

February, 2026



# AI and Jobs

This time is no different

A Case Study of India's IT Sector



## **AI and Jobs: This Time is No Different**

Deepak Mishra, Mansi Kedia, Aarti Reddy, Cledwyn Fernandez, and Agrima Khanduri

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# Table of Contents

Acknowledgements	07
Executive Summary	08
01. AI and Jobs: Apocalypse or Business-As-Usual?	10
02. India's IT Industry: Ground Zero for the AI-Jobs Debate	11
03. A Survey of India's IT Sector	13
04. Employment Effects of Generative AI	15
05. Why Are Occupations with Greater AI Exposure Experiencing Higher Demand?	25
06. Talent Management and Internal Skilling	27
07. Corroborative Evidence from Secondary Sources	32
08. Outlook and Concluding Remarks	35

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*All errors remain our own.*



# Executive Summary

**As generative AI spreads, so is the fear of mass job losses.** Repeated warnings from powerful and prominent voices such as Elon Musk, CEO of Tesla and SpaceX, Dario Amodei, co-founder of Anthropic, Kristalina Georgieva, Managing Director of International Monetary Fund, have made job-loss fears seem not only plausible but inevitable. Gradually, such gloomy narratives are shaping behaviour and becoming self-fulfilling, making employers cautious and leaving young people pessimistic about their prospects even before they enter the labour market.

**In India, the doomsday narrative around AI hits especially close to home.** Its IT industry—long a pillar of national pride and prosperity—is increasingly portrayed as ground zero in the battle between intelligent algorithms and human talent. As home to the world’s largest and fastest-growing software developer community, India’s IT model is built on a vast army of developers performing standardised, codifiable and repeatable tasks. It turns out, these are precisely the activities where generative AI delivers rapid productivity gains. No wonder India’s IT stocks have been taking a beating every time a major advance in generative AI is announced.

**Everyone has opinions, but we have the data.** Drawing on a survey of 651 IT firms across 10 Indian cities conducted between November 2025 and January 2026, we analyse the impact of generative AI on employment and skilling in India’s IT sector. The primary survey is supplemented by in-depth interviews with industry leaders. Impacts are assessed across multiple dimensions, including overall hiring, occupations in demand, business function performance, and productivity gains reflected in output expansion and cost savings. We also examine how AI is reshaping skill demand, hiring practices, and workforce training and upskilling. Here are some of the key findings of the study:

- » We find no evidence to support apocalyptic predictions of large-scale job losses following the adoption of generative AI in India’s IT sector.

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- » While generative AI adoption has been associated with a moderation in overall hiring, total employment in the sector has continued to grow.

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- » AI is beginning to reshape the workforce, with slower hiring at the entry level, increased demand for skilled mid-level workers, and relative stability at the senior level.

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- » Occupations most exposed to AI—particularly technical and analytically intensive roles—are experiencing the strongest growth in demand. Roles such as software analysts and developers, application developers, and statisticians and mathematicians are seeing increased demand, suggesting that AI is functioning primarily as a complement to high-skill technical work rather than as a substitute.

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- 
- » Consistent with the overall moderation in hiring, most business divisions report modest decline in team size, though divisions most affected by AI—such as software-related functions—are experiencing the smallest job losses relative to others.
- 
- » A majority of firms report significant productivity gains following AI adoption, reflected in higher and better-quality output, as well as time and cost savings.
- 
- » AI adoption is reshaping hiring priorities toward hybrid skill profiles that combine domain expertise with AI and data-related technical skills. The most in-demand skills are prompt engineering and generative AI capabilities (68%), followed by data analytics (36%) and data science and machine learning (35%).
- 
- » Although most firms are investing in internal awareness and workforce reskilling initiatives, formal AI training remains limited. Only 4% of IT firms have trained more than half of their staff in AI-related skills. Upskilling efforts are constrained mainly by costs, shortage of good trainers, and organisational readiness.
- 
- » Finally, most firms do not foresee dramatic AI-driven employment contractions in the near term. About 44% expect no major change in employment, 28% anticipate workforce expansion, and 27% expect a decline.

**The evidence suggests that generative AI is fundamentally transforming our industries—as many earlier general-purpose technologies did—but there is no evidence yet to suggest that this time is different.** Past industrial revolutions—from steam engines and power looms to electricity, automobiles, and the internet—eliminated specific jobs but ultimately created more employment than they destroyed, which is why predictions of permanent technological unemployment never materialised. While generative AI is distinct—as it targets non-routine cognitive tasks at the upper end of the skill distribution and is being deployed at extraordinary speed and scale—it is also at an early stage of rollout, with significant substitution effects (machines replacing humans). But over time—as with all past industrial revolutions—income effects will dominate: rising productivity will lower costs, drive a massive expansion in the consumption of AI-enabled products, and ultimately generate net positive employment opportunities.

**The study's findings should both reassure and concern Indian policymakers.** While India's IT sector appears to be coping well with AI adoption—through productivity gains, evolving skill profiles, and moderated hiring without a decline in aggregate employment—firms remain insufficiently prepared for the future. Limited hiring in AI-related roles, weak R&D expansion, inadequate investment in training, shortages of qualified trainers, and regulatory uncertainty pose urgent challenges that must be addressed if the sector is to fully harness the potential of generative AI. These conclusions may need to be revisited if the use of generative AI expands dramatically or if artificial general intelligence and smart humanoids are deployed at scale.



# 01 AI and Jobs

## Apocalypse or Business-As-Usual?

**Prominent tech leaders and policymakers have framed the global Artificial Intelligence (AI) debate around the promise of large productivity gains coupled with the risk of widespread job losses.** Elon Musk, CEO of Tesla and SpaceX, has argued that advances in AI and robotics will make work optional in the next 10–20 years, and that none of us will probably have a job.<sup>1</sup> Dario Amodei, co-founder of Anthropic, had warned in 2024 that AI could eliminate roughly half of all entry-level white-collar jobs in the next one to five years, potentially driving sharp increases in unemployment.<sup>2</sup> Similarly, International Monetary Fund (IMF) Managing Director Kristalina Georgieva has cautioned that an AI-driven “tsunami” could replace a large share of jobs globally.<sup>3</sup> These concerns are now embedded in popular perceptions with 64 percent of U.S. adults believing that AI will reduce the number of jobs (Pew Research), and 59 percent of young adults’ viewing AI as a threat to their job prospects (Harvard Youth Poll).

**While earlier waves of technological change displaced workers, there is a growing perception that the AI revolution may be different because of its unprecedented speed and scale.** Past general-purpose technologies—from steam engines and power looms to electricity, automobiles, and the internet—eliminated specific jobs but ultimately created more employment than they destroyed, which is why predictions of permanent technological unemployment never materialised.<sup>4,5</sup> Generative AI, however, is viewed as distinct: it targets non-routine cognitive tasks at the upper end of the skill distribution, is being deployed at extraordinary speed and scale, and continues to improve rapidly.<sup>6</sup> This has fueled fear that job losses could occur so quickly and extensively that, without adequate preparation, societies could face a prolonged period of mass unemployment. These concerns are reinforced by studies estimating that generative-AI could replace the equivalent of 300 million full-time jobs, including around a quarter of work tasks in the United States and Europe.<sup>7</sup>

**Other studies offer a more measured assessment, finding that generative AI is driving partial automation and task reallocation rather than wholesale job replacement.** Occupations most exposed

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<sup>1</sup> Murphy Kelly, S. (May, 2024). *Elon Musk says AI will take all our jobs*. CNN.

<sup>2</sup> Dario Amodei (January, 2026). *The Adolescence of Technology: Confronting and Overcoming the Risks of Powerful AI*.

<sup>3</sup> Bove, T. (January, 2026). *An AI ‘tsunami’ is coming for young workers, IMF chief warns | Fortune*. Fortune.

<sup>4</sup> 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.

<sup>5</sup> Acemoglu, D., & Restrepo, P. (2018). Artificial intelligence, automation, and work. In *The economics of artificial intelligence: An agenda* (pp. 197-236). University of Chicago Press.

<sup>6</sup> World Bank, *South Asian Development Update, 2025*.

<sup>7</sup> Generative AI could raise global GDP by 7%. (April, 2023). *Goldman Sachs*.

to AI tend to be those with a high concentration of cognitive tasks, where work is being reshaped rather than eliminated.<sup>8</sup> Historically, technological change has also generated new jobs, particularly in knowledge-intensive industries and among those driving innovation. Consistent with this, 24 percent of respondents in the World Economic Forum’s 2026 Annual Survey of more than 10,000 executives indicated that AI could create more jobs in the future.<sup>9</sup> Job-posting data also shows a change in type of hiring: between January 2023 and March 2025, the share of AI-related postings more than doubled from 2.9 to 6.5 percent of all listings, and demand for AI skills grew 75 percent faster than non-AI listings.<sup>10</sup>

**There is growing evidence of labour productivity gains from deploying generative AI, though such gains remain far from universal.** While it remains unclear how AI technologies might serve as either substitutes or complements for human labour in specific tasks and occupations, it is sure to improve productivity.<sup>11</sup> The productivity improvement is enhanced in the type of jobs that have strong human-AI complementarities.<sup>12</sup> Several studies found AI use is associated with higher output per worker in firms.<sup>13</sup> But there are exceptions to this: an MIT study found that despite the rush to integrate powerful new models, about 5 percent of AI pilot programs achieve rapid revenue acceleration; the vast majority stall, delivering little to no measurable impact on the firms’ bottom-line.<sup>14</sup>



## 02 India’s IT Industry

### Ground Zero for the AI–Jobs Debate

**India’s IT sector is widely seen as the battleground in the global debate on AI and jobs.** This is because India has the largest and fastest-growing software developer community in the world—nearly five million strong—many of whom perform repeatable and codifiable tasks. These are precisely the activities where generative AI tools deliver rapid productivity gains and are therefore likely to be automated first. Indeed,

<sup>8</sup> Felten, E., Raj, M., & Seamans, R. (2021). Occupational, industry, and geographic exposure to artificial intelligence: A novel dataset and its potential uses. *Strategic Management Journal*, 42(12), 2195-2217.

<sup>9</sup> World Economic Forum (January, 2026). *Four Futures for Jobs in the New Economy: AI and Talent in 2030*

<sup>10</sup> Lightcast. (July, 2025). *New Lightcast Report: AI Skills Command 28% Salary Premium as Demand shifts Beyond Tech Industry*.

<sup>11</sup> Brynjolfsson, E., Li, D., & Raymond, L. (2025). Generative AI at work. *The Quarterly Journal of Economics*, 140(2), 889-942.

<sup>12</sup> Pizzinelli, C., Panton, A. J., Tavares, M. M. M., Cazzaniga, M., & Li, L. (2023). *Labor market exposure to AI: Cross-country differences and distributional implications*. International Monetary Fund.

<sup>13</sup> Calvino, F., & Fontanelli, L. (2023). Artificial intelligence, complementary assets and productivity: evidence from French firms (No. 2023/35). LEM Working Paper Series; Acemoglu, D. & Johnson, S. Power and progress; our thousand-year struggle over technology and prosperity

<sup>14</sup> Nanda, M., Challapally, A., Pease, C., Raskar, R., Chari, P., & Project NANDA. (2025). *The GenAI divide* (By Project NANDA).

Marc Benioff, CEO of Salesforce, has openly acknowledged that AI-driven automation has led to substantial job cuts at his firm, remarking bluntly, “I need less heads.” Referring more directly to India’s IT sector, Indian-origin American tech entrepreneur Vinod Khosla has warned that “all IT services will be replaced in the next five years” and that the traditional Business Process Outsourcing (BPO) and Information Technology (IT) services model could disappear, threatening one of India’s most reliable export engines.

**In the absence of rigorous studies on AI’s employment impact in India, fear of job losses is widespread and growing.** A Microsoft Work Trend Index survey finds that 74 percent of Indian workers worry that AI could replace their jobs.<sup>15</sup> Similarly, a Great Place to Work India survey shows that 49 percent of millennials fear job displacement within three to five years.<sup>16</sup> An IIM Ahmedabad survey of executives reports that 60 percent expect AI to lead to job losses, although a comparable share also anticipates new job creation, reflecting mixed expectations about displacement and demand.<sup>17</sup> Echoing this ambivalence, a NITI Aayog report projects that AI could affect millions of jobs in India’s tech ecosystem, with losses in some areas alongside the creation of new roles requiring reskilling and investment in talent development.<sup>18</sup>

**Against this backdrop, this study analyses the impact of generative AI on employment and skilling in India’s IT sector.** The analysis draws on a primary survey, supplemented by in-depth interviews with industry leaders. Impacts are assessed across multiple dimensions, including overall hiring, occupations in demand, business function performance, and productivity gains reflected in output expansion and cost savings. The study also examines how AI is reshaping skill demand, hiring practices, and workforce training and upskilling. In addition, it uses complementary data from Periodic Labour Force Survey (PLFS) and Centre for Monitoring the Indian Economy (CMIE) to test the robustness of the findings. Finally, the study offers several potential explanations for the key findings of the report and makes a case for urgent upskilling.

**Our findings are likely to disappoint those who argue that generative AI will be fundamentally different from past industrial revolutions—that this time will be different—in terms of its impact on jobs.** We find no evidence to support doomsday predictions of large-scale job losses following generative AI adoption in India’s IT sector—the perceived ground zero of the race between AI and coders. Instead, we observe a modest, broad-based moderation in hiring, concentrated mainly at the entry level. Notably, occupations most exposed to AI—particularly technical and analytically intensive roles such as application and software developers, analysts, and statisticians—are also experiencing the strongest growth in demand, pointing to augmentation rather than automation. At the organisational level, AI’s impact is greatest in core technology divisions that function as profit centres, which have seen the least employment decline despite being most affected by AI. The report identifies several areas of concern, especially as upskilling efforts remain constrained by costs, talent shortages, and organisational readiness.

<sup>15</sup> Microsoft. (2023, June 1). *Microsoft Work Trend Index 2023 releases new insights on how AI will change the way we work in India*. Microsoft News India.

<sup>16</sup> Banerjee, D. (November, 2025) 49% of millennials in India fear AI could replace their jobs within five years: Report. *The Indian Express*.

<sup>17</sup> Brij Disa Centre for Data Science and Artificial Intelligence & Indian Institute of Management Ahmedabad. (August, 2024). *Labour-force perception about AI: A study on Indian white-collar workers*. Indian Institute of Management Ahmedabad.

<sup>18</sup> For a similar balanced perspective on AI, see Economic Survey (2026), “Evolution of the AI Ecosystem in India: The Way Forward.” Chapter 14, Ministry of Finance, Government of India.

## 03

# A Survey of India's IT Sector

**We examine the impact of generative AI on India's IT sector, with a focus on implications for employment, productivity, and upskilling.** The analysis is based on a primary survey of 651 respondents working across five operating segments: IT Services, IT Products, Business Process Management (BPM), Engineering Services and Research & Development (ER&D), most of which are also popularly called the Global Capability Centres (GCCs), and startups.<sup>19</sup> The firms surveyed are located across 10 cities in India.<sup>20</sup> The survey was conducted between November 2025 and January 2026, and was administered both in person (72 percent) and online (28 percent).

**The survey sample is broadly representative of India's IT ecosystem.** By revenue, medium-size firms constitute the largest share (34 percent), while small (31 percent), micro (16 percent) and very large firms (16 percent) are also well represented. By employee count, small-size firms form the largest group (32 percent), followed by medium (27 percent), micro (17 percent), and very large firms (14 percent) (see Table 1).

**There are several features of the survey that are worth highlighting at the outset.** First, to our knowledge, this is the first survey of India's IT sector to systematically collect evidence on the impact of AI on hiring decisions, productivity, and skilling. While the survey is not fully representative of the entire sector, its depth and breadth of coverage make the findings reasonably robust. The survey relies on a combination of quantitative and qualitative responses, focusing on the direction of change rather than precise magnitudes. The questionnaire was developed through extensive consultations with a wide range of industry experts (see the "Acknowledgements" page) and refined through detailed piloting to maximise response rates. This approach resulted in stronger engagement, with all respondents answering all 21 questions in the survey (See Appendices 1 and 2 for the survey questionnaire and selected observations on the sample and survey methodology, respectively).

<sup>19</sup> In selected large firms with offices in multiple locations, we interviewed more than one respondent, as individuals tended to be more familiar with the use and implications of AI at their specific office location rather than across the firm as a whole.

<sup>20</sup> The cities covered are Ahmedabad, Bengaluru, Chandigarh, Chennai, Delhi National Capital Region (including Gurgaon and Noida), Hyderabad, Jaipur, Kolkata, Mumbai and Pune.

