Adoption of Artificial Intelligence Among Firms

Soon Da Ren

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ADOPTION OF ARTIFICIAL INTELLIGENCE AMONG FIRMS

Director
Manpower Research and Statistics Department
Ministry of Manpower
18 Havelock Road #05-01
Singapore 059764
Republic of Singapore

Email: mom_rsd@mom.gov.sg

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CONTENTS

Highlights

Artificial Intelligence (AI) adoption remains limited and at an early stage.

A majority of firms (71.5%) have yet to adopt AI. Among the 28.5% that have started, meaningful integration remains limited – only a small share (3.8%) integrating AI into core processes as most remain at planning (7.4%) or piloting (6.0%) stages.

AI adoption is widespread among larger firms.

Larger firms demonstrate higher adoption rates and deeper levels of integration compared to smaller firms. Adoption rises from 23.9% among firms with fewer than 25 employees to 76.4% among firms with more than 500 employees. Larger firms are also more likely to possess the digital infrastructure and organisational capabilities needed to integrate AI into existing workflows.

Digitally intensive and knowledge-based sectors are more progressive in AI adoption.

AI adoption is highest in digitally intensive and knowledge-based sectors such as *Information and Communications* (74.1%), *Professional Services* (57.5%) and *Financial and Insurance Services* (56.4%).

Structural barriers continue to constrain uptake.

Firms face persistent constraints in adopting AI. High implementation costs (44.9%) and lack of in-house expertise (42.4%) are commonly cited barriers. Smaller firms also face organisational challenges such as lack of strategy (32.4%) and low trust in AI (30.8%), while larger firms face integration complexity (56.1%) and data security concerns (55.4%).

AI is augmenting but not replacing labour.

There is little evidence of widespread displacement. Only 6.2% of firms reported reduced headcount. Instead, firms are redesigning roles (18.9%) and creating new AI-related jobs (13.9%), indicating that AI is primarily transforming tasks rather than replacing roles.

Productivity gains are already evident among adopters.

Among firms using AI, 70.7% report improvements in worker productivity, alongside gains in decision-making (13.3%) and innovation (11.9%), suggesting that benefits are material even at early stages of adoption.

Firms are taking steps to build capabilities for AI adoption and support workforce adaptation.

There are early signs of capability-building to support AI adoption within firms. Smaller firms are focused on foundational steps such as training (46.6%) and provision of AI tools (41.1%), while larger firms are moving towards more structured approaches, including governance frameworks (37.5%) and workflow redesign (22.5%). These patterns suggest that firms are beginning to adapt work processes and roles alongside AI adoption, with workforce adjustments currently concentrated within firms rather than across firms or sectors.

Overview

Singapore has positioned artificial intelligence (AI) as a key enabler to address structural constraints such as an ageing workforce and persistent labour tightness. However, firm-level adoption remains limited and uneven, despite strong digital readiness.

To better understand this, the Manpower Research and Statistics Department (MRSD) conducted an establishment-based survey covering 2,560 private sector establishments employing 486,600 workers, with fieldwork conducted between January and March 2026.

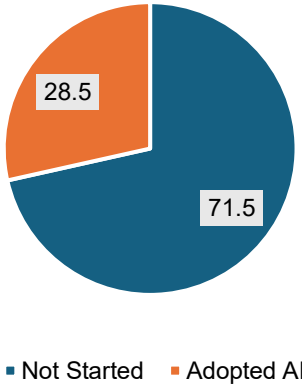
The findings show that AI adoption is still at an early stage of diffusion. A majority of firms have yet to adopt AI, and among adopters, most remain at preliminary stages such as piloting or planning stage, with only a small proportion achieving integration into core business processes. Adoption is also uneven across firm sizes and sectors, with larger firms and digitally intensive industries leading.

At the same time, early evidence suggests that AI is complementing rather than displacing labour. Firms report productivity gains and improvements in work processes, with impacts primarily taking the form of job role redesign rather than workforce reductions.

