Geografia

AI and the Future of Jobs

White Paper

Dr. Shashi Karunanethy
Chief Economist
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The benefits and societal costs of technology

Throughout human history, innovation and technological development have regularly improved living standards. From penicillin to power grids, each generation has seen its quality of life increase through innovation, even as it has opened new avenues for growth.

However, these gains have rarely come without externalities or societal costs. For example, industrialisation raised incomes while emitting carbon into our atmosphere. Automobiles expanded personal mobility, but also locked cities up in congested streets and polluted air. Digital platforms have connected billions, but they have also frayed our attention spans and upended civic discourse.

These patterns are consistent: the benefits of technology may arrive early and visibly; the full societal costs are rarely understood at first and often realised much later.

Economic history offers a sobering warning: when the path of technological development is left to its own devices, its societal costs can be long-lasting, taking generations to correct.

Guided or not, AI will shape the future of work

AI now stands at the same frontier. AI generative models are already accelerating problem-solving and driving innovation across our global economy. Yet, concerningly, early deployments have focused on its labour-mimicking potential.

Technology giants and management consultants (eager to claim expertise in this new domain) use it to or promote it for automating tasks, trimming costs and scaling operations, with the promise being a more profitable and efficient age of business. All of this is done with little regard for what this means for the nature of work or workers.

Knowing what we know about the societal costs of unguided technology, this paper explains why the future of AI cannot be left alone, and why Australia is in a unique position in the world to model how the development of AI can be guided towards outcomes that serve society meaningfully.

A framework for AI development in Australia

The argument that whether the development of AI can lead to broad societal gains hinges on three conditions:

1. Technology must create new tasks, even as it automates familiar ones. While the automation of roles cannot be avoided, incentives and institutions must be put in place to ensure we create the new jobs and tasks of the future.

2. AI development must lift the productivity of people in both established and emerging roles, allowing wages to rise in step with output. To ensure AI translates to greater labour productivity, we must focus on its human augmenting (rather than replacing) potential.

3. The technological gains of AI must be shared broadly, rather than captured by the few. The economic gains of labour improving/replacing potential will largely fall to owners of AI platforms and algorithms. We must ensure to remove distortionary taxes that over-tax labour, while modernising our wealth accumulation system for the age of AI.

Fulfilling all three conditions is far from guaranteed. However, AI is still in an early development and deployment phase. For now, there is a small window of opportunity to ensure the benefits outweigh the costs.

Australia is well placed to lead in this effort. With its strong institutions, broad-based prosperity models, and some tradition of reformative policy innovations, it has the necessary ingredients to ensure that AI contributes to shared prosperity.

There are five mutually reinforcing policy directions that can tilt the balance in favour of workers, society and long-term economic resilience.

1. We must treat AI as a utility, not a product

AI development is currently shaped by commercial incentives, delivered as proprietary subscription services. Models built by firms such as OpenAI and others are fine-tuned to replicate human tasks. The prevailing trajectory prioritises short-term efficiency gains from reducing labour costs over long-term public value.

This narrow focus risks crowding out the broader potential of AI. When development is geared towards task replacement, less attention and investment is directed to areas where AI could offer the greatest social returns: advancing health, education, climate science and discovery. Critically, it also limits opportunities for people to use AI creatively, in ways that generate new roles, tasks and industries.

Open-source models offer a more promising path. By decentralising innovation, they increase the chances that AI will be adapted to a wider range of socially beneficial uses. They also foster experimentation, allowing individuals and institutions the ability to fine-tune models for new and unpredictable applications. If AI is treated as a utility, then the creative, risk-taking appetite of Australia's 500,000 small to medium sized businesses could also be unlocked to generate new ideas and opportunities.

As a utility, the comparison with electricity is instructive: had its early deployment been restricted to a handful of applications (say, lighting or refrigeration), its economic potential would have been drastically curtailed - and the suggestion deemed ludicrous. And yet, systems like ChatGPT and CoPilot risk doing just that: narrowing a general-purpose platform into a limited number of commercial applications.