**Table 1: Composition of the surveyed firms by size of their revenue and employment**

Type of firms	By revenue		By employee count	
	Ad-hoc thresholds	Share of the sample	Ad-hoc thresholds	Share of the sample
Micro	< 10 cr.	15.7%	< 100 employees	17.2%
Small	≥ 10 & < 100 cr.	31.2%	100–500	32.3%
Medium	≥ 100 & < 500 cr.	34.2%	501–1,000	26.6%
Large	≥ 500 & ≥ 1,000 cr.	3.1%	1,001–10,000	9.5%
Very Large	≥ 1,000 cr.	15.9%	>10,000	14.3%

**Note:** The category of “Large” firms includes several Global Capability Centres (GCCs) that employ a large workforce but report relatively limited revenue, as their Indian operations primarily provide in-house services to parent companies abroad. This helps explain the anomalous outcome whereby “Large” firms account for 9.5 percent of the sample by employee count but only 3.1 percent by revenue.

**Source:** Authors’ calculations based on survey data

### The survey approaches employment issues from two angles: by occupation and by business division.

To enable cross-country comparisons, we sought to align our report with global studies that primarily examine these issues from an occupational perspective (e.g., Felten et al. 2021).<sup>21</sup> At the same time, our stakeholder consultations indicated that some respondents were more comfortable discussing these issues at the level of business divisions rather than occupations per se. Accordingly, we included both taxonomies in the questionnaire, as shown in Table 2. This dual approach enabled us to check for internal consistency within the survey. For multi-establishment firms (i.e., those with offices in multiple locations), we asked respondents to provide information at the establishment level, unless they were based at headquarters and had a comprehensive, organisation-wide perspective.

<sup>21</sup> Felten, E., Raj, M., & Seamans, R. (2021). Occupational, industry, and geographic exposure to artificial intelligence: A novel dataset and its potential uses. *Strategic Management Journal*, 42(12), 2195-2217.

Table 2: The occupations and business divisions explored in the survey

Occupations	Business Divisions
1. Software Developers	1. Software Development & Engineering
2. Software Analyst	2. Project/Program Management
3. Application Developers	3. IT Infrastructure & Cloud Services
4. Web and Multimedia Developers	4. Sales & Business Development
5. Computer Network Systems Administrators & Technicians	5. Client Services / Account Management
6. Database Designers and Administrators	6. Human Resources (HR) & Talent Management
7. Finance Professionals	7. Finance & Legal
8. Legal Professionals	8. Quality Assurance (QA) & Testing
9. Human Resource Professionals	9. Research & Innovation / R&D
10. Administrative Professionals	10. Marketing & Communications
11. Sales Professionals	
12. Other Marketing Professionals	
13. Clerks and Secretaries	
14. Statisticians/Mathematicians and related professionals	
15. Any other (please specify)	

Source: ICRIER-OpenAI survey

## 04 Employment Effects of Generative AI

### 4.1 Impact on overall hiring

The adoption of generative AI has been associated with a moderation in overall hiring, though not in the overall levels of employment, in India's IT sector. Our survey indicates that a majority of firms (65 percent) report a decline in hiring following the introduction of AI, while 24 percent report an increase and only 11 percent report no significant change (see left panel of Figure 1). Historically, India's IT sector has been an important generator of formal, white-collar, high-paying jobs, and so when six out of ten firms are not hiring, it is bound to raise some concerns.<sup>22</sup> But it is worth reminding us that "not hiring" does not mean

<sup>22</sup> See Mishra et al. (2025) for an estimating of the size of the labour force in India's IT sector

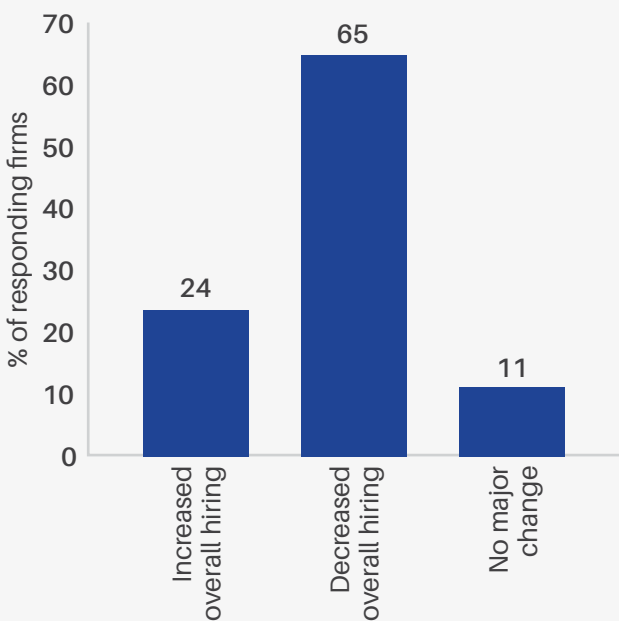
the level of employment is shrinking (as sceptics of the AI age would like us to believe); it simply means the pace of hiring has slowed down.

**Both our survey results and macro statistics point to a slowdown and not a reduction in the overall employment in the sector.** Media reports and official statistics point to a broader deceleration in revenue growth and employment expansion following the exceptional COVID boom years. For instance, revenue growth among listed IT companies fell to single digits in 2023–24 and 2024–25, compared with double-digit growth during the pandemic period. Similarly, data from the PLFS show a decline in IT-related employment across several occupations—including IT managers and IT technicians—between 2021–22 and 2023–24, but increase in overall employment (for a detailed discussion based on national data sources, see Section 7).

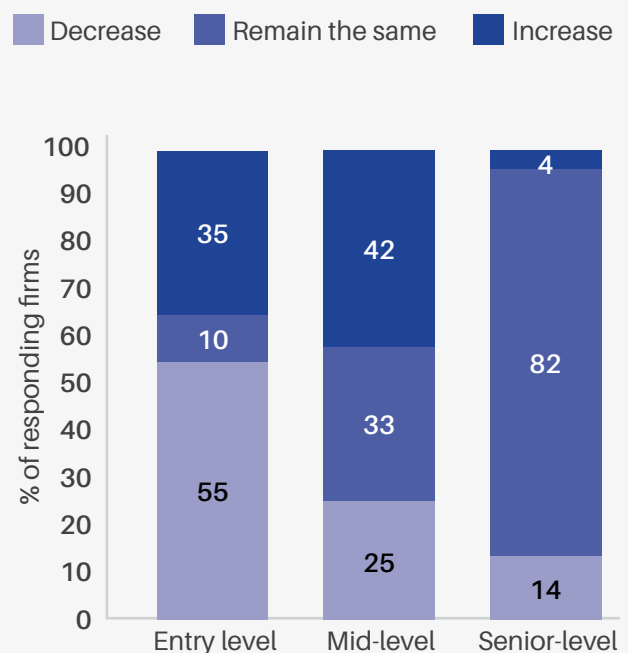
**As expected, generative AI is reshaping the skill composition of employment.** Entry-level roles appear to be the most affected, with 55 percent of firms reporting declines in employment and 35 percent reporting increases (see right panel of Figure 1). Mid-level positions display more hiring than firing: 25 percent of firms report declines, 33 percent report no change, and 42 percent report increases. In contrast, senior-level employment remains largely stable, with 82 percent of firms reporting no change. Taken together, these patterns suggest that the introduction of generative AI is beginning to transform the workforce, with a general moderation in hiring at the entry level, increased demand for more skilled mid-level workers, and considerable stability at the senior level.

**Figure 1: The impact of AI on hiring: Aggregate and composition**

Left Panel: Has AI changed the number of workers your organization is hiring? (in %)



Right panel: What has been the change in employment in your organisation over the last 24 months for the following sub-categories? (in %)



Source: Authors' calculations based on survey data

## 4.2 Impact on Occupations

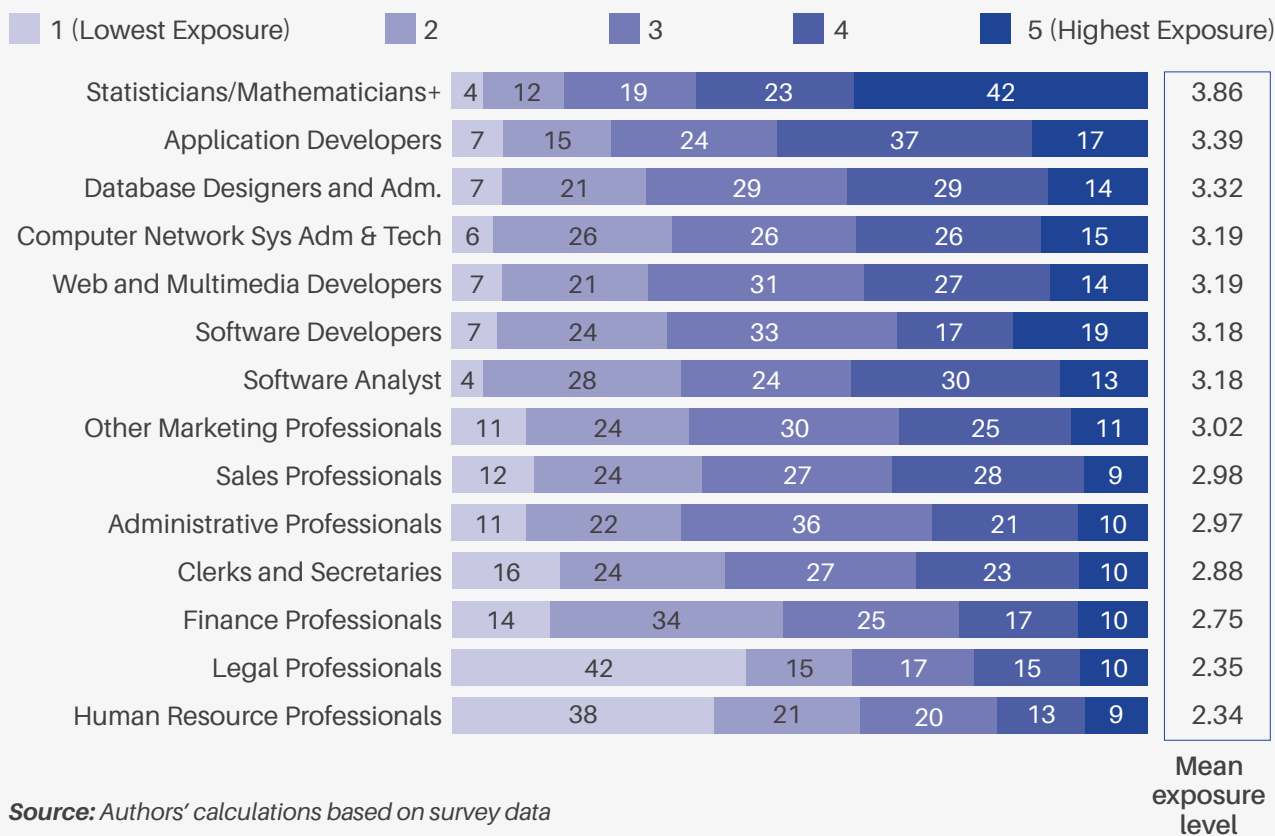
**While all occupations in the IT sector seem to be exposed to AI, the technical jobs are considered significantly more exposed.** For example, the top three occupations considered most exposed to AI (mean exposure levels of 3 or higher, on a scale of 1 to 5) are all technical and analytics-intensive roles (see Figure 2). In particular, statisticians/mathematicians, application developers, database designers and software developers stand out, with roughly two-thirds of respondents classifying these roles as significantly exposed, reflecting the rapid diffusion of AI tools in coding, modelling, and analytical tasks.

**A point-estimate measure of AI exposure across occupations, derived from weighted average responses, reinforces the above findings** (see the numbers reported within the dotted box in Figure 2). Technical and analytical roles display the highest exposure to generative AI, with statisticians and mathematicians (3.86), application developers (3.39), database designers (3.32) and software developers and analysts (3.18) ranking above the average. In fact, all core technology roles including web and multimedia developers, network systems professionals, and database administrators, register relatively high exposure levels, all well above the midpoint of the scale.

**By contrast, non-technical and support functions (from the perspective of the IT sector) exhibit lower levels of AI exposure.** Roles that are more relationship-oriented, administrative in nature, or shaped by regulatory and procedural constraints tend to be less exposed to AI. Marketing, sales, administrative, finance, human resource, clerical, and legal roles all record average exposure scores below 3.0, with HR professionals (2.34), legal professionals (2.35) and finance professionals (2.75) among the least exposed. Overall, Figure 2 underscores the strongly task-dependent nature of AI exposure in India's IT sector: occupations centred on routine cognitive processing, coding, and data analysis face the highest exposure, while roles relying on judgement, compliance, and interpersonal skills remain comparatively insulated.

**Figure 2: The extent of exposure of various occupations in the IT sector to AI**

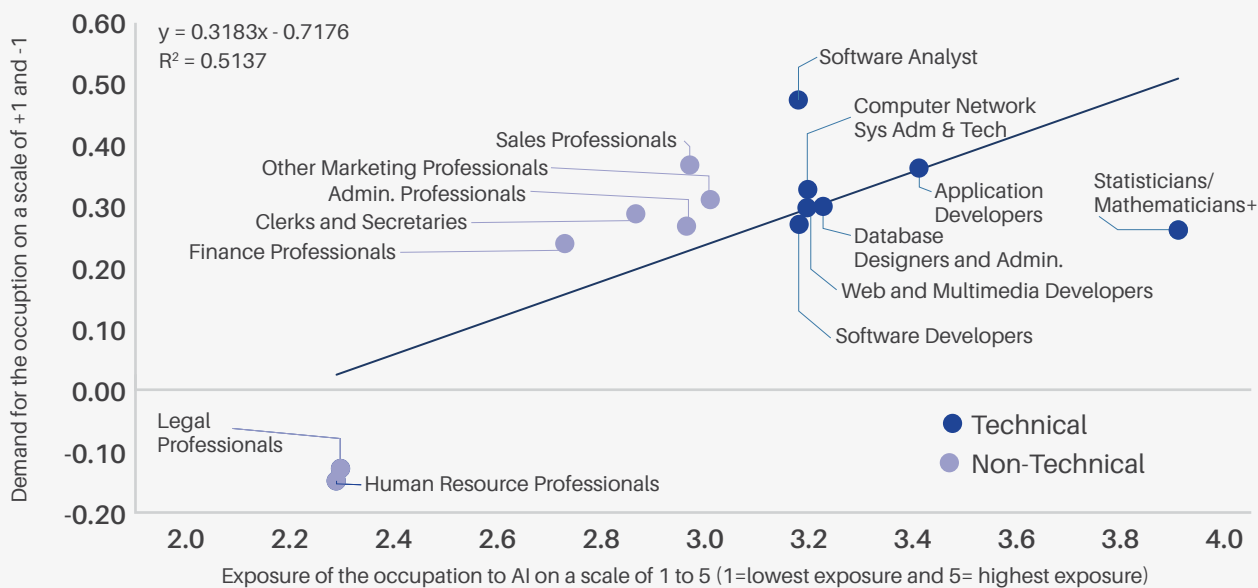
Full distribution and point estimate of the level of exposure (on a scale of 1 to 5)



**We find a clear positive relationship between an occupation’s exposure to AI and changes in demand for that occupation** (see Figure 3). Occupations with higher AI exposure (dark dots)—including software analysts, software developers, application developers, and statisticians and mathematicians—are concentrated in the upper-right quadrant, indicating both high exposure and rising demand. The upward-sloping trend line reinforces this pattern, suggesting that greater AI exposure has, on average, been associated with demand expansion rather than contraction. We interpret this positive relationship as reflecting strong complementarities between AI and technical roles, though such complementarities may not extend uniformly to all highly exposed occupations.

**In contrast, occupations with low exposure to AI tend to experience weaker demand dynamics.** Human resource and legal professionals stand out as the two occupations with relatively low AI exposure that have nevertheless experienced negative demand growth (see Figure 3). In contrast, other non-technical occupations continue to exhibit positive demand growth alongside lower levels of AI exposure. Taken together, the evidence suggests that, within India’s IT sector, AI is functioning primarily as a complement to high-skill technical occupations—raising their productivity and market demand—rather than as a substitute that displaces them. (see Appendix 3 for details on size-wise breakdown of Figure 3)

Figure 3: Higher exposure occupations are experiencing greater demand



**Note:** Positive average values on the y-axis indicate a larger share of firms reporting increased demand for the occupation, while negative values indicate a larger share reporting decreased demand. The average demand measure is computed as a weighted average, where 1.5 denotes "increased a lot," 0.5 denotes "increased a little," 0 denotes "remained the same," and -1 denotes "decreased."

**Source:** Authors' calculations based on survey data

## Box 1: Occupations and skills whose demand has declined due to AI adoption

One of the most common questions facing young people in India today concerns the skills they need to acquire to prepare for the AI age. The flip side of this question is which skills and occupations are seeing a decline in demand as AI adoption gathers momentum. Our survey offers some useful insights into this issue.