Taken together, the findings suggest that while AI adoption is gaining traction, it has yet to become broad-based. The next phase of adoption will depend on how firms overcome structural constraints and translate early experimentation into sustained, large-scale deployment.

AI Adoption Remains at an Early Stage

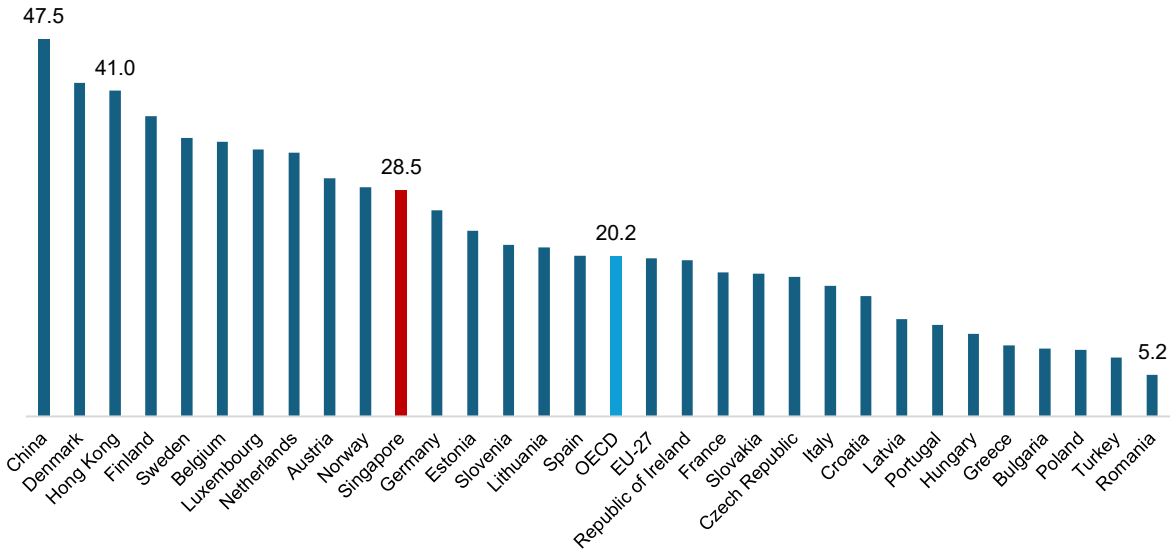
Chart 1: Distribution of the current status of AI adoption in firms (%), 2026



Source: Artificial Intelligence Survey, Manpower Research & Statistics Department, MOM

Despite strong national emphasis on AI, adoption among firms remains limited. A substantial proportion of firms (71.5%) reported that they have not begun adopting AI in their operations [Chart 1].

Chart 2: Proportion of firms that have adopted AI, by country (%)



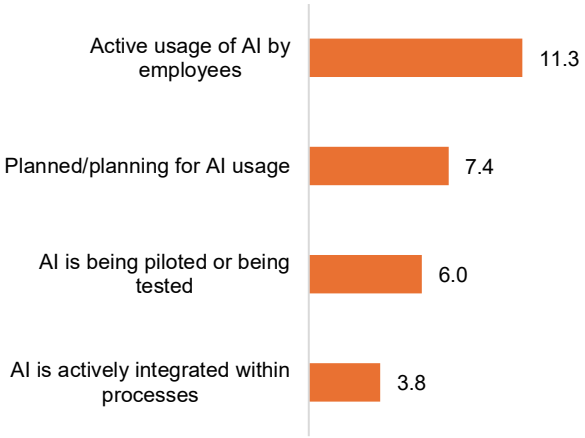
Source: (For Singapore) Artificial Intelligence Survey, Manpower Research & Statistics Department, MOM; (OECD) OECD ICT Access and Usage by Businesses Database; (China) IDC enterprise research; (Hong Kong) Hong Kong Productivity Council

Singapore, which is among the world's most digitally competitive economies, is well positioned to translate digital readiness into AI implementation at scale.[1] However, it is trailing other digitally competitive countries such as Denmark, Finland, and Sweden which have pulled ahead on firm-level AI adoption [Chart 2].

