experience emigration out of their countries as privacy regulators will likely become more interested in hiring personnel with governance/audit experience. Therefore, labour market shock absorption policies that take into account the regulatory changes as a structural shock to the labour market and not merely routine market fluctuations must be developed. To support displaced IT personnel and enable them to re-enter the labour market with upgraded skills aligned with the new regulations, transition wage insurance, mobility grants, and retraining stipends should be created. Additionally, framing the EU AI Act as a structural labour market shock will ensure the policy response aligns with the long-term impact of the Act on improving personnel skills, wages and employment stability for all of Europe.

At the same time, India needs to respond quickly and directly to the domestic requirement for AI through the stimulation by the Government for the Domestic Adoption of the use of Artificial Intelligence (AI). The implementation of AI usage within Public Services (including the Judicial Administration, Healthcare Delivery, Welfare Targeting, and Automation of Bureaucratic Processes) to adhere to Indian regulatory requirements may generate an ongoing domestic demand for AI-related workers, which will facilitate the transition of displaced workers coming from EU-linked projects and provide a method of productively employing those workers' skillsets within the domestic economy. Furthermore, through the domestic implementation of AI, India reduces the potential risk of being affected

by changes in external regulations and fluctuations in worldwide demand for AI. By creating mechanisms for the absorption of shocks in the workforce due to AI-related labour shortages and proactively stimulating the Domestic Demand for AI, India can reduce risks associated with future labour shortages and retain qualified Human Capital while managing future outmigration for the benefit of its longer-term strategy for growing the AI workforce (Economic Times HR, 2024; Terratern, 2024).

9) Conclusion

To summarize, the international job opportunities available to Indian professionals provide many benefits, both economically and strategically. These include remittances, skills gained internationally, exposure to regulatory and technological systems in other countries, and the enhanced presence of Indian "soft power" in high-skilled industries around the world. Professionals who work abroad will usually return with higher levels of human capital than those who stayed in India, and they can use this knowledge to enhance domestic innovation systems, including gaining technical expertise, improving management methods, and developing better institutional capabilities. If a country does not develop sufficient capacity to absorb skilled professionals into its economy after they have returned to their home country, it runs the risk of developing a "brain drain" phenomenon, whereby highly-skilled professionals leave critical sectors needed for long-term economic transformation. Therefore, the continued analysis of India’s migration trends warns that extended periods of skill flight can damage the domestic research capacity of India and create a growing shortage of workers, thus limiting the potential social benefits derived from public investment in education and training (The Geostrata, 2023; ClearIAS, 2024).

At the same time, policy research increasingly recognises that brain drain is not an inevitable outcome of global mobility. With the right institutional design, outward migration can be converted into brain circulation, knowledge transfer and even reverse migration, allowing countries to benefit from global integration without hollowing out domestic capabilities (AFPR, 2023). The policy measures proposed in this paper are designed to achieve precisely this balance. By strengthening vocational skill development, aligning AI governance with global standards, expanding domestic AI demand, cushioning regulatory labour shocks and building institutional capacity through dedicated governance structures, these interventions enhance the quality and stability of domestic employment while preserving access to international opportunities. Collectively, they seek to retain critical talent not through

restriction, but through opportunity, ensuring that India remains both globally integrated and domestically resilient in the evolving AI-driven economy.

Ultimately, the only way to make India successful on the world stage is mobilising its large "curse" of a population into a well-oiled machine of efficiency and absorption. But transition is only possible with the right institutional framework. Thus, it is up to the lawmakers to decide India's fate in the AI world.

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