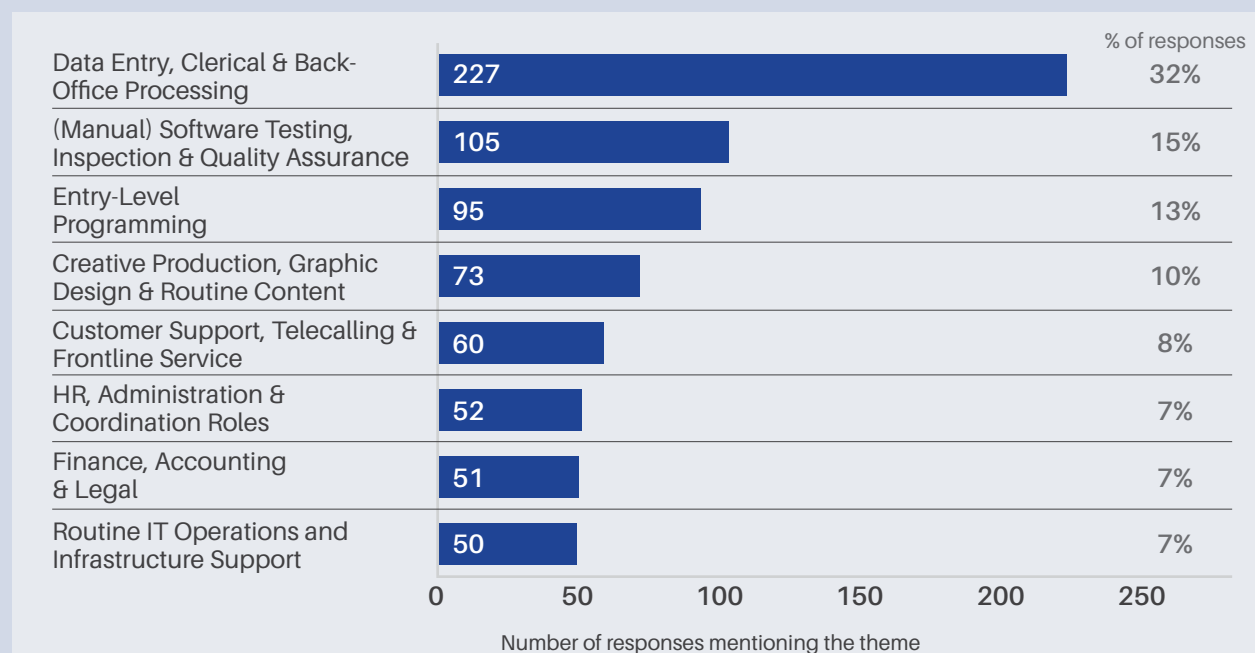
The questionnaire included an open-ended question asking respondents to identify traditional roles and skills that are being phased out or reduced in the industry (not necessarily within their own organisations) as a result of AI-based automation and adoption.

The open-ended responses were qualitatively coded into thematic categories through manual review, with each response assigned to one or more themes based on its dominant content. The bar chart below shows the number of times each skill or theme was mentioned, while the figures in the light grey boxes indicate the corresponding frequency of responses.

The analysis covers approximately 595 out of 650 responses. A small number were excluded because they were too ambiguous, abstract, or could not be reliably classified under the predefined themes.

The figure shows that AI adoption is leading to the significant decline in demand for routine and entry-level roles in India’s IT and services sector. The most affected category is data entry and clerical work, cited by 32% of respondents, followed by manual testing, manual quality assurance, and entry-level programming. Creative production, customer support, and administrative functions are also experiencing noticeable declines, reflecting the growing use of generative AI and automation tools. Overall, the pattern suggests that AI is primarily displacing standardized, repetitive tasks, while its impact may be gradually extending to more skilled roles.

### Roles and skills whose demand has declined due to AI adoption



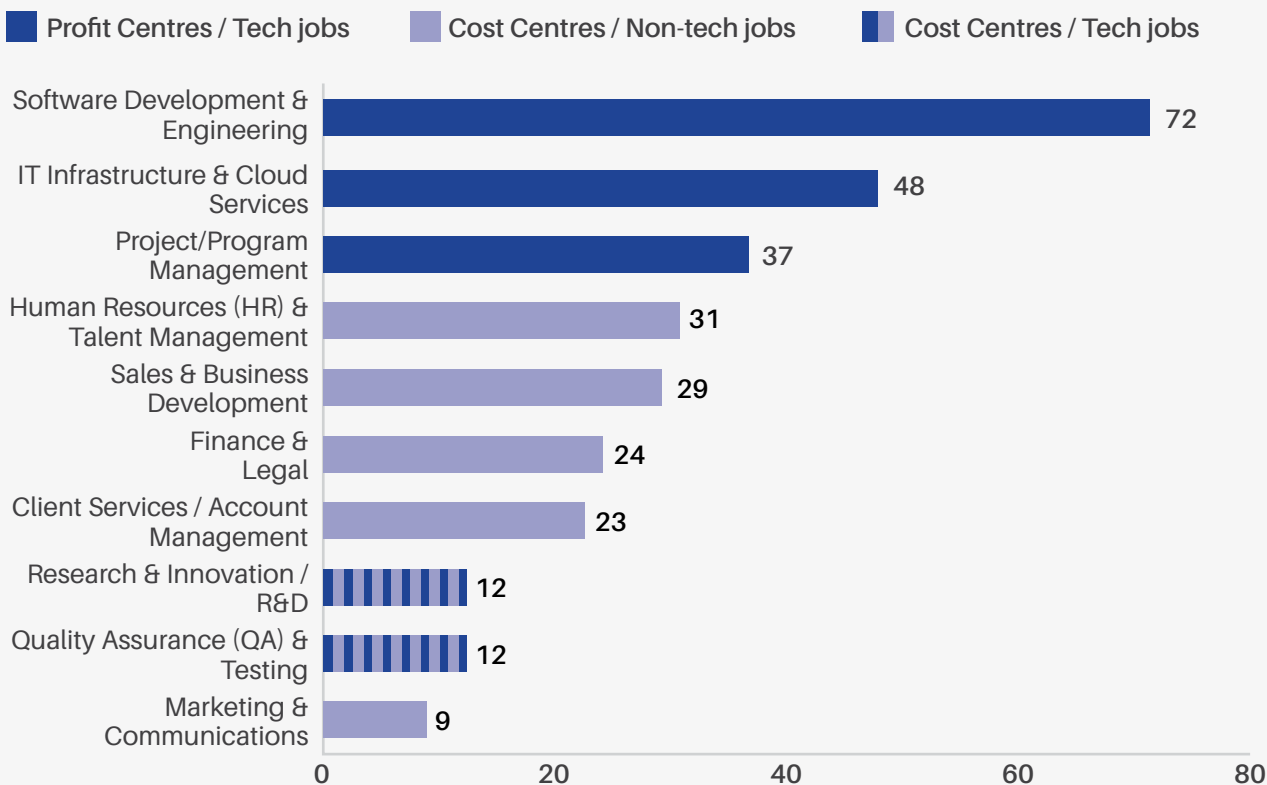
**Note:** This question asks which traditional roles or skills are being phased out or reduced in the industry (not necessarily your organization) due to AI-based automation/AI adoption.

### 4.3 Impact on Business Divisions

As expected, all divisions in IT firms are expected to be impacted by AI, although differentially.<sup>23</sup> The greatest impact of AI at the organisational level seems to be concentrated in core technology divisions, which are also seen as profit centres. Software Development and Engineering stands out as the most affected division, cited by 72 percent of respondents as one of the top three areas impacted by AI. This is followed by IT Infrastructure and Cloud Services (48 percent) and Project/Program Management (37 percent), indicating that AI is reshaping not only coding and engineering tasks but also the management and delivery of technology projects.

By comparison, support and non-technical functions are seen to be less affected—also viewed as the cost centres—though still experiencing meaningful change. Human Resources and Talent Management (31 percent) emerges as the most affected non-tech division, reflecting AI’s growing role in recruitment, performance management, and workforce planning. Sales and business development (29 percent), finance and legal (24 percent), and client services and accounts management (23 percent), register more moderate impacts. Quality assurance, R&D, and marketing are among the least affected divisions. Overall, Figure-4 suggests that AI’s impact is strongest in divisions where digital production and delivery are central, with more limited—but still notable—spill over into support and administrative functions.

**Figure 4: Business functions most affected by AI at the organization level**  
 (% of respondents choosing a business function as one of the top three most affected by AI)



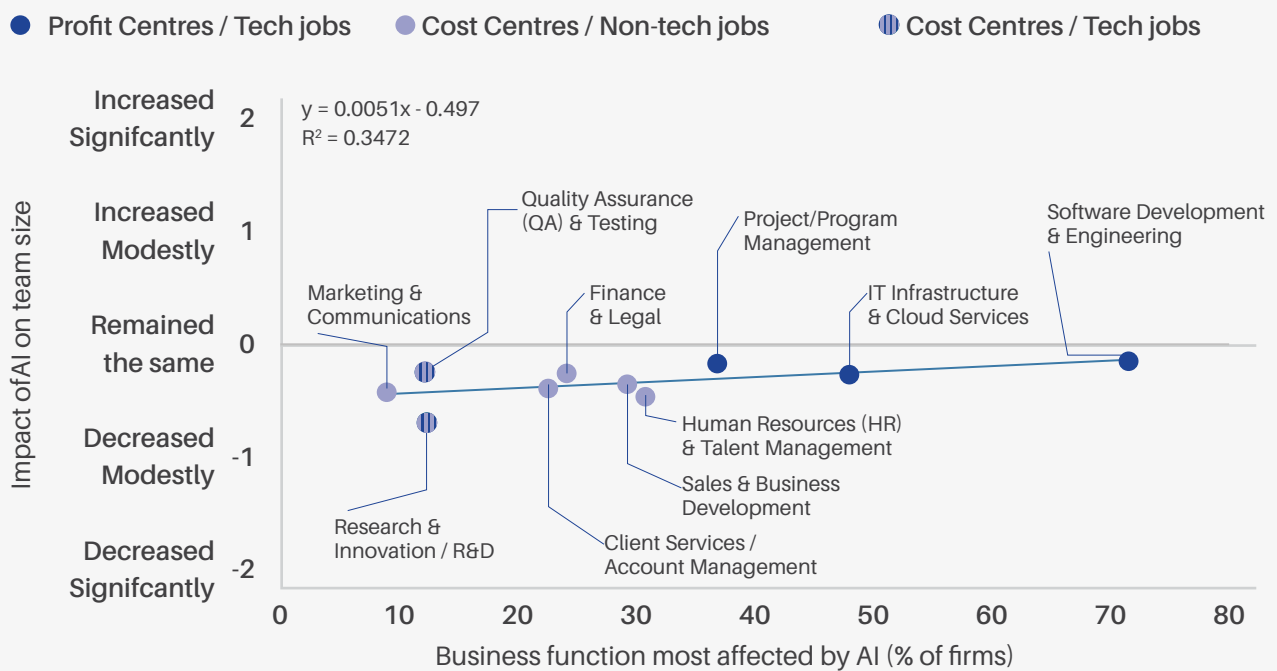
Source: Authors’ calculations based on survey data

<sup>23</sup> We used the term “exposure to AI” in questions relating to occupations, while the corresponding term used for business divisions was “impacted by AI.” Although the two phrases are not strictly equivalent, we use them interchangeably in the report for ease of discussion.

The functioning of most business divisions appears to be impacted by AI, albeit only modestly. Consistent with the overall moderation in hiring discussed in Section 4.1, most divisions report a decline in team size following the adoption of AI, although the average reduction is relatively modest (see Figure 5). The estimated decline ranges from -0.15 to -0.70 on a scale that spans from +2 (significant increase) to -2 (significant decline).

Contrary to prevailing wisdom, we find that the business functions most affected by AI are also those experiencing the least job displacement. Divisions identified as being more strongly impacted by AI tend to experience smaller declines—or even stability—in employment, as indicated by the upward-sloping trend line. In particular, divisions regarded as profit centres, such as Software Development & Engineering and IT Infrastructure & Cloud Services, are among the most affected by AI, yet they show little to no decline in team size. (see Appendix 4 for details on size-wise breakdown of figure 5)

Figure 5: Higher impacted divisions have seen least decline in team size



**Note:** The x-values represent the percentage of firms that identify a given business function as one of the most affected by AI. The y-values represent the average impact of AI on team size for that business function, calculated as the mean of response values where 2 = increased significantly, 1 = increased modestly, 0 = remained the same, -1 = decreased modestly, and -2 = decreased significantly. The average impact for each business function is computed only using responses from firms that identified that function as being among the most affected by AI.

**Source:** Authors' calculations based on survey data

In contrast, business divisions that primarily operate as cost centres tend to experience larger employment contractions. Divisions such as marketing and communications, finance and legal, and client services—which are perceived to be less impacted by AI—have seen the more pronounced declines in employment. Human resources and talent management occupy an intermediate position, with relatively

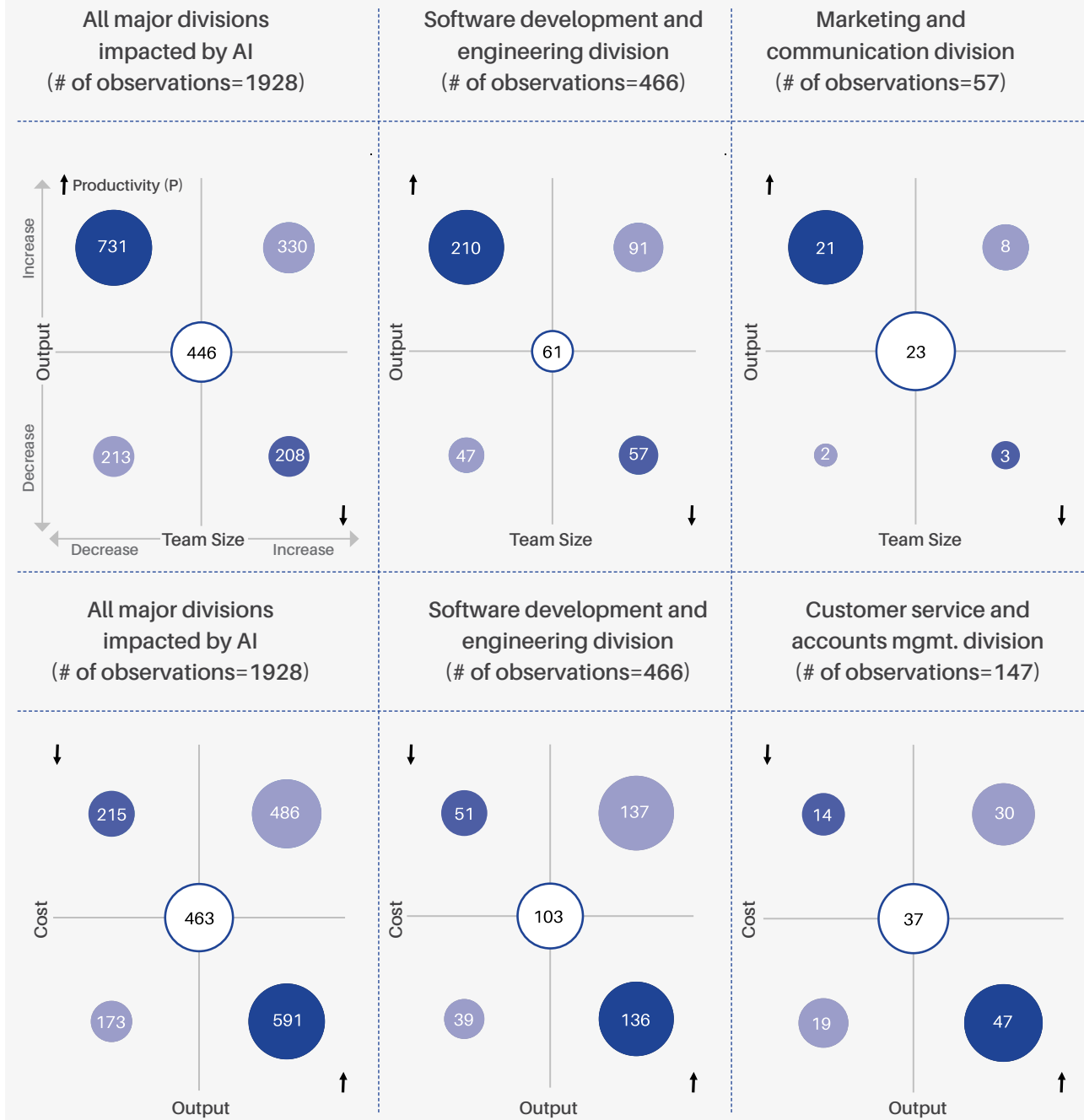
higher AI exposure but still some moderation in team size. Two divisions—R&D and quality assurance and testing—which involve technical roles but are treated as cost centres, have also experienced moderate declines in team size. This suggests that the key differentiator is not technical versus non-technical functions, but rather whether a division operates as a profit centre or a cost centre. Overall, Figure 5 suggests that AI is delivering productivity gains—a finding that is reinforced in the next section—in core technical divisions without commensurate job losses, strengthening the view that AI adoption in India’s IT sector is associated more with augmentation than substitution.

## 4.4 Impact on Productivity

**The surveyed firms report broad-based improvements in productivity following AI adoption.** The top left panel of Figure 6 shows that, among the 1,928 divisions identified by the 651 establishments as being most impacted by AI, 731 divisions (38 percent of the total) experienced a simultaneous decline in team size and an increase in output, indicating significant productivity gains. By contrast, 208 divisions (11 percent) saw the opposite pattern—an increase in team size accompanied by a decline in output—while 446 divisions (23 percent) had unchanged productivity. As a result, divisions experiencing productivity gains outnumber those experiencing declines by a margin of 3.5 to 1. This ratio is even higher for software development and engineering (3.7 to 1; top panel, middle column) and for marketing and communications (7.0 to 1; top panel, rightmost column). Taken together, this evidence suggests that generative AI is enabling firms to produce more with the same or fewer workers.

**A similar pattern emerges when examining the joint impact on costs and output.** Among the 1,928 affected divisions, 591 divisions (31 percent of the total) reported a simultaneous increase in output and decline in cost, indicating significant productivity improvements (bottom leftmost panel). The ratio of divisions experiencing productivity gains to those experiencing productivity declines is approximately 2:1, both all divisions combined as well as for software development and engineering division (bottom middle panel). Overall, Figure 6 reinforces the central finding of the study: India’s IT firms are undergoing productivity-enhancing restructuring, consistent with AI acting as a labour-augmenting rather than a labour-displacing technology.

**Figure 6: A majority of business divisions experienced either a decline in team size, an increase in output, or a reduction in costs—or at least two of these outcomes simultaneously**



**Note:** The figure reports the number of responses falling into each combination of changes across two dimensions of a business function. The leftmost panels summarise these changes across all business functions identified by firms as being most affected by AI. In total, 1,928 responses are recorded across 651 establishments, implying that each establishment identified, on average, three business functions as most affected by AI. The middle and right panels show the number of establishments reporting each type of change for the respective business functions and include only those establishments that identified the relevant function as being among the most affected by AI. Size of the bubble is proportionate to the number of observations.

The arrows within each quadrant indicate the implied change in productivity. For example, in the top-left quadrant (Q2) in the top panel, an increase in output combined with a decrease in team size implies a rise in productivity, while in the bottom-right quadrant (Q4), a decrease in output alongside an increase in team size implies a fall in productivity. The productivity implications of the other two quadrants (Q1 and Q3) are indeterminate.

**Source:** Authors' calculations based on survey data

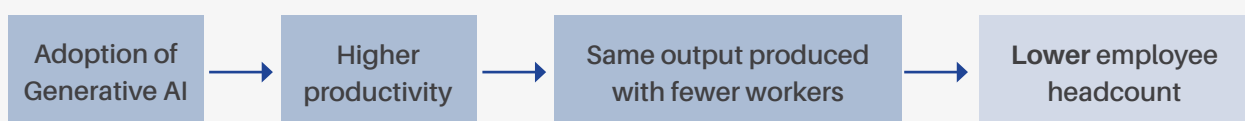
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# Why Are Occupations with Greater AI Exposure Experiencing Higher Demand?

The finding that occupations with greater exposure to AI are also experiencing higher demand took us by surprise. We focused on India's IT sector largely because of an ex-ante belief that it would experience both the greatest productivity gains and the highest risk of job displacement. This belief was rooted in the perception that India's IT workforce performs highly repeatable and codifiable tasks—precisely the tasks at which generative AI excels—raising concerns that coders could soon be replaced by AI. However, we find no evidence to support this hypothesis. On the contrary, these counterintuitive results are further reinforced at the business-function level, where software-related divisions are found to be experiencing the least moderation in employment relative to other functions.

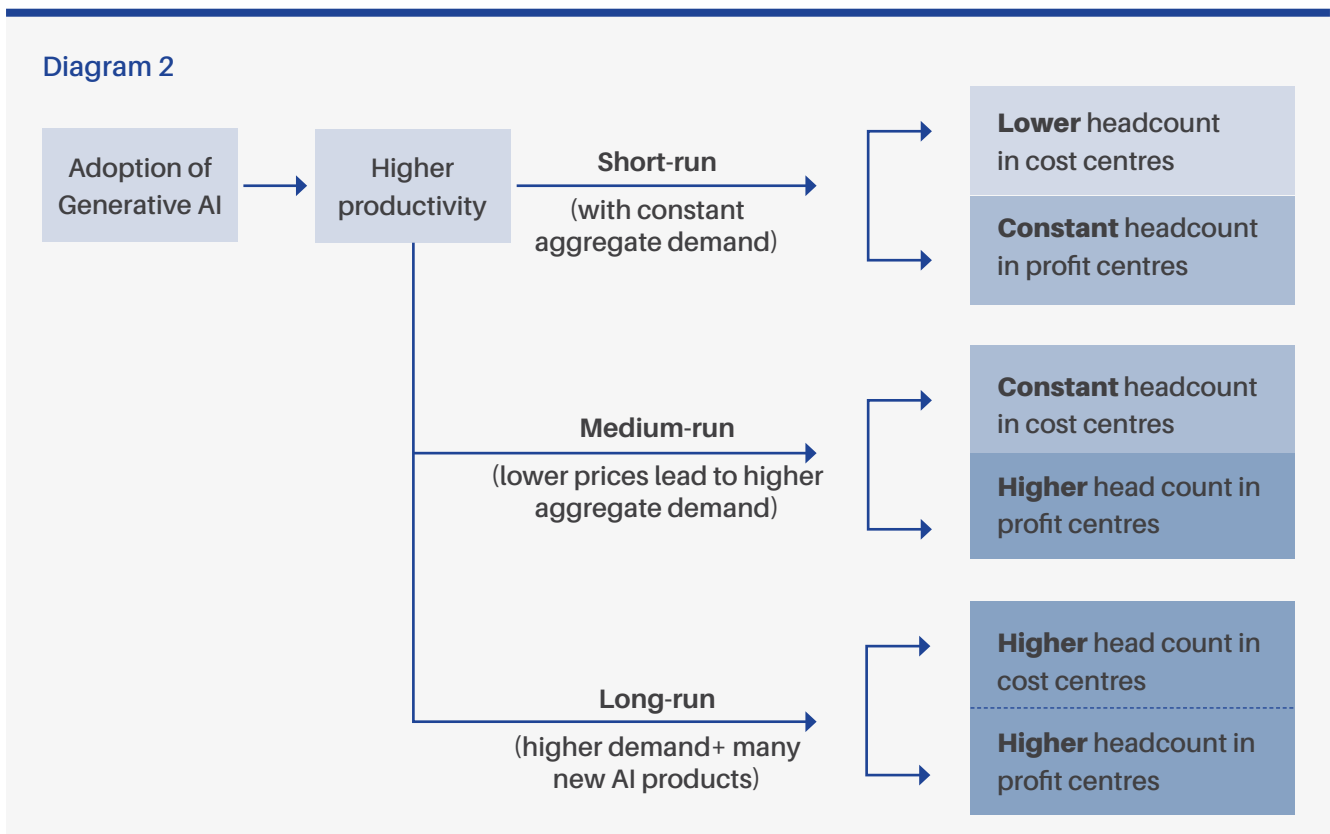
Discussions with IT experts suggest that the conventional argument is incomplete, as it is based only on the substitution effect of AI on labour.<sup>24</sup> The diagram below illustrates the logic underlying this view: the adoption of generative AI automates or accelerates routine, codifiable, and information-processing tasks, thereby raising worker productivity. Holding output demand constant, higher productivity allows firms to produce the same level of output with fewer workers, leading to a reduction in headcount. This reasoning, however, overlooks broader general-equilibrium forces—such as cost reductions, price declines, market expansion, and the creation of new tasks—that can raise output demand and offset, or even outweigh, the initial labour-saving effect.

Diagram 1



<sup>24</sup> There are likely to be many other alternative explanations for the upward-sloping relationship between exposure and demand. For example, it is likely that companies are applying AI to those tasks for which demand is rising most sharply, which would also imply positive co-movement between AI and the roles engaged in producing those tasks.

According to industry experts, a fuller explanation must account for two additional factors: the differential impact of productivity shocks across profit and cost centres, and the tendency for income effects to outweigh substitution effects over the medium to long term. In the IT industry, roles such as software analysts and system administrators are largely located in profit centres, while functions such as human resources, legal, finance, and customer support are typically organised as cost centres. As a general-purpose technology, generative AI raises productivity across most roles, as shown in Figure 5. In the short run, firms often respond by reducing headcount in cost centres, while employment in profit centres remains broadly stable. In the medium run, lower costs translate into higher demand, leading to employment growth in profit centres even as headcount in cost centres stabilises. In the long run, expansionary effects dominate: higher output and market growth increase labour demand across the organisation, resulting in higher headcount in both profit and cost centres. Overall, the diagram highlights that AI’s initial labour-saving effects are transitional, and that income and scale effects can outweigh substitution effects over time, leading to net job creation.



The above explanations are likely to apply beyond the IT sector. The positive relationship between AI adoption and employment does not depend on any idiosyncratic features of the IT industry. Rather, the differential responses of profit and cost centres to a general-purpose-technology shock reflect rational firm behaviour, even though the specific occupations classified as profit or cost centres may vary by sector. Similarly, the interaction between substitution and income effects follows standard demand theory, assuming firms operate in competitive markets.<sup>25</sup> That said, employment outcomes could differ if the pace of

<sup>25</sup> If a firm operates as a monopoly, higher productivity and lower costs may not translate into lower prices for consumers; instead, they may result in supernormal profits for the monopolist, preventing the income effect from materialising. This underscores the importance of regulating the AI economy to avoid the emergence of monopolistic outcomes.

AI adoption is exceptionally rapid—as may be the case in some advanced economies with higher wages—or if the scope of generative AI use expands sharply in the short term. More fundamentally, if generative AI evolves dramatically or if artificial general intelligence and smart humanoids are deployed at scale, many of the conclusions drawn here would warrant reassessment.

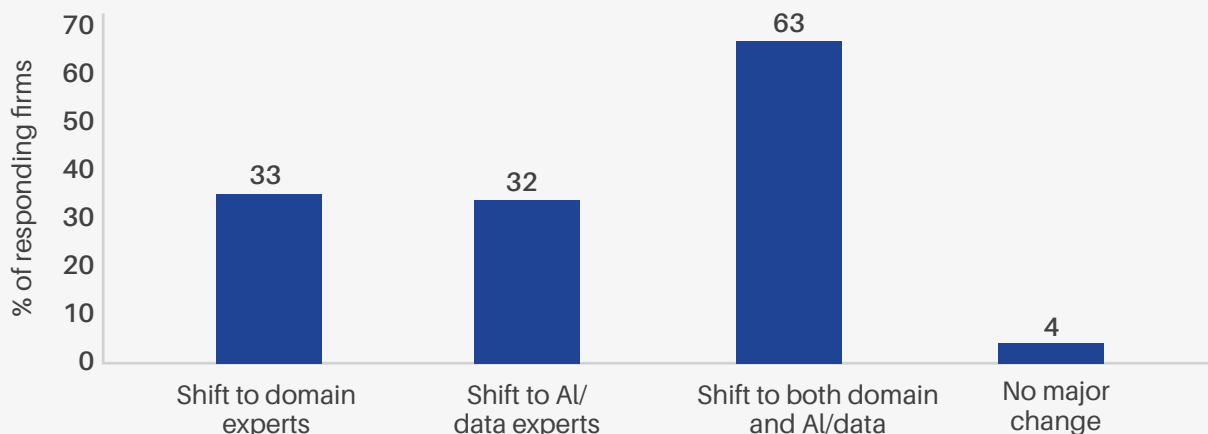
## 06 Talent Management and Internal Skilling

### 6.1 Demand for skills

AI adoption is reshaping hiring priorities toward hybrid skills profile - that combines domain expertise and AI/data-related technical skills - rather than narrow specialisation. Figure-7 shows that a majority of firms report a shift in the types of roles they are hiring for as a result of AI adoption, with the largest share (63 percent) indicating a move toward candidates who combine both domain expertise and AI/data skills. A further 32 percent report a shift specifically toward AI and data experts, while 33 percent indicate increased demand for domain experts alone. Only a small minority of firms (4 percent) report no major change in hiring patterns. Taken together, the results suggest that AI is not simply increasing demand for technical specialists in isolation, but is driving a broader reconfiguration of skill demand toward hybrid roles that integrate domain knowledge with AI and data capabilities.

Figure 7: Impact of AI on skills demand

To what extent has AI changed the type of roles your organisation is hiring for?(in %)

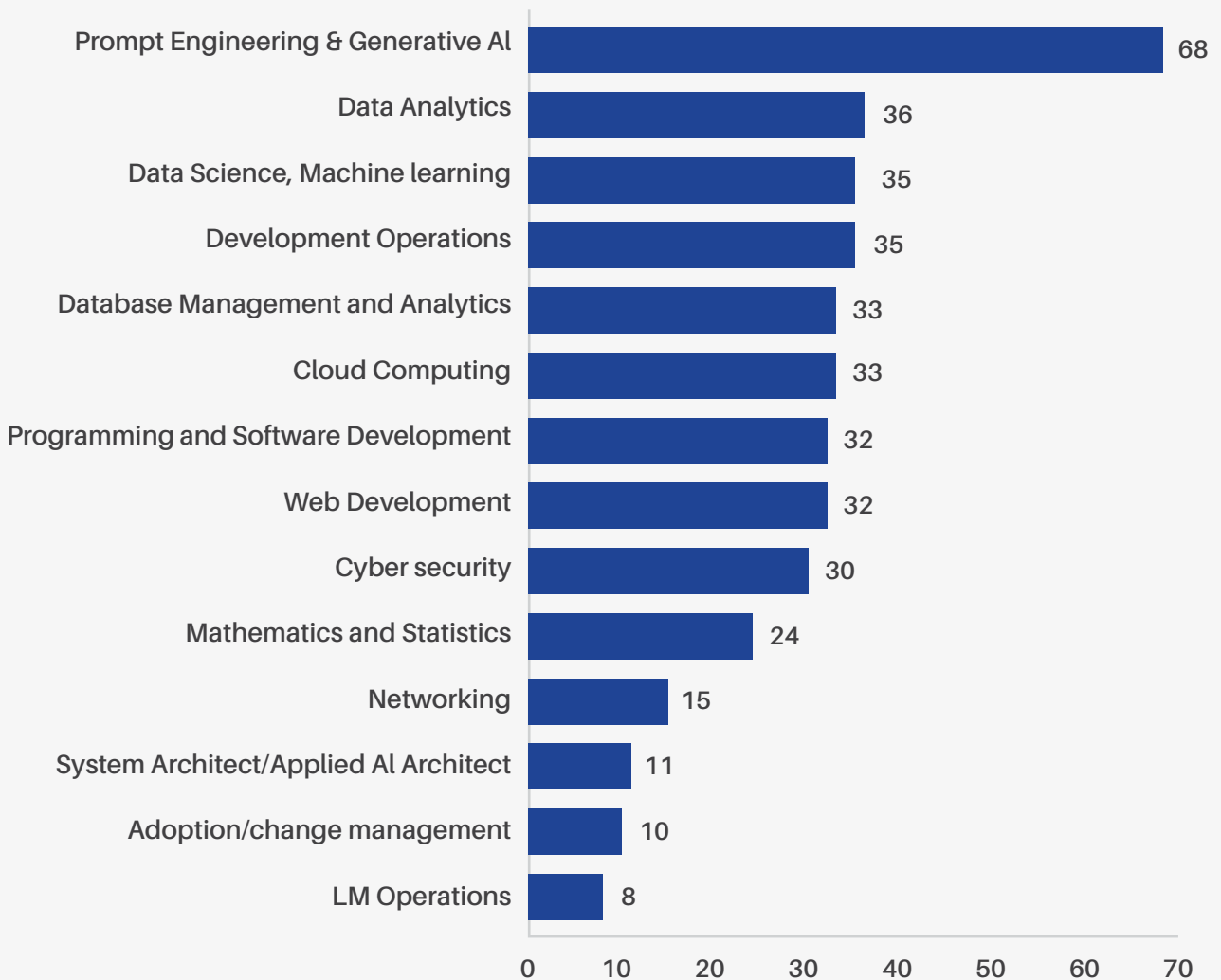


Source: ICRIER-OpenAI survey

**AI adoption is driving a broad-based increase in demand for advanced skills, with generative AI capabilities at the forefront.** Figure 8 shows that the strongest increase in demand is for prompt engineering and generative AI skills (68 percent), followed by data analytics (36 percent) and data science and machine learning (35 percent). Demand has also risen substantially for complementary technical capabilities such as development operations (35 percent), database management and analytics (33 percent), cloud computing (33 percent), programming and software development (32 percent), and cybersecurity (30 percent). In contrast, more specialised or downstream roles—such as system and applied AI architects, adoption and change management, and Large Language Models (LLM) operations—are cited by a smaller share of firms, implying that few Indian IT firms surveyed for this report are investing in building foundational models.<sup>26</sup>

**Figure 8: Impact of AI on the demand for different skills and expertise**

Which skill sets are now in greater demand in your organization due to AI adoption? (in %)



Source: ICRIER-OpenAI survey

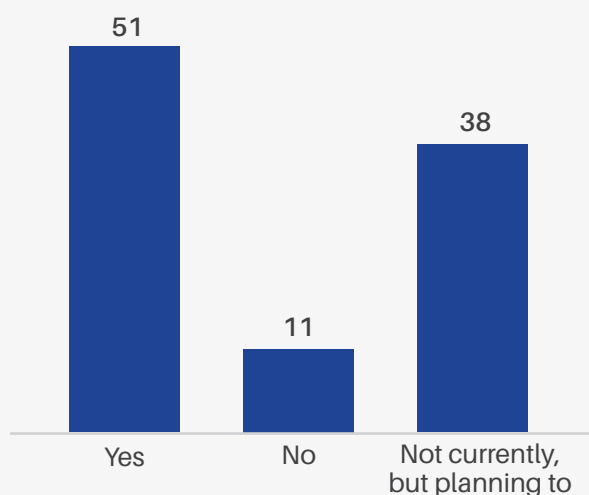
<sup>26</sup> To understand global flow of talent, see <https://archivemacropolo.org/interactive/digital-projects/the-global-ai-talent-tracker/>

## 6.2 Training and upskilling the work force

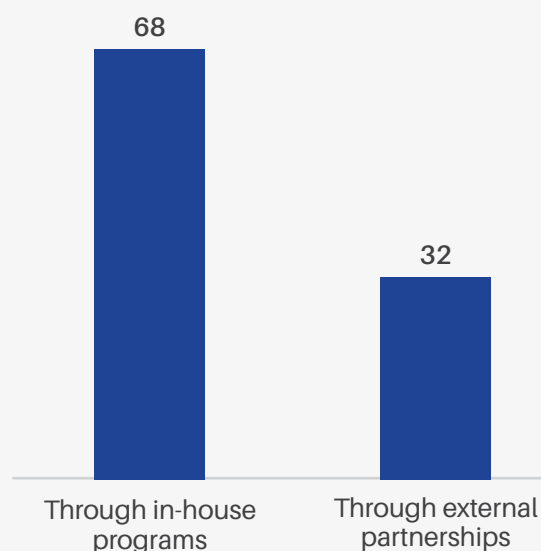
**Most firms are investing in internal awareness and workforce reskilling initiatives.** Figure 9 indicates that a clear majority of firms (51 percent) are already creating awareness and providing support for AI adoption, while a further 38 percent are not doing so yet but plan to in the near future; only 11 percent report no such efforts. Consistent with this proactive stance, firms rely primarily on in-house mechanisms for retraining and reskilling, with 68 percent using internal programmes compared to 32 percent leveraging external partnerships.

**Figure 9: Awareness and training program involving AI**

Is your organization creating awareness and providing support around the adoption of AI? (in %)



How is your organization actively retraining/reskilling existing staff to adapt to AI adoption? (in %)

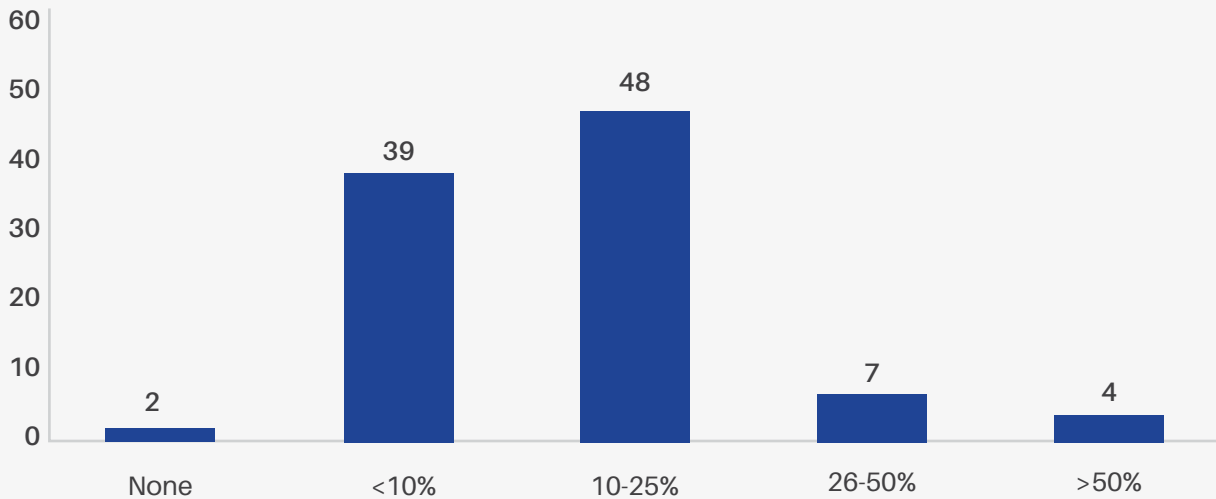


*Source: ICRIER-OpenAI survey*

**Despite widespread awareness of AI, only four percent of firms have provided AI training to more than 50 percent of their staff.** Figure 10 shows that while a large majority of firms have begun upskilling their workforce in AI-related areas, the depth of these efforts remains modest. Four out of 10 firms report that less than 10 percent of their workforce has received AI-related training in the past 12 months, while another 48 percent indicate coverage in the 10–25 percent range. Only a small minority of firms have undertaken more extensive upskilling, with 7 percent training between 26–50 percent of employees and just 4 percent reaching more than half of their workforce. At the other end, only 2 percent of firms report no AI-related upskilling at all, suggesting that while awareness and enthusiasm are widespread, comprehensive workforce transformation is still at an early stage.

**Figure 10: Upskilling the work force**

What proportion of your workforce has received AI-related upskilling in the past 12 months? (in %)

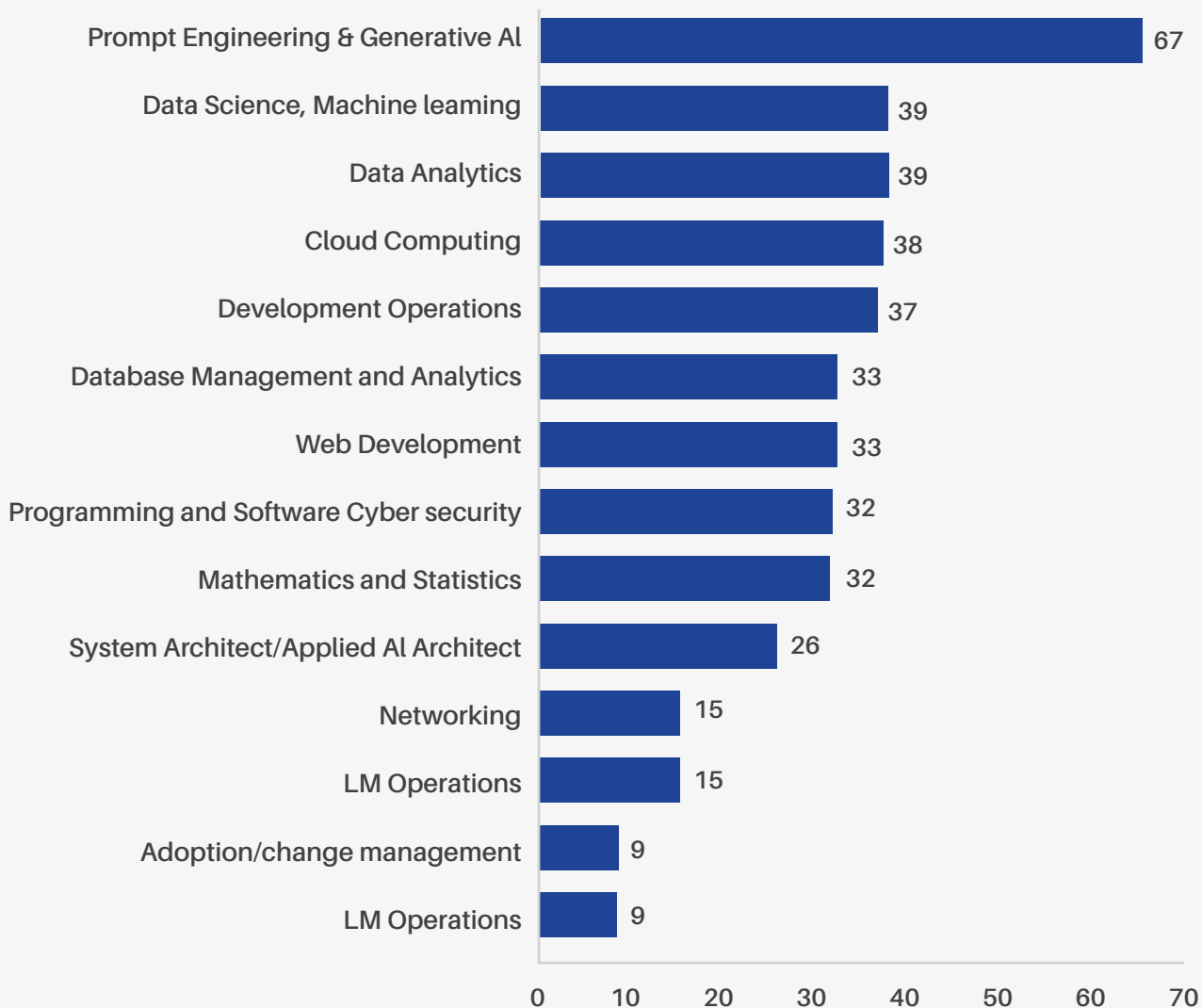


*Source: ICRIER-OpenAI survey*

**Firms are prioritising training on generative AI capabilities.** Figure 11 shows that the most commonly prioritised skills in organisational training programmes are prompt engineering and generative AI (67 percent), followed closely by data analytics (39 percent) and data science and machine learning (39 percent). Substantial emphasis is also placed on complementary technical skills such as development operations (37 percent), database management and analytics (33 percent), cybersecurity (32 percent), and programming and software development (32 percent). In contrast, system architecture, networking, adoption and change management, and LLM operations receive relatively less attention. Overall, the pattern indicates that firms are concentrating their training investments on imparting the skills that are in greatest demand as shown in Figure -8.

**Figure 11: Skills that are being prioritised**

What AI-related skills is your organization prioritizing in your training programs? (in %)



Source: ICRIER-OpenAI survey

**Upskilling efforts are constrained primarily by cost, talent shortages, and organisational readiness.**

Figure 12 indicates that the most frequently cited challenge to adapting the workforce to AI is not finding the trainer with right talent and skills (70 percent), followed by high cost of upskilling and uncertainty about returns (68 percent). Ethical, legal, and reputational risks (59 percent), a lack of organisational readiness and supportive workplace culture (44 percent), and the lack of adequate high-quality data for training AI systems (33percent) also feature prominently, underscoring the multifaceted nature of the challenge. By contrast, the absence of clear strategy or support from government is cited by a smaller, though still significant, share of firms (35 percent). Overall, the figure suggests that the main barriers to AI-related upskilling are internal to the industry, with limited scope for governmental support.

**Figure 12: Challenges to AI adoption**

What are the biggest challenges your organization faces in adapting the workforce to AI? (in %)



Source: ICRIER-OpenAI survey



## 07 Corroborative Evidence from Secondary Sources

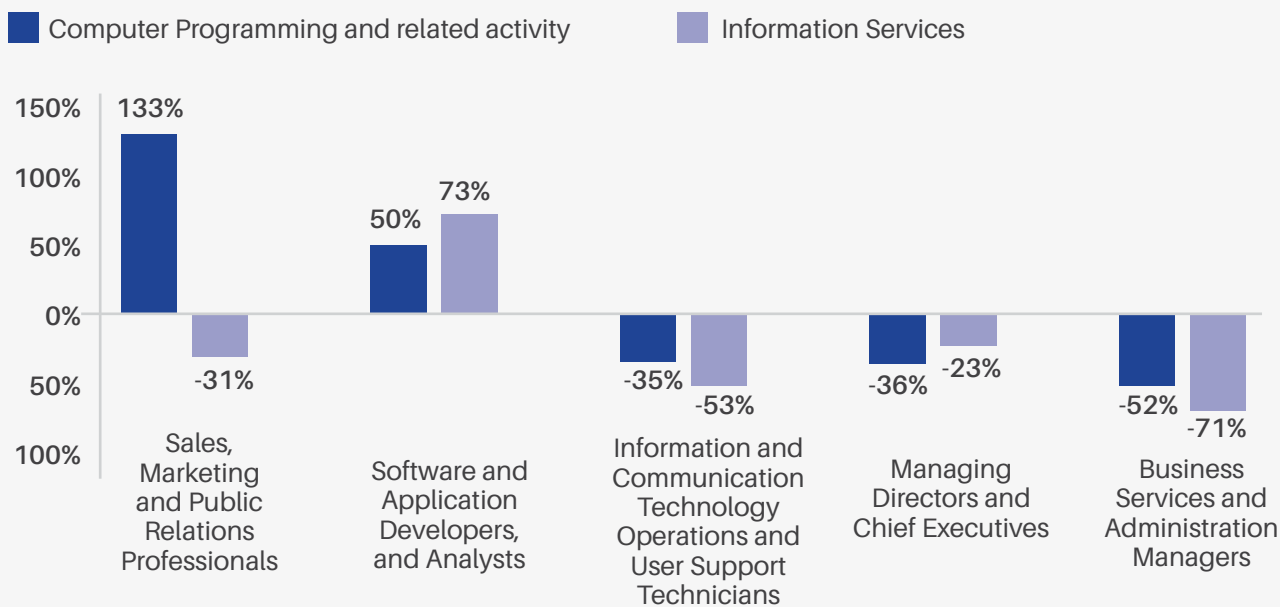
The effect of AI on jobs has always been a challenging question to answer due to the lack of coherent and specific data. In the Indian economy, labour market outcomes are published by the Ministry of statistics and Planning Implementation (MoSPI), under the Periodic Labour Force Survey (PLFS). The PLFS is a large-scale household survey that tracks the employment scenario of the economy at large. It is an annual survey that started in the year 2017-18, with the latest round being 2023-24. Using the PLFS data, we track the

employment numbers for two specific industrial codes, namely, Computer programming, consultancy and related activities, and Information Services Activity. These two industrial codes were specifically chosen as they closely represent the IT industry in India.

Each industrial code has a set of occupations (categorized by the National Classification of Occupations (NCO)) that come under it. We compute the total employment at the industry level for the year 2021-22 and compare it to 2023-24 (which is the latest year for which the data is available). At the aggregate level, the employment number for the industry - Computer programming, consultancy and related activities was 3.8 million in 2021-22, which increased to 5.2 million in 2023-24. For the industry, Information Services Activity, the number increased from 731,000 to 809,761.

Figure 13 provides an illustration of the change in employment numbers for the occupations within both these industries. Business services and administrative managers and Managing Directors and Chief Executives are the two occupations with the largest decline in jobs from 2021-22 to 2023-24. Core jobs (occupations) such as IT Managers and IT technicians have also witnessed a decline. Software and Application Developers and Analysts is the only occupation that has seen an increase over the years. Thus, while certain jobs have faced a decline, other occupations have seen gains in employment.

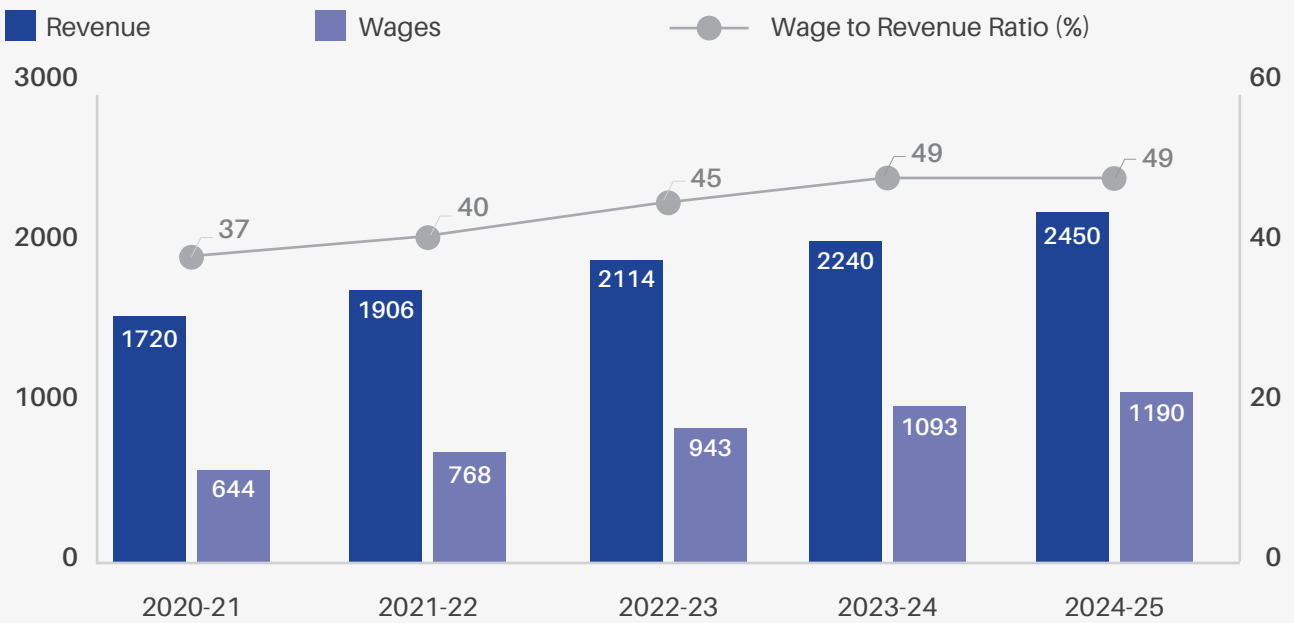
**Figure 13: Changes in employment numbers across specific occupations in the IT industry (2021-22 to 2023-24)**



**Source:** Authors' analysis using Periodic Labour Force Survey (PLFS)

We complement the PLFS numbers with data from the Centre for Monitoring the Indian Economy (CMIE). CMIE provides data on a range of indicators for almost 50,000 companies established and functioning in India. For our study, we select the companies within the Information Technology industry. CMIE disaggregates the IT industry into (a) Computer Software and (b) ITES. To understand the impact of AI, we examine how revenue (income from operations) has changed for the major companies over the years. Examining close to 750 firms in the IT industry, we find that revenue from operations has increased from INR 1,719 crores in 2020-21 to INR 2,449 crores in the latest year. In terms of expenses paid for salaries and wages, that has doubled from INR 644 crores in 2020-21 to INR 1,190 crores in 2024-25. Figure 14 provides an illustration of the trend for revenue and wages for a large set of IT companies in India. Along with wages, and revenue, the wage to revenue ratio has also been increasing. In 2020-21, the ratio of wages to revenue stood at 37 percent. This indicator increased to almost 50 percent in 2023-24. Hence, while firms have begun to adopt technology and AI into their operations, the wage bill has also increased to accommodate more skilled talent.

**Figure 14: Trend of Revenue, Wages, and Wage to Revenue ratio for a large set of IT Companies in India**



**Source:** Authors' analysis using Centre for Monitoring the Indian Economy (CMIE)

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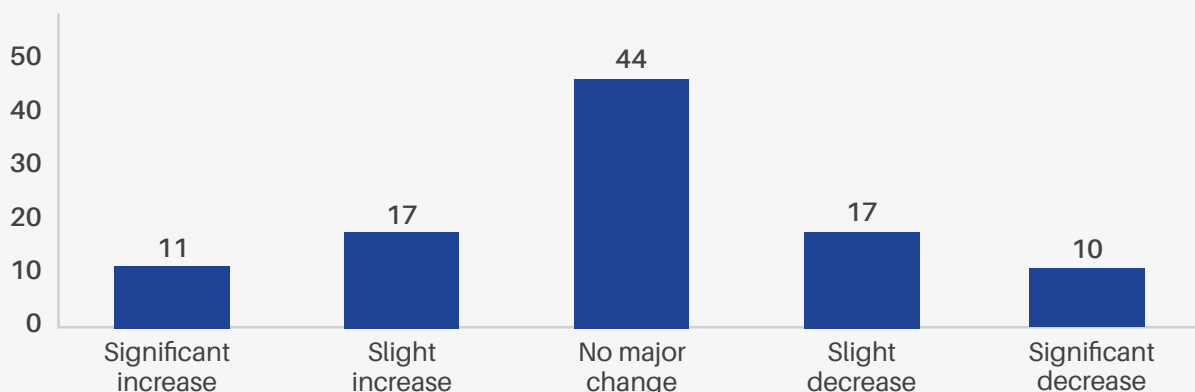
# Outlook and Concluding Remarks

India's IT industry expects generative AI is to reshape jobs and skill composition but not trigger large-scale job losses. As Figure 15 shows, India's IT industry is evenly divided in its expectations of how AI will affect workforce size over the next two years. The largest share of firms (44 percent) anticipates no major change in overall employment, indicating perhaps expectations of gradual adjustment. Among the rest, positive and negative expectations are broadly symmetric: 28 percent expect an increase in workforce size (11 percent significant and 17 percent slight), while 27 percent anticipate a decline (17 percent slight and 10 percent significant). Overall, the distribution suggests that firms do not foresee dramatic AI-driven employment contractions in the near term.

Our survey is, however, likely to underestimate the overall job creation potential of generative AI in India's IT sector. By design, our survey captures only the perspectives of existing firms, whereas history suggests that many of the most impactful technology-driven jobs will be created by startups that have yet to be established—or are currently taking shape in classrooms and garages. While some incumbent firms are likely to survive and thrive in the AI age, it is new, AI-centric firms that are most likely to disrupt incumbents and generate a large share of future employment. For these reasons, there is good reason to be optimistic about India's job prospects in the AI era. As home to one of the world's largest pools of AI-skilled workers, and with global demand for AI-enabled products set to expand rapidly, Indian workers are likely to see large and sustained increase in demand for their services in the medium to long-run.

**Figure 15: Expectations about AI's employment impact are broadly balanced**

Over the next 2 years, how does your organization expect AI to affect your overall workforce size? (in %)

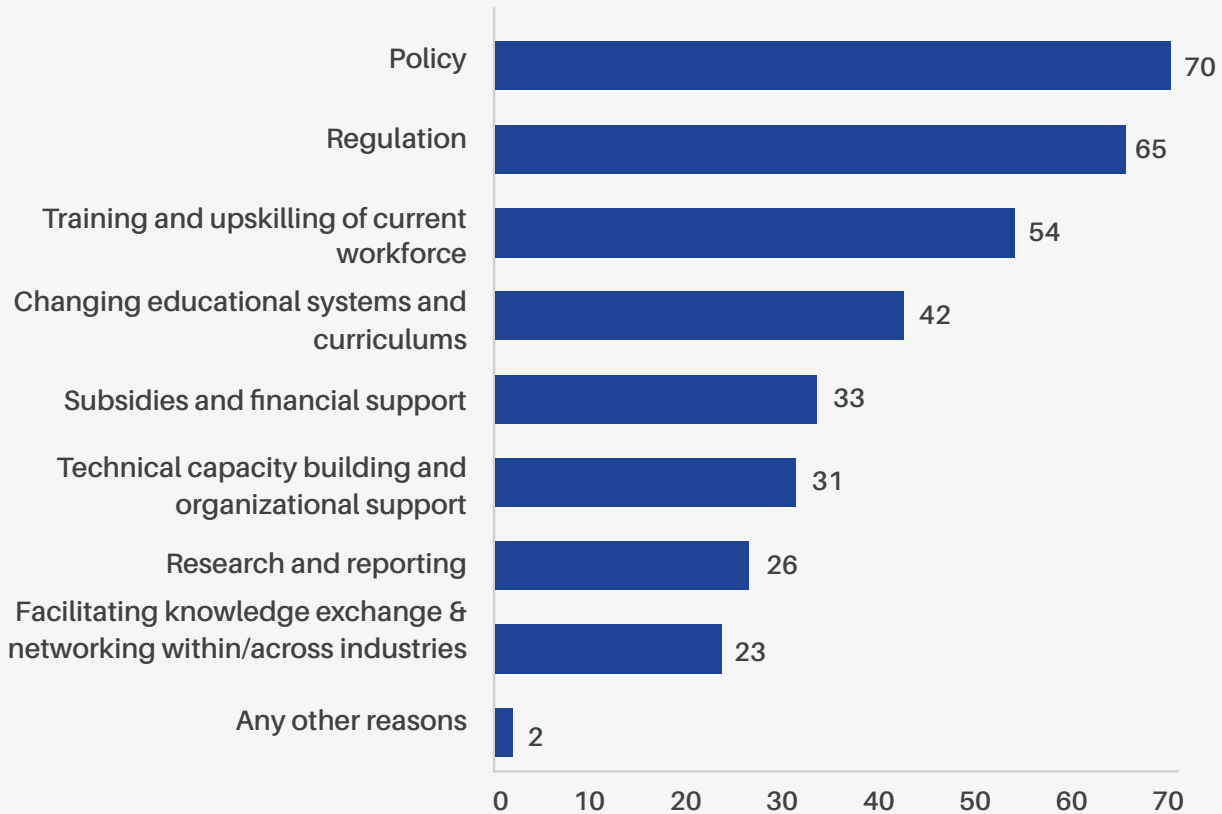


Source: ICRIER-OpenAI survey

To transition successfully to the AI age, firms place a premium on a stable policy and regulatory environment, along with sustained investments in skills and education. Figure 16 shows that respondents assign the greatest role to government and industry associations in shaping policy (70 percent) and regulation (65 percent) to support AI-led workforce transitions. A substantial share also emphasises training and upskilling of the existing workforce (54 percent) and reforms to educational systems and curricula (42 percent), underscoring the importance of human capital development. By contrast, fewer firms prioritise subsidies and financial support (33 percent) or technical capacity building and organisational support (31 percent). Overall, the results suggest that government and industry bodies can play a catalytic—rather than directive—role during the transition to the AI era.

**Figure 16: Government of India and industry bodies can play an important role in facilitating the transition**

What role can government or industry bodies (e.g., NASSCOM) play in supporting AI-led workforce transitions? (in %)



Source: ICRIER-OpenAI survey

**The findings of this study should both reassure and concern Indian policymakers.** On the reassuring side, India's IT sector appears to be coping reasonably well with AI adoption, reporting gains in productivity, transformations in roles and skill sets within firms, and some moderation in hiring without any outright contraction in employment—at least for now, dispelling the fears of sceptics. The cause for concern, however, is that India's IT firms are not hiring enough workers with skills in large language model operations, are not expanding their R&D divisions, and, most importantly, are not investing adequately in training and upskilling. The shortage of qualified AI trainers, the limited AI skills among new labour market entrants, and policy and regulatory uncertainty surrounding AI are challenges that must be urgently addressed if India's IT sector is to fully harness the power and potential of generative AI.

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## Appendix-1 Survey

### Reimagining India's Tech Talent in the AI age

#### About the Survey

Thank you for participating in this survey being conducted by the Indian Council of Research for International Economic Relations (ICRIER). The survey aims to understand how Artificial Intelligence (AI) is impacting talent management and organizational practices for India's tech sector. Your participation and inputs through this survey will help generate insights that can inform policy, industry practices, and future workforce strategies.

The survey will take approximately **30 minutes** to complete. It has a total of 20 questions across 5 sections. Your responses will be treated with the **strictest confidentiality** and used only for aggregate analysis. No individual or company-level data will be disclosed publicly.

Participation is **entirely anonymous**, and we do not collect any personally identifiable information unless you voluntarily choose to share it. If required, we are open to signing a **Non-Disclosure Agreement (NDA)** to ensure complete data privacy and institutional assurance.

We sincerely appreciate your time and contribution.

#### Respondent's Basic Information

Respondent Name; Company Name; Designation in company; Mobile Number; City.

#### Section A: Organization Profile

##### 1. What is the size of your company?

- < 100 employees
- 100-500
- 501-1,000
- 1,001-10,000
- > 10,000

**2. What type of company are you**

(Please select all that are applicable)

- IT Services
- IT Products
- Business Process Management (BPM)
- Engineering Services and Research & Development (ER&D)
- Startups
- Other (please specify): \_\_\_\_\_

**3. What is the annual range of revenue for your company?**

- < 10 crore
- ≥ 10 & < 100 crore
- ≥ 100 & < 500 crore
- ≥ 500 & ≥ 1000 crore
- ≥ 1,000 crore

**Section B: Firm-level Impact****4. What are the top business functions that are affected by the impact of AI at the organization level?**

- Software Development & Engineering
- Project/Program Management
- IT Infrastructure & Cloud Services
- Sales & Business Development
- Client Services / Account Management
- HR & Talent Management
- Finance & Legal
- Quality Assurance (QA) & Testing
- Research & Innovation / R&D
- Marketing & Communications

For the top functions selected: After the introduction of AI, have the following aspects i) **increased modestly** ii) **increased significantly** iii) **decreased modestly** iv) **decreased significantly** or v) **remained the same**?

Business Function	Team Size	Volume of output	Quality of output	Scope	Time spent per unit of work	Cost per unit of work	Skilling Efforts
Software Dev & Engineering							
Project/Program Management							
IT Infrastructure & Cloud Services							
Sales & Business Development							
Client Services/ Account Mgmt							
Human Resources & Talent							
Finance & Legal							
Quality Assurance & Testing							
R&D and Innovation							
Marketing & Communications							

5. For the below mentioned occupations, kindly indicate the respective occupation’s exposure to AI, as well as the relative demand for individuals within that particular occupation due to the use of AI.

Occupation	Exposure to AI (scale of 1 to 5; 1 = low exposure 5 = high exposure)	Demand for the occupation (- Decreased - Remained the same - Increased a little - Increased a lot - Don’t know/Can’t say)
Software Developers		
Software Analyst		
Application Developers		

Web and Multimedia Developers		
Computer Network Systems Administrators & Technicians		
Database Designers and Administrators		
Finance Professionals		
Legal Professionals		
Human Resource Professionals		
Administrative Professionals		
Sales Professionals		
Other Marketing Professionals		
Clerks and Secretaries		
Statisticians/Mathematicians and related professionals		
Any other (please specify)		

## Section C: Talent Management & Internal Skilling

6. a. To what extent has AI changed the number of workers your organization is hiring?

- Increased overall hiring
- Decreased overall hiring
- No major change

6. b. To what extent has AI changed the type of roles your organization is hiring for?

[SELECT ONE]

- Shifted towards only domain experts
- Shifted towards only AI/data experts
- Shifted towards experts with both domain and AI/data expertise
- No major change

7. Which skill sets are now in greater demand in your organization due to AI adoption?

(Select all that apply)

- Prompt Engineering & Generative AI (e.g., ChatGPT, Copilot)
- Data Science, Machine learning
- Programming and Software Development (NLP, Python, Java, C++ etc.)
- Data Analytics
- Mathematics and Statistics
- Database Management and Analytics (SQL, ETL etc.)
- Development Operations
- Cloud Computing
- Web Development (UI/UX etc)

- Cyber security
- Networking
- System Architect/Applied AI Architect
- LLM Operations
- Adoption/change management
- Other (please specify):
- \_\_\_\_\_

**8. Which traditional roles or skills are being phased out or reduced in your industry (not necessarily your organization) due to AI-based automation/AI adoption? (Open-ended)**

\_\_\_\_\_

**9. What has been the change in employment over the last 24 months for the following subcategories?**

Category of labour force	Increase/decrease/remain the same
Entry – Level workforce	
Mid – Level workforce	
Senior – Level workforce	

**10. Is your organization creating awareness and providing support around the adoption of AI?**

- Yes.
- No
- Not currently, but planning to

**11. How is your organization actively retraining/reskilling existing staff to adapt to AI adoption?**

- Through in-house programs
- Through external partnerships

**12. What proportion of your workforce has received AI-related upskilling in the past 12 months?**

- None
- <10%
- 10-25%
- 26-50%
- >50%

**13. What AI-related skills is your organization prioritizing in your training programs?**

(You may like to choose options from Q7)

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**14. What are the biggest internal or external challenges your organization faces in adapting the workforce to AI?**

- Not finding enough people with necessary talent and skills;
- Lack of organizational readiness and culture (e.g., resistance from employees, challenges in systemic change management and integration),
- High cost and uncertain return;
- Ethical, legal and reputational risks;
- Lack of adequate high-quality data to train the models etc.;
- Absence of national strategy and direction and support from the government.
- Any others: \_\_\_\_\_

**Section D: Strategic Outlook****15. Over the next 2 years, how does your organization expect AI to affect your overall workforce size?**

- Significant increase
- Slight increase
- No major change
- Slight decrease
- Significant decrease

**Section E: Final Thoughts****16. What role, if any, does your organization see for government or industry bodies (e.g., NASSCOM) in supporting AI-led workforce transitions?**

- Policy
- Regulation
- Subsidies and financial support
- Technical capacity building and organizational support
- Training and upskilling of current workforce
- Promoting change within educational systems and curriculums to prepare future workforce
- Research and reporting
- Facilitating knowledge exchange and networking within or across industries
- Any other

## Appendix-2

# Data collection and methodology

The sample was selected to ensure adequate representation across firm size, region, and business type. Table 1 in the main text presents the size-wise breakdown of the sample, using two key indicators—revenue and employee count. Although the thresholds are ad hoc and do not exactly match official classifications, they provide a useful picture of the sample’s size distribution. The location-wise breakdown is shown in Table A1.

**Table A1: Composition of the surveyed firms by location of establishment**

Location	Observations	Percent
Mumbai	101	15.5
Bengaluru	100	15.4
Pune	99	15.2
Hyderabad	86	13.2
Chennai	83	12.8
Delhi NCR	80	12.3
Kolkata	27	4.2
Ahmedabad	25	3.8
Jaipur	25	3.8
Chandigarh	25	3.8

Close to 6,500 individuals working in IT sector firms were approached for the survey. Responses were received from 651 individuals, after which the survey was closed, yielding a response rate of around 10 percent. Of these, 620 responses correspond to unique firms. Some larger firms had more than one respondent, drawn from different locations and/or positions.

About 72 percent of the interviews were conducted in person using tablets, which allowed respondents to view the questionnaire as it was being filled out, helping to improve response quality. The remaining interviews were conducted online, with screen sharing to enable respondents to see the questionnaire.

A total of 651 firm representatives participated in the survey. Unless otherwise noted, all graphs and tables in the report are based on these 651 responses. In Section 4.3, firms first identified the business functions most affected by AI and then reported its impacts on team size, output volume, output quality, scope, time spent per unit of work, cost per unit of work, and skilling efforts, but only for the functions they identified as most impacted. As a result, the number of responses varies across business functions, depending on how frequently each was selected.

## Appendix-3 Impact on Hiring disaggregated by firm size

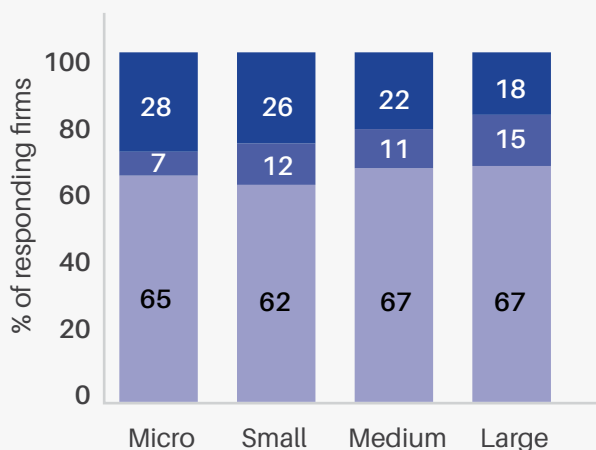
Across all firm sizes, a greater share of firms reported decreases in overall hiring (62%-67%) due to AI, with a greater share of large firms reporting decreases. Conversely, smaller firms were more likely to report increases in overall hiring (28%-18%). The change in composition of employment has also been broadly consistent across firm size with greater share of firms reporting net decrease in entry level jobs. Large firms are slightly more likely to report decreases in entry level jobs and are significantly less likely to report increases.

**Figure A1: Higher impacted divisions have seen least decline in team size, more so in large firms**

Has AI changed the number of workers your organization is hiring? (in %)

Change in overall hiring:

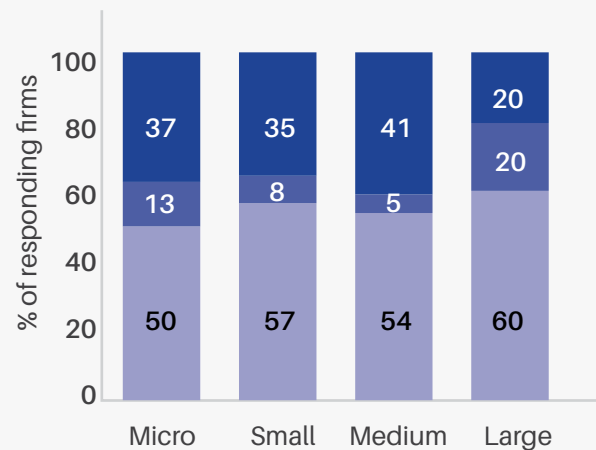
Decrease No Major Change Increase



What has been the change in employment in your organisation over the last 24 months for entry level workforce? (in %)

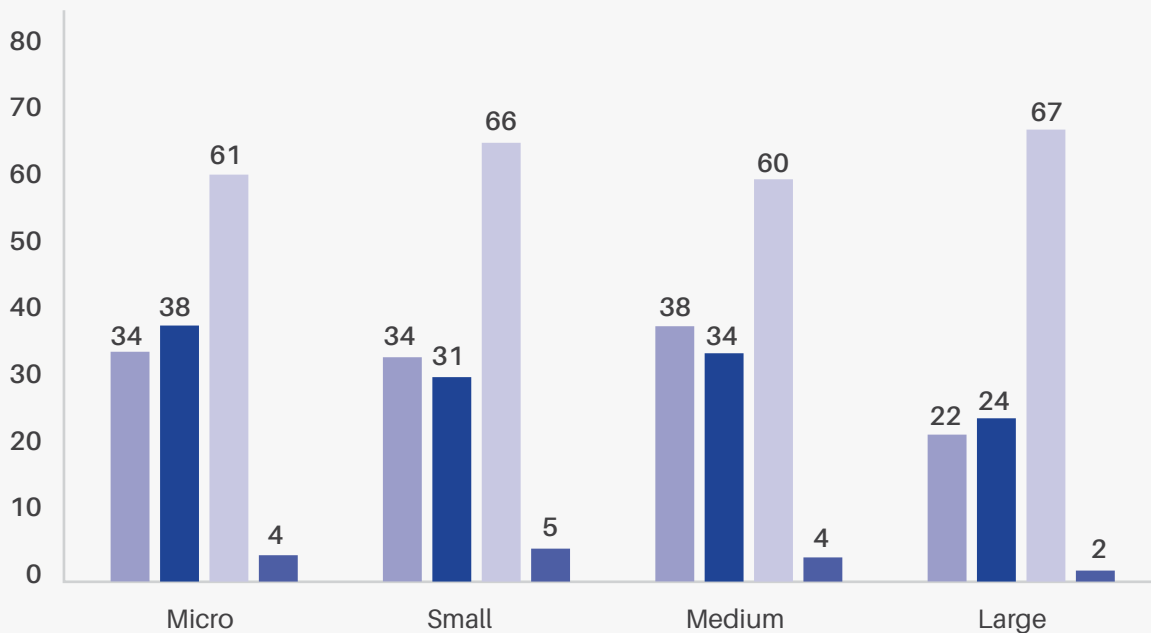
Change in overall hiring:

Decrease No Major Change Increase



To what extent has AI changed the type of roles your organization is hiring for?

Only Domain Expert    
  Both domain & AI/data expert  
 Only AI/data expert    
  No Major Change



**Note:** Firm size as per reported revenue. The “Large” category in this figure represents firms with revenue ≥ 500 crore, and remaining categories correspond to those in Table 1.

## Appendix-4

# Impact on Occupation and Business Divisions, disaggregated by firm size

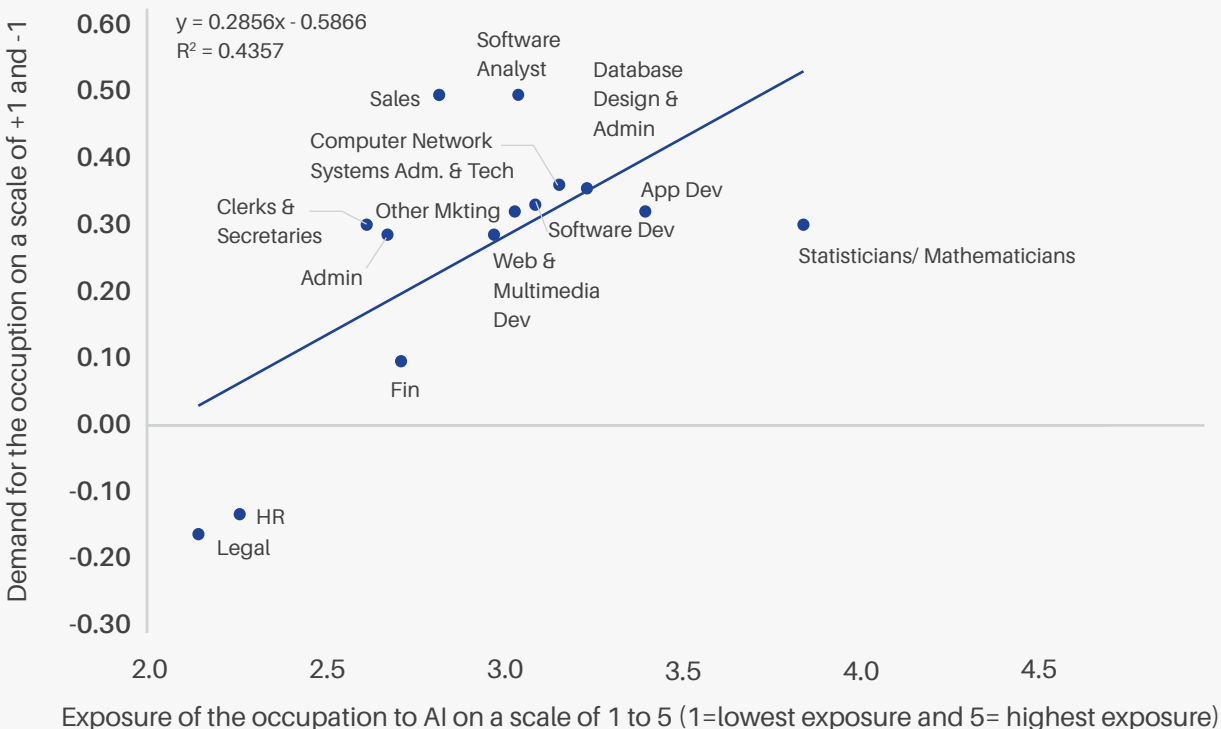
The positive correlation between occupational exposure to AI and changes in demand holds across firm sizes (Figure A2). Medium-sized firms, however, exhibit a stronger and more positive correlation, suggesting that they are better able to augment workers with AI. Large firms, while showing higher average exposure across occupations, are experiencing relatively smaller increases in demand.

The pattern of occupations with relatively high exposure or strong demand growth is broadly similar across firms of different sizes. For example, Software Analysts face relatively higher demand across all firm sizes, whereas HR and Legal Professionals experience both lower exposure and weaker demand. Some occupations, however, show greater variation by firm size. App Developers, for instance, see relatively higher

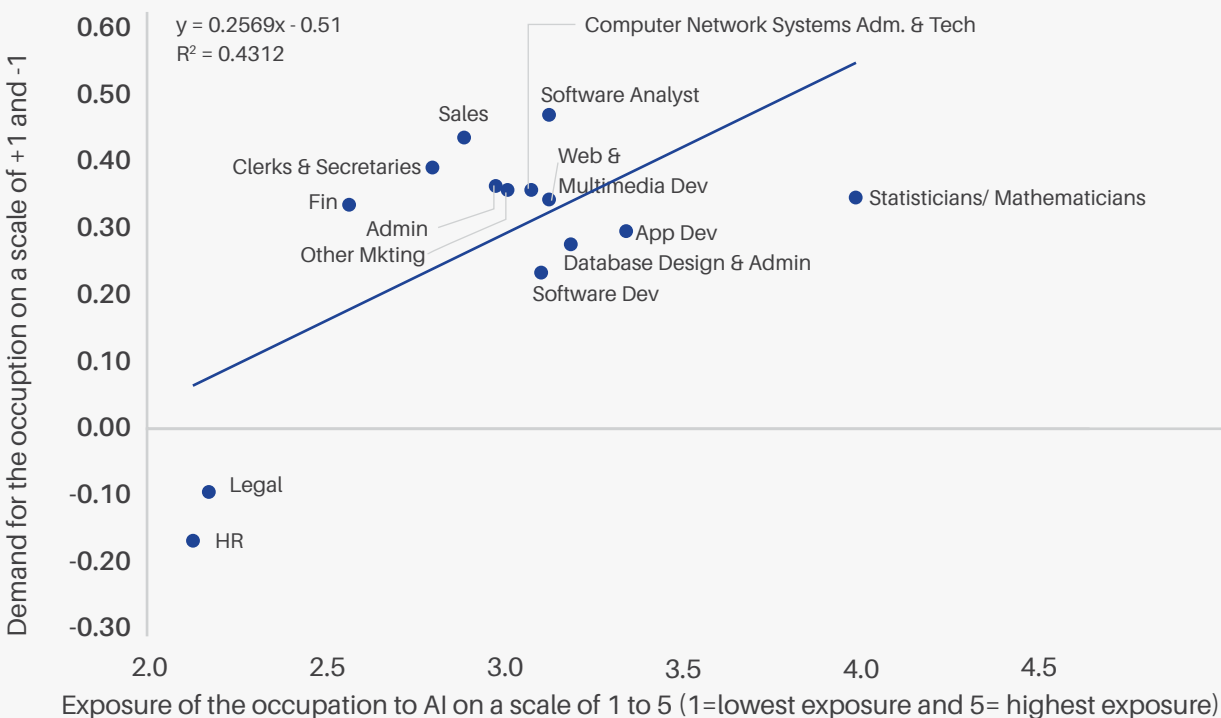
demand in medium and large firms, while Sales Professionals experience comparatively higher demand in micro and small firms.

**Figure A2 : Higher exposure occupations are experiencing greater demand, with a steeper correlation for medium sized firms**

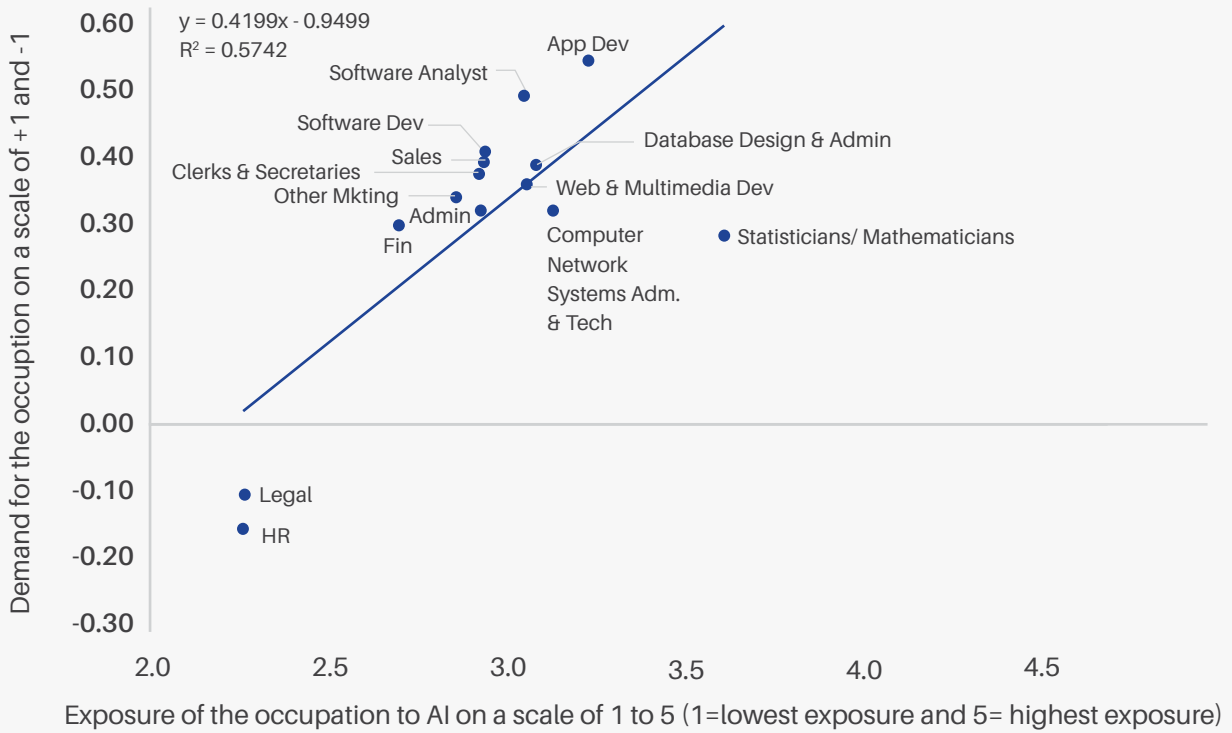
**Micro (< 10 crore revenue)**



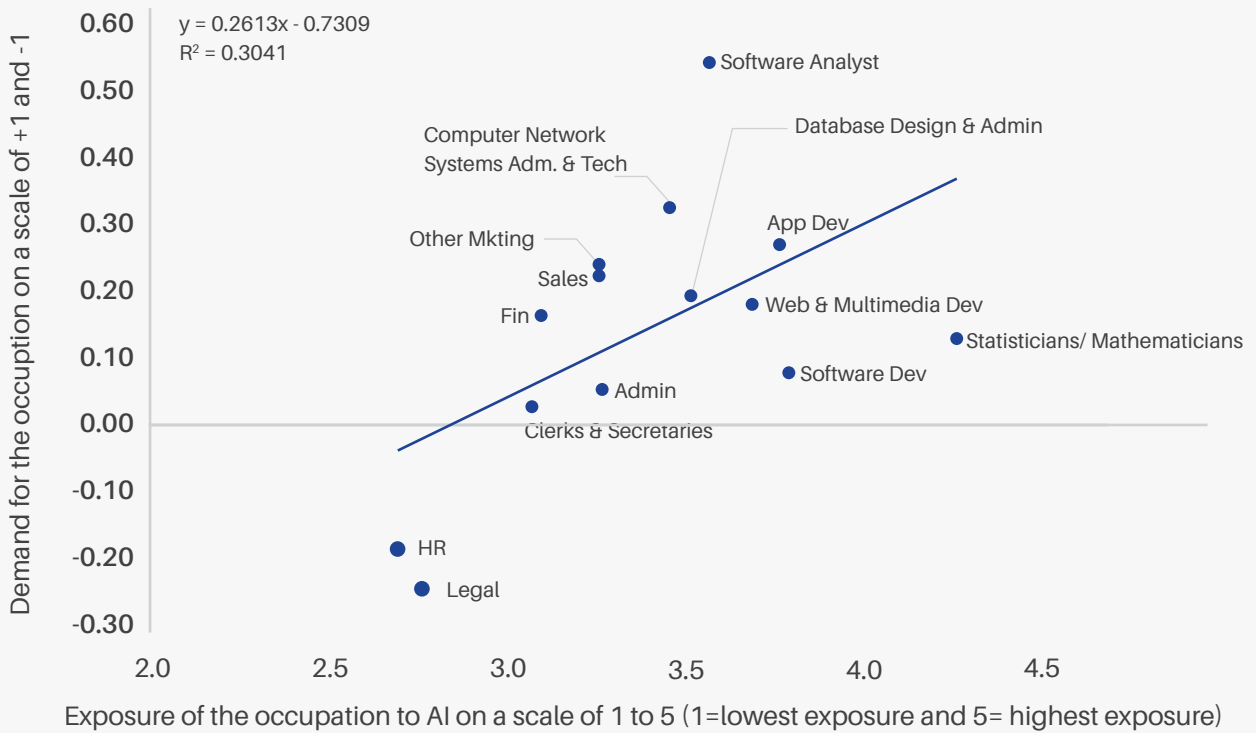
**Small (≥ 10 & < 100 crore revenue)**



Medium (≥ 100 & < 500 crore revenue)



Large (≥ 500 crore revenue)



**Note:** Firm size categories as reported by the respondent, subject to some misclassification (Appendix 2)

Insights from the disaggregated analysis of impacts on business functions are consistent with the results for the full sample (Figure A3 versus Figure 5 in the main text). Across firm sizes, core technology divisions are the most affected by AI, while support and non-technical functions are relatively less impacted.

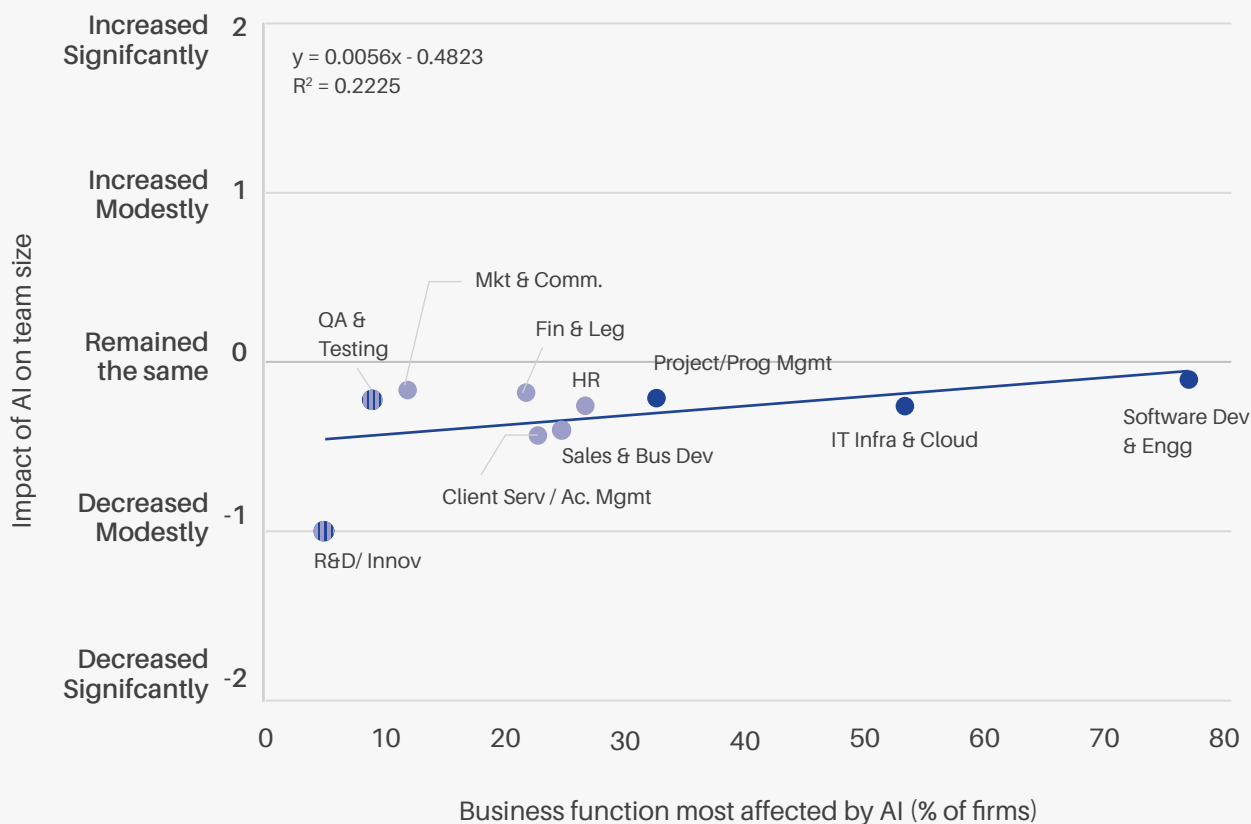
On average, the effect on team size is modestly negative across most business functions, regardless of firm size. Large firms, however, are more likely to report declines in team size in support and non-technical functions.

The finding that business functions more affected by AI tend to experience less job displacement is driven largely by medium and large firms. Large firms, in particular, display a steeper slope and stronger correlation. They are also more likely to report support and non-technical functions as being affected by AI and facing greater average declines in team size. This is consistent with earlier results showing that large firms have higher exposure but smaller increases in demand across occupations.

**Figure A3: Higher impacted divisions have seen least decline in team size, more so in large firms**

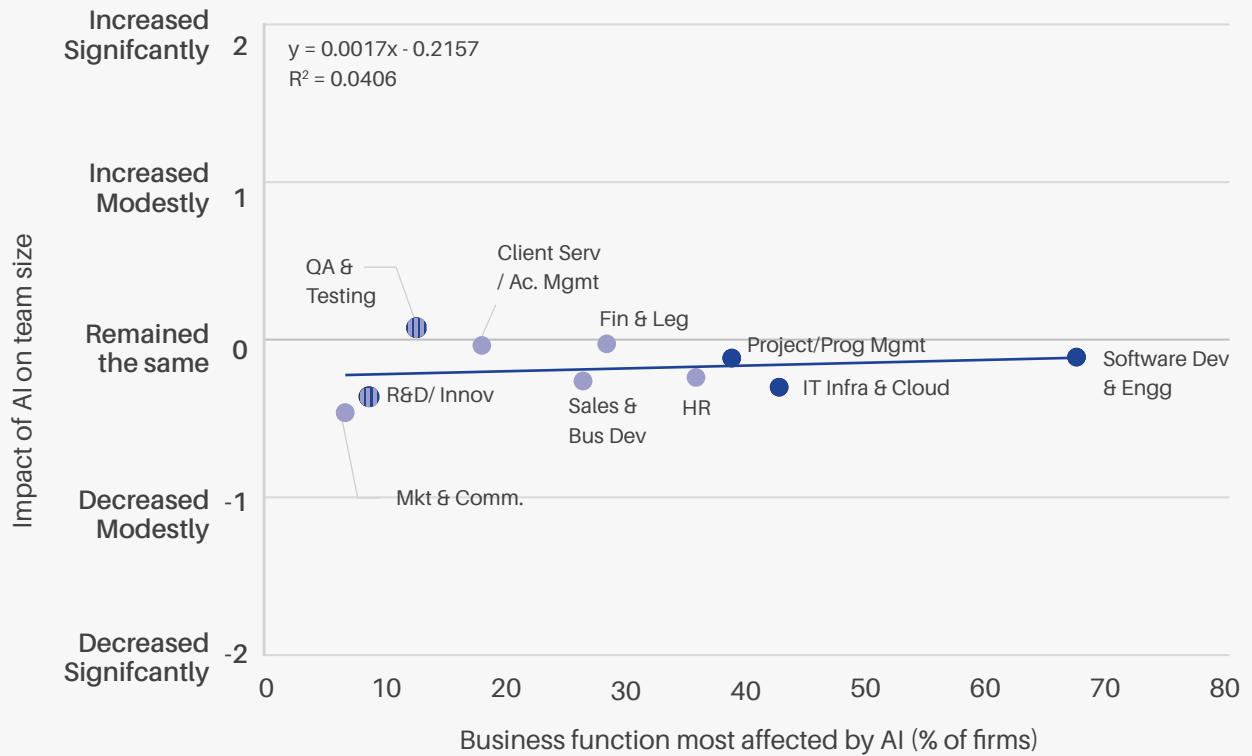
Micro (< 10 crore revenue)

- Profit Centres / Tech jobs
- Cost Centres / Non-tech
- Cost Centres / Tech jobs



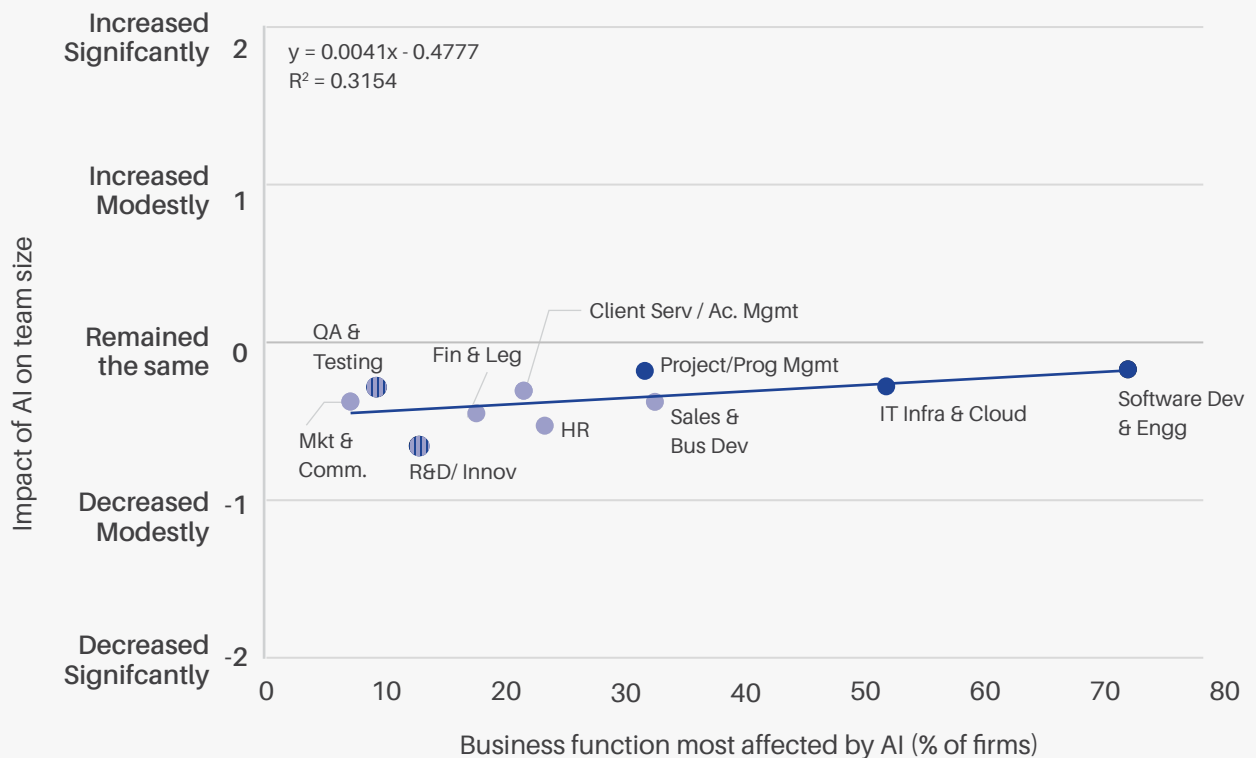
Small (≥ 10 & < 100 crore revenue)

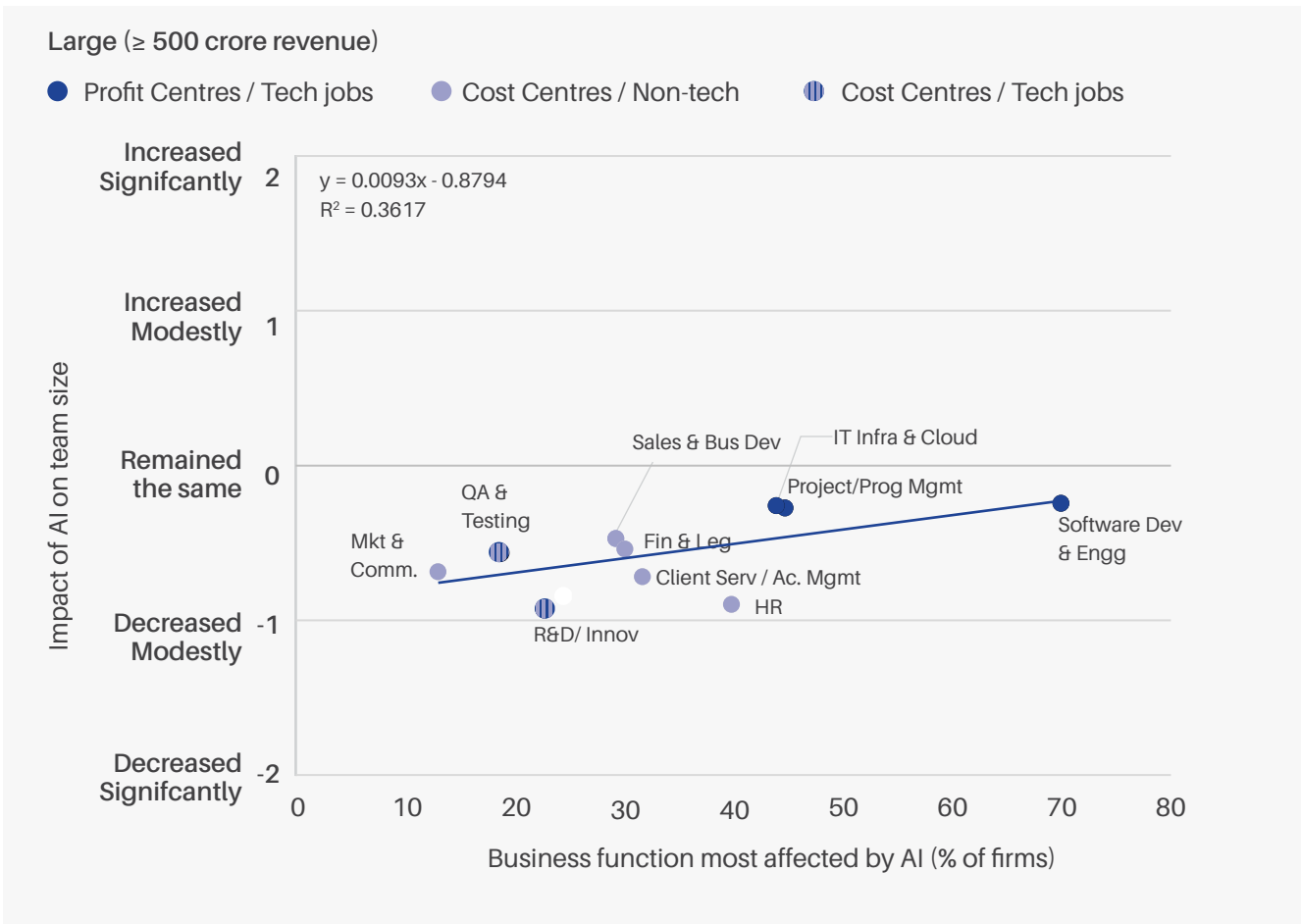
- Profit Centres / Tech jobs
- Cost Centres / Non-tech
- Cost Centres / Tech jobs



Medium (≥ 100 & < 500 crore revenue)

- Profit Centres / Tech jobs
- Cost Centres / Non-tech
- Cost Centres / Tech jobs





While this study was not designed to capture how the productivity impacts of AI differ by firm size, or their subsequent effects on the distribution of firm sizes, this remains an important area for future research. Understanding these dynamics is crucial for analysing changes in employment within the sector, given that the nature, quality, and types of jobs tend to vary by firm size and by the degree of monopsony power firms have in the labour market.