Another frontrunner in AI adoption is China, which is experiencing widespread nationwide adoption rate of generative AI standing at 42.8%[2] and industrial AI penetration at 47.5% [Chart 2]. Mainland cities — led by Beijing, Shenzhen, and Shanghai — are investing heavily to embed AI across industries and infrastructure, while Hangzhou leverages lower operating costs and free AI models to drive everyday adoption despite chip constraints.

Hong Kong shows signs of promise with 41.0% of companies either using AI or planning to adopt it [Chart 2]. 55.0% of SMEs having either used or plan to utilise AI tools in their daily operations within the next year[3]. 27.0% of Hong Kong's SMEs plan to increase their financial investment in AI in the next year, as majority move towards adopting the technology[4].

Chart 3: Breakdown of AI adoption by stage of AI adoption (%), 2026



Source: Artificial Intelligence Survey, Manpower Research & Statistics Department, MOM

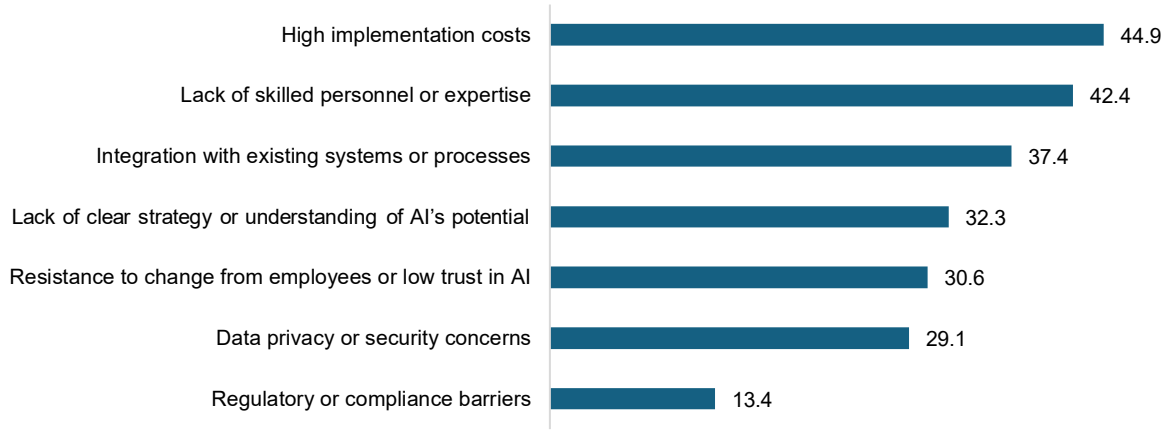
Among the 28.5% that have adopted AI, the depth of use remains shallow, with only 3.8% of firms reporting that AI has been integrated into their core business processes [Chart 3].

This distribution suggests that AI adoption in Singapore is still in the early phase of diffusion. The data exhibits a pronounced skew, with a large concentration of firms at the non-adoption

[1] Singapore (3rd), Denmark (5th), Sweden (8th) and Finland (11th) are among the top-ranked economies in the 2025 IMD World Digital Competitiveness Ranking. These countries also feature prominently in the Network Readiness Index by the Portulans Institute, with Finland (2nd), Singapore (3rd), Denmark (4th), and Sweden (5th) all placing in the top five.
[2] Source: China Internet Network Information Center
[3] Source: Hong Kong Productivity Council
[4] Source: Hong Kong Productivity Council

stage and only a small minority achieving meaningful integration. In practical terms, this implies that while awareness of AI may be widespread, the ability to deploy and scale AI solutions remains limited to a relatively small group of firms.