Treating AI as a utility means building the foundations for widespread, adaptive use. Open systems unlock more of AI's value by enabling a wider pool of users and developers to shape its creation of new and important applications. The more people can experiment with AI, the more likely it is to serve the public interest, not just the bottom line.

2. We must level the tax playing field between capital and labour

Australia's tax system incentivises firms towards machines, and away from people. It does this through a range of taxes and systems.

On the labour side, payroll taxes add a direct cost for every new hire. On the capital side, generous R&D offsets, accelerated depreciation schedules and expense write-offs make software and algorithms comparatively cheaper than labour. In effect, the system distorts us away from hiring, while subsidising automation. The push to expand these tax breaks to applications like ChatGPT will only exacerbate this issue.[1]

Nevertheless, it's important to note that this bias is not new. The Henry Tax Review (2010) identified payroll taxes as among Australia's most distortionary forms of tax. That warning came before the rise of affordable, labour-replacing AI. Today, this disincentive is much more acute, where each additional worker attracts a levy, while an AI subscription can be expensed.

[1] OpenAI wants AI tax breaks, promises $115b annual windfall (The Australian, July 1 2025)

Capital incentives are designed to spur innovation, yet in the age of AI, they shift investment towards over-automation. International evidence shows this. Research by Nobel-prize winning economist Daron Acemoglu (2020) and others found[2] that U.S. firms are over-automating their workforce because tax rules make labour-saving capital more attractive. Unless it recalibrates, Australia risks being on the same trajectory. Their US modelling also suggests that optimising the US tax code would raise overall employment and lift labour's share of national income.

A reformed tax system should phase out payroll taxes, tighten automation-focused depreciation, and shift more revenue to broad-based taxes (e.g. raising the GST). This requires inclined political leadership to secure a 'grand bargain' between the Federal and state governments. Although difficult and crucial, this is necessary to ensure our tax system is modernised for the age of AI.

3. Focus our national and state AI strategy for new jobs of the future

The recent speech by the Productivity Commission's Deputy Chair, Alex Robson,[3] argues that targeted industry policy is warranted where markets misprice externalities or where society faces a systemic challenge (such as the climate transition).

AI and its potential effects on our workforce passes both tests.

Left to private incentives, it skews toward labour-saving replication, which could create uncountable externalities in un- and under-employment. Yet its greatest social value lies in augmenting people's health, learning, and in green-tech deployment: true potential to help solve some of Australia's most pressing challenges.

The OECD's *Harnessing AI for the Public Sector* (2023) demonstrates how governments can leverage AI to enhance frontline services by automating paperwork and providing real-time analytics, while maintaining judgment and care in human hands. Australia already has a template in the CSIRO's "missions" for water, energy, and climate resilience, where public seed funding crowds in private R&D aligned with national priorities.

We advocate for embedding a human-complementarity focus into the forthcoming National AI Capability Plan through:

- **Focusing industrial strategy towards human-complementary domains—** health and aged care (the care economy), education, and environmental management. These are industries where the need is urgent, human decision and interface will continue to remain prominent, and the deployment of AI is more likely to augment rather than replace workers.

- **Mandate a "human-complementarity test" for AI procured with public funds,** certifying tools complement or enhances workers' productivity rather than replace them.

- **Leverage mission-based funding** through agencies such as CSIRO and ARENA to co-finance open-source AI models for carbon accounting, biodiversity monitoring, remote-care triage, etc. This is to underpin the platform for solving our most pressing problems in climate and health.

[2] Does the US Tax Code Favor Automation (Acemoglu, Manera and Restrepo, 2020)

[3] Optimal Industry Policy, speech by Deputy Chair, Alex Robson (www.pc.gov.au/media-speeches/speeches/optimal-industry-policy)

Focused national and state AI plans could potentially create the next wave of high-quality jobs and give displaced workers a clear pathway into roles that machines cannot easily replicate.

