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For Singapore, the AI revolution is coming just in time

Lessons from the 1990s Windows boom show us why AI will not destroy work. Instead, it will transform it in ways we cannot yet imagine.

Ben Chester Cheong

Critics worry about concrete job losses, but they are missing Singapore's bigger challenge: a rapidly ageing workforce. By 2030, almost one in four Singaporeans will be over 65, creating what economists call a "super-aged" society. This demographic reality makes AI adoption not just beneficial, but essential. ST PHOTO: LIM YAOHUI

Thirty years ago, office workers across Singapore, like everywhere else, were terrified. Microsoft Windows 95 was revolutionising workplaces, and the productivity gains seemed almost magical. Suddenly, tasks that took hours were completed in minutes. Entire job categories, from filing clerks, typists, to manual bookkeepers, were disappearing overnight.

"Computers will eliminate millions of jobs", warned the headlines. Sound familiar?

Yet here we are in 2025, and Singapore enjoys near-full employment with wages at historic highs. The 1990s productivity revolution did not destroy work. Instead, it transformed it in ways no one could have predicted. Travel websites replaced travel agents but created web developers. E-mail eliminated secretarial typing pools but spawned digital marketing specialists. Spreadsheets made manual calculations obsolete but enabled financial analysts to tackle far more complex problems.

Today, as DBS announces it will not renew 4,000 contract roles over three years due to AI adoption, we are hearing familiar fears that other companies will follow suit. But history suggests we are about to witness something far more interesting: the next great wave of human adaptation and innovation.

Every major technological revolution follows the same pattern. Initial disruption creates fear, then humans adapt by finding new ways to create value that complement rather than compete with the new technology.

The Industrial Revolution destroyed agricultural jobs but created manufacturing ones. The computer revolution eliminated clerical work but generated entire industries around software, systems, and digital services. Each time, humans did not just adapt, they leaped to higher-value activities that made them more productive and prosperous than before.

Singapore exemplifies this pattern. In the 1990s, the city-state transformed from a manufacturing hub to a financial and technology centre as computers automated production. Rather than resist, Singapore invested heavily in education and skills training. The result? Today Singapore ranks second globally in labour market resilience, with workers commanding some of the world's highest wages.

WHAT IS DIFFERENT ABOUT AI – AND WHAT IS NOT

AI represents a step-change beyond the 1990s productivity revolution. While Windows automated data processing, AI automates cognitive tasks, including writing, analysis, even creative work. Recent Federal Reserve research shows workers using AI save 5.4 per cent of their work hours weekly, suggesting a 1.1 per cent productivity gain economy-wide. In Singapore, PwC data reveals that AI-exposed industries have seen productivity growth nearly quadruple since 2022.

But here is what remains constant: human ingenuity. The DBS example illustrates this perfectly. Yes, 4,000 contract roles will not be renewed as AI handles routine tasks. But the bank is simultaneously creating 1,000 new AI-related positions and expects the measured economic value – including cost savings and productivity gains – to exceed $1 billion from its 800 AI models across 350 use cases. This is not job destruction. It is job transformation.

Just as the 1990s computer revolution did not create a world of unemployed humans staring at screens all day, the AI revolution will not create a world where machines do everything while humans do nothing.

Critics worry about concrete job losses, but they are missing Singapore's bigger challenge: a rapidly ageing workforce. By 2030, almost one in four Singaporeans will be over 65, creating what economists call a "super-aged" society. Currently, five working-age individuals support each elderly person. This ratio will drop to fewer than two.

This demographic reality makes AI adoption not just beneficial, but essential. Japan's experience offers an instructive parallel. Facing