Chart 4: Proportion of firms that reported that they face or will face the following challenges in adopting AI (%), 2026



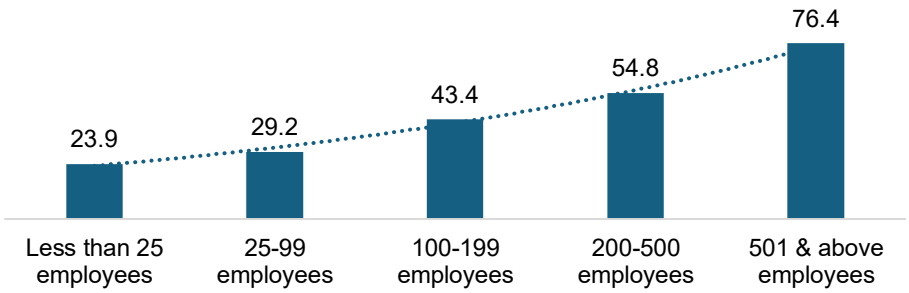
Source: Artificial Intelligence Survey, Manpower Research & Statistics Department, MOM

Notes:
(1) Data are not separately shown for 'Others' due to smaller numbers covered in the survey.
(2) Respondents can indicate multiple options.

The persistence of this gap points to structural barriers rather than a lack of interest for AI adoption. Firms frequently cite high implementation costs (44.9%) and the lack of in-house capabilities (42.4%) as key constraints [Chart 4].

Adoption is Uneven Across Firm Sizes and Sectors

Chart 5: Proportion of firms that have adopted AI, by firm size (%), 2026

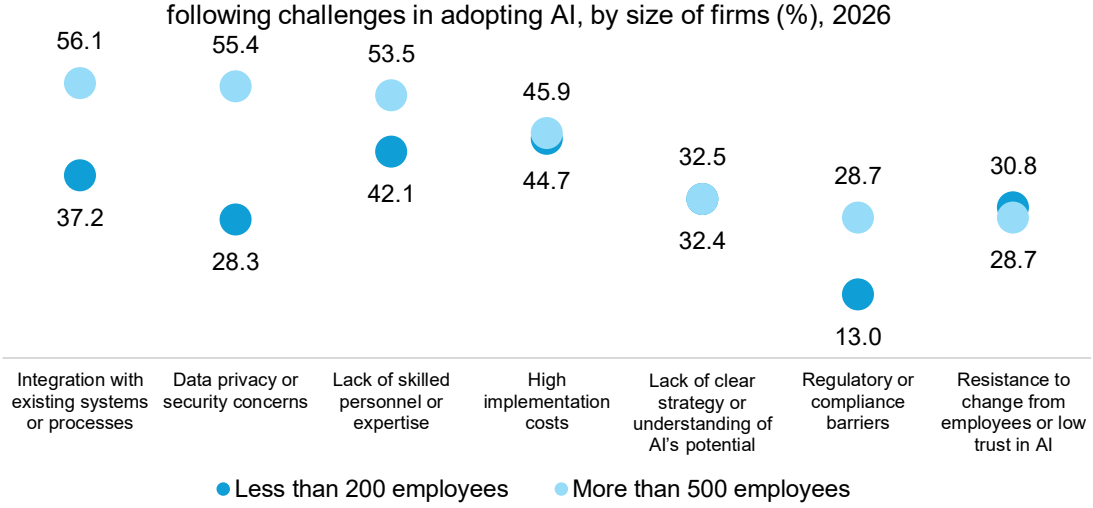


Source: Artificial Intelligence Survey, Manpower Research & Statistics Department, MOM

AI adoption is not evenly distributed across the firm landscape. Larger firms consistently demonstrate higher adoption rates and deeper levels of integration compared to smaller firms [Chart 5]. This reflects both their greater capacity to absorb upfront investment costs and their stronger incentives to pursue process automation at scale. Larger firms are also more likely

to possess the digital infrastructure and organisational capabilities needed to integrate AI into existing workflows.