4. Ensure our savings system captures the long-term gains of AI

Technology-driven inequality is not inevitable. What distinguishes Australia from peer economies is its compulsory superannuation system, which ensures that workers hold a stake in capital accumulation. This mechanism has helped buffer Australia against the sharp decline in labour's share of income seen in countries like the United States.

But the system must evolve. Contractors and sole traders (many of whom are exposed to gig work or task-based employment) are not part of the compulsory superannuation setting. Without compensating gains to these and other workers, this is a problem likely to grow as technologies like robo-taxis displace humans. A future-proofed system would extend super contributions to all forms of work, ensuring that the long-term gains of AI are not disproportionately captured by capital owners.

At the same time, Australia's superannuation system must be positioned to invest in the sectors that will drive the next wave of economic growth. Early-stage AI and deep-tech ventures are capital-intensive and often poorly served by traditional funding models. Unlocking institutional investment for domestic venture capital will be essential, not just for returns, but to ensure AI capability is developed and retained locally.

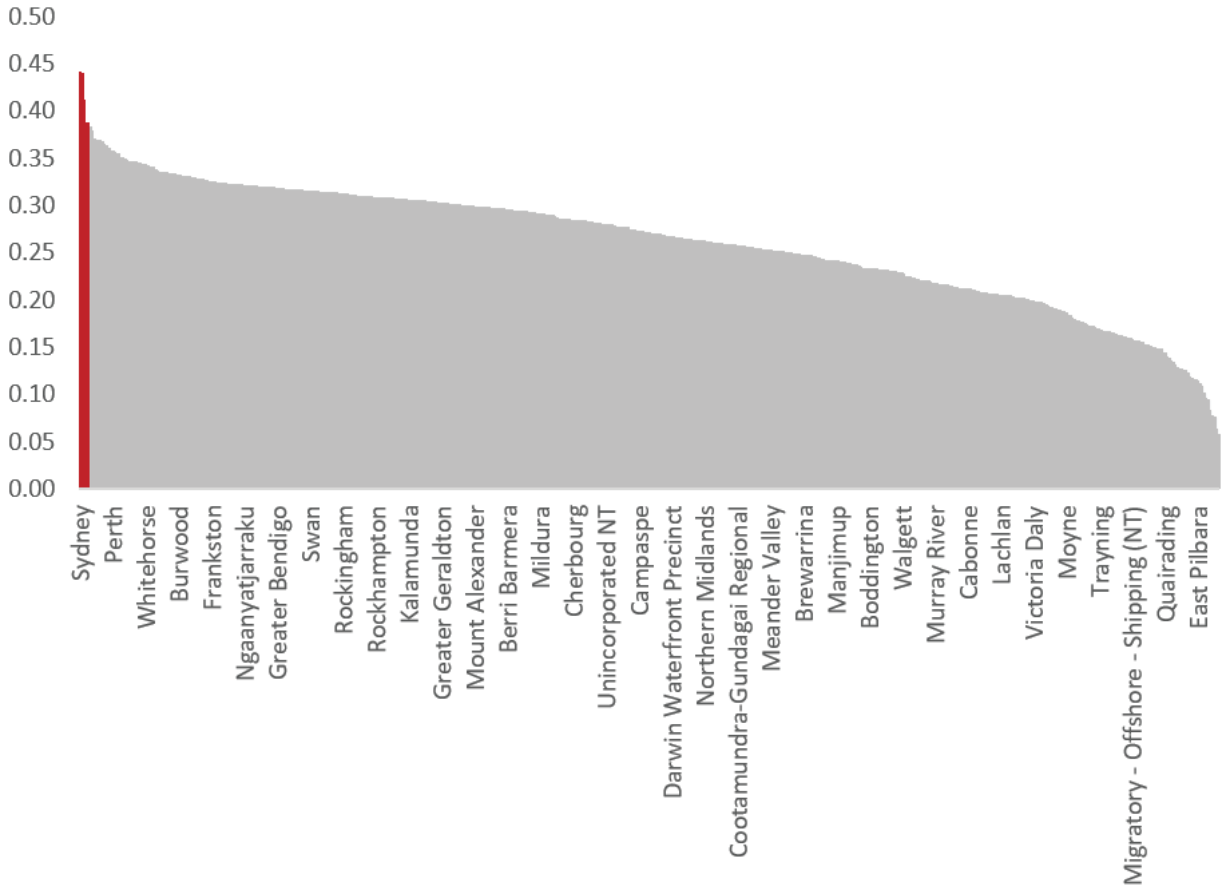
This will require thoughtful reform. Blanket application of unrealised capital gains taxes or liquidity constraints could have the unintended consequence of deterring long-term, high-risk investments in our own technology sector. A modernised superannuation system should reward patient capital and provide flexible channels for supporting innovation while continuing to deliver for members.