Chart 6: Proportion of firms that reported that they face or will face the following challenges in adopting AI, by size of firms (%), 2026



Source: Artificial Intelligence Survey, Manpower Research & Statistics Department, MOM

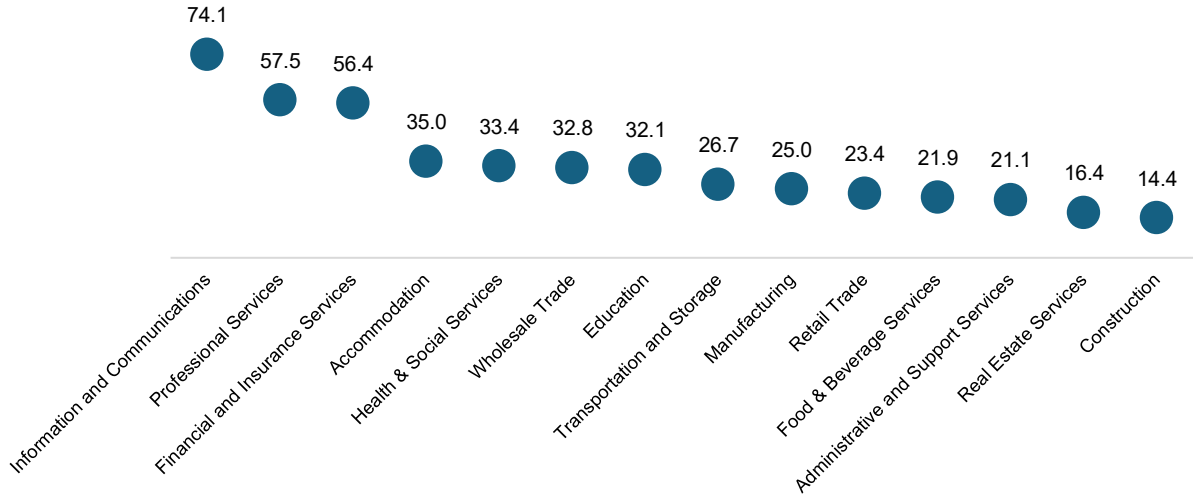
Notes:
(1) Data are not separately shown for "Others" due to smaller numbers covered in the survey.
(2) Respondents can indicate multiple options.

These barriers are particularly binding for smaller firms, with 44.7% citing high implementation costs and 42.1% identifying lack of in-house capabilities as key adoption obstacles [Chart 6]. Beyond financial and technical constraints, smaller firms encounter additional challenges including employee resistance and low trust in AI (30.8%), coupled with unclear strategies and limited understanding of AI's potential (32.4%). These represent significant barriers that could be addressed through comprehensive change management approaches, enhanced communication strategies, and practical demonstrations of AI benefits. The convergence of resource limitations and organisational readiness challenges suggests that smaller firms require targeted support mechanisms that address both technical capacity building and cultural transformation to enable successful AI adoption and sustained deployment.

Larger firms encounter distinct adoption challenges as compared to smaller firms. Integration complexities with existing systems and processes (56.1%) are the primary obstacle, alongside data privacy and security concerns (55.4%) that reflect the scale and sensitivity of their operations [Chart 6]. These technical integration challenges extend beyond internal capability limitations to encompass broader AI ecosystem considerations, requiring careful planning to minimise disruption from potentially significant infrastructure modifications.

The complexity of these challenges suggests that larger firms require enhanced guidance mechanisms and carefully crafted policy frameworks. Strategic bodies such as a National AI Council could provide necessary oversight whilst ensuring regulatory compliance without creating prohibitive barriers to adoption. This indicates that whilst larger firms possess greater resources for AI deployment, they face proportionally complex implementation challenges that require sophisticated support structures.

Chart 7: Proportion of firms that have adopted AI, by industry (%), 2026



Source: Artificial Intelligence Survey, Manpower Research & Statistics Department, MOM

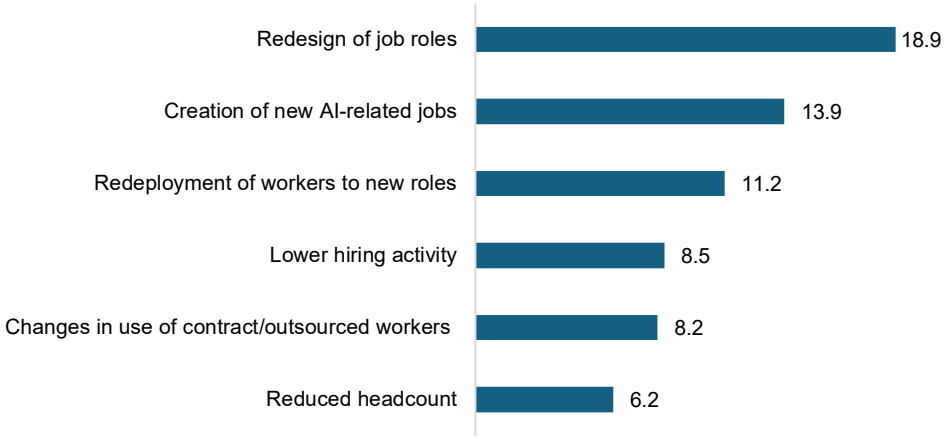
Note: Data are not separately shown for *Arts, Entertainment and Recreation, Other Community, Social and Personal Services* and *"Others"* due to smaller numbers covered in the survey.

At the same time, clear sectoral differences are observed. Adoption rates are highest in digitally intensive and knowledge-based sectors such as *Information and Communications* (74.1%), *Professional Services* (57.5%) and *Financial and Insurance Services* (56.4%) [Chart 7]. These sectors are characterised by a higher share of tasks that can be automated or augmented by AI, particularly those involving data processing, analysis, and decision-making.

In contrast, adoption remains lower in customer-facing and labour-intensive sectors such as *Retail Trade* (23.4%) and *Food and Beverage Services* (21.9%). In these sectors, a larger proportion of tasks involve physical interaction or service delivery, which are less immediately amenable to AI deployment. Taken together, these patterns indicate that both firm capabilities and task composition play a central role in shaping adoption outcomes.

AI is Currently Complementing Rather than Replacing Labour

Chart 8: Proportion of firms that experienced each of the following after adopting AI (%), 2026



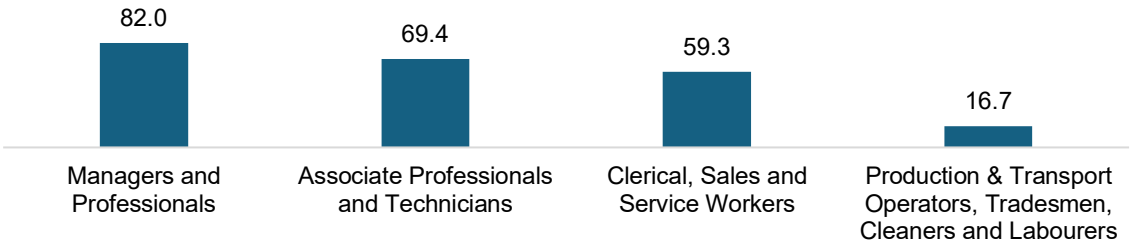
Source: Artificial Intelligence Survey, Manpower Research & Statistics Department, MOM

Note: Data reflects firms that are piloting AI, are actively integrating AI within process and whose employees are actively using AI.

At this stage, there is limited evidence to suggest that AI adoption is leading to widespread workforce displacement. Only a small minority of firms reported reductions in headcount (6.2%) or lower hiring activity[5] attributable to AI [Chart 8]. Instead, firms more commonly reported adjustments within existing roles including the redesign of job functions (18.9%).

In addition, some firms have begun to create new roles related to AI (13.9%), indicating emerging demand for specialised skills [Chart 8].

Chart 9: Proportion of firms that reported an impact of AI on each of the occupational groups (%), 2026



Source: Artificial Intelligence Survey, Manpower Research & Statistics Department, MOM

Notes:

(1) Data reflects firms that are piloting AI, are actively integrating AI within process and whose employees are actively using AI.

(2) Respondents can indicate multiple options.

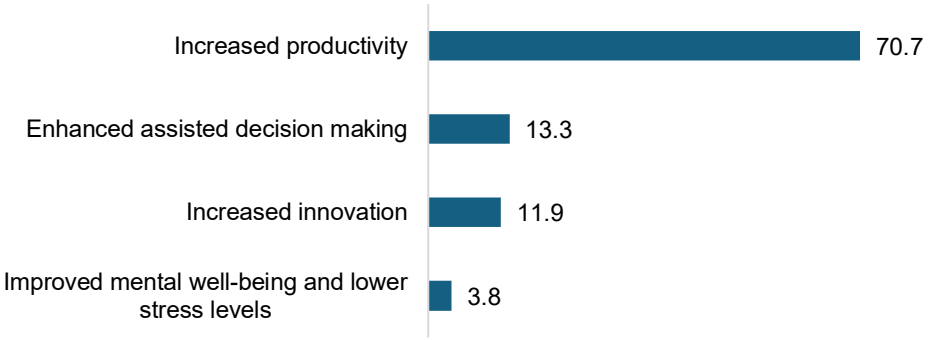
[5] Refers to no hiring expansion plans

The impact of AI is also differentiated across occupational groups [Chart 9]. Higher-skilled professionals, particularly those engaged in analytical and cognitive tasks, are more likely to experience changes in task composition due to AI. In contrast, roles involving routine physical tasks, such as those in production and transport, have thus far seen more limited exposure. Importantly, where exposure exists, it has generally been associated with productivity improvements rather than job displacement.

This suggests that the current phase of AI adoption is characterised primarily by task-level transformation, with broader employment effects likely to emerge more gradually over time.

Productivity Gains are Already Evident Among Adopters

Chart 10: Distribution of the main impact of AI on employees' work tasks (%), 2026



Source: Artificial Intelligence Survey, Manpower Research & Statistics Department, MOM

Notes:

(1) Data reflects firms that are piloting AI, are actively integrating AI within process and whose employees are actively using AI.

(2) 'Others' category is not shown.

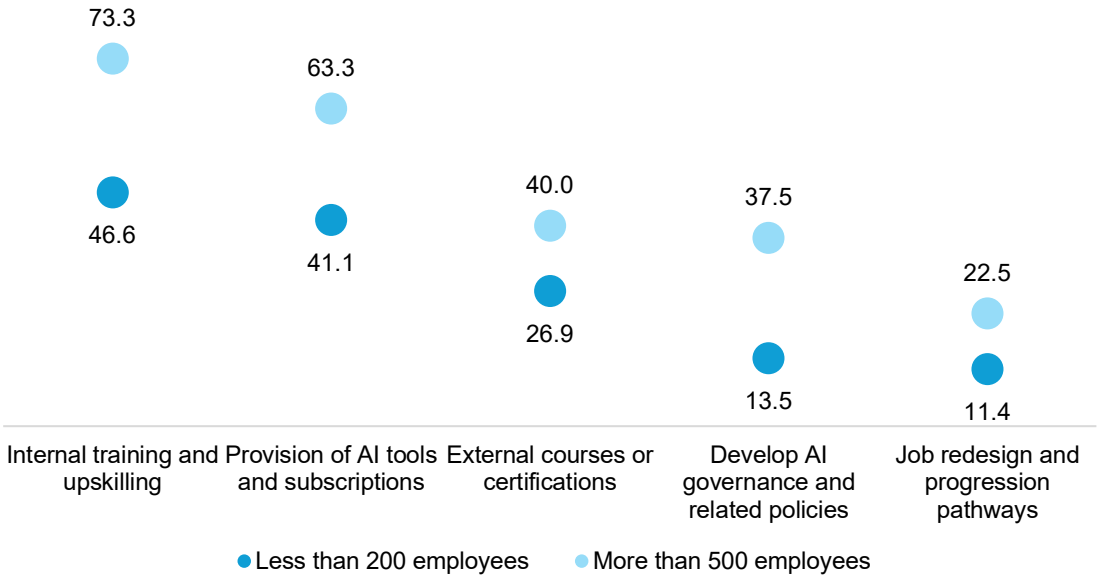
Among firms that have adopted AI, the reported outcomes are overwhelmingly positive. Majority of adopters indicated that AI has led to improvements in worker productivity. This suggests that, conditional on adoption, AI is already delivering tangible efficiency gains in terms of productivity (70.7%), innovation (11.9%) and cutting down decision-making processes (13.3%) [Chart 10].

Beyond productivity, firms also reported a range of sector-specific benefits. *In Health and Social Services*, 33.5% of firms observed improvements in worker well-being, including reduced stress and workload pressures. In *Real Estate Services*, 32.1% of firms reported enhanced decision-making capabilities, reflecting AI's role in supporting data-driven processes.

These findings indicate that the benefits of AI extend beyond cost savings to include improvements in job quality and work processes. However, the variation in reported outcomes across sectors suggests that the nature and magnitude of these benefits are closely tied to how AI is applied within specific operational contexts.

Firms are Progressing Along Diverging Adoption Pathways

Chart 11: Proportion of firms by initiatives started or planned to support the use of AI for employees, by firm size (%), 2026



Source: Artificial Intelligence Survey, Manpower Research & Statistics Department, MOM

Notes:

(1) Data reflects firms that are planning AI, piloting AI, are actively integrating AI within process and whose employees are actively using AI.
(2) Data are not separately shown for 'Others' due to smaller numbers covered in the survey.
(3) Respondents can indicate multiple options.

There are early signs of capability-building to support AI adoption within firms. Smaller firms are focused on foundational steps such as training (46.6%) and provision of AI tools such as ChatGPT and IBM Cognos Analytics (41.1%), while larger firms are moving towards more structured approaches, including governance frameworks (37.5%) and workflow redesign. These patterns suggest that firms are beginning to adapt work processes and roles alongside AI adoption, with workforce adjustments currently concentrated within firms rather than across firms or sectors [Chart 11].

Implications for the Labour Market

The observed patterns point to several emerging implications for the labour market.

First, uneven adoption across firms and sectors is likely to translate into widening productivity differences, particularly if larger firms continue to move ahead in integrating AI into core operations while smaller firms remain at earlier stages.

Second, the shift towards AI-enabled work processes will increase demand for higher-order skills, including analytical, digital and problem-solving capabilities. This is consistent with early evidence showing that higher-skilled occupations are more exposed to AI-driven changes in task composition.

Third, AI adoption is beginning to reshape job roles and work processes. Rather than displacing workers, firms are redesigning jobs, augmenting tasks and creating new AI-related roles. While this suggests limited displacement in the near term, it also points to the need for workers to adapt to evolving job requirements.

Finally, while early outcomes indicate improvements in productivity and aspects of job quality, these benefits are unlikely to be evenly distributed. Differences in firm capabilities and workforce readiness may lead to uneven gains across workers.

Overall, while the near-term impact of AI on employment remains modest, continued monitoring will be important as adoption deepens. Ensuring that AI adoption is broad-based and that workers are equipped to adapt will be critical to maximising its benefits while mitigating the risk of widening gaps across firms and the workforce.