5. Transforming city economies through human-complementary AI pathways

Australia's CBDs are both the engine rooms of knowledge work and the places most exposed to automation risk. Geografia's city workforce modelling (figure to the left) shows that professional, financial, and administrative services (the sectors with the highest share of AI-susceptible tasks) are disproportionately concentrated in capital-city centres (see Figure). Yet the same regions also host the country's densest clusters of AI-resilient activity: teaching hospitals, universities, hospitality and entertainment precincts, flagship retail, and other shift-work based industries.[4]

That dual character makes city centres the natural laboratories for a balanced AI transition. Policies already aimed at widening the trading day create real-world test beds where human-centric sectors can trial AI tools for scheduling, customer service and preventive health without displacing face-to-face work. This includes Sydney's 24-Hour Economy Strategy, Melbourne's night-time economy pilots and similar schemes in Brisbane and Perth.

[4] The Deputy Big Shift Report (2025, Deputy)



AI Job-Vulnerability Index by Australian Local Government Area (LGAs)
Source: Geografia (2024) using task-impact modelling by Eloundour (OpenAI) et al 2023
Capital cities are highlighted in red.

To unlock this potential, multiple levers of the city must be explored, such as:

- **Create civic "innovation commons."** City governments can establish shared data trusts and regulatory sandboxes, allowing local firms and community organisations to co-develop AI tools that meet a "human-complementarity test" before public deployment.

- **Investing in shift workers, 24-hour mobility and the public realm.** Round-the-clock transit, lighting , and streetscape upgrades extend the productive day, support shift workers, and encourage night-time employment that anchors jobs in hospitality, health, culture and retail, the sectors most resilient to automation.

- **Channel mission-based R&D into city test beds.** Agencies such as CSIRO, ARENA, and the Medical Research Future Fund already support open-source models for carbon accounting, biodiversity monitoring, climate monitoring , and remote-care triage and healthcare applications. Locating pilot sites in city centres and innovation precincts (where universities, start-ups, and clinical partners sit side by side) or promoting these connections shortens the path from lab to labour market.

Handled well, Australia's capital city economies can absorb AI's shocks to office employment while catalysing the new, human-complementary jobs that will define the next wave of urban growth.

Seizing the narrow opportunity

We are living through a brief moment where we can steer generative AI before its path calcifies. The five principles set out here form a coherent strategy:

1. Open the technology as a utility

2. Clear tax distortions that favour machines over people

3. Redirect industrial policy toward human-centred sectors and task-creating applications

4. Modernise long-term savings so every worker owns a slice of the upside;

5. Use capital-city centres as living laboratories for human-centred AI.

Together, these principles would turn a period of disruption into a platform for shared prosperity. They ask governments to lead, businesses to invest with a longer horizon, civic institutions to experiment, and workers to engage in shaping the tools that will define their livelihoods.

The choice is urgent but straightforward. Act now, and Australia can set an example for peer nations on how to build an inclusive AI economy. Wait, and market forces will lock in a future that is harder and costlier to reshape. The time to build guardrails, incentives and ambition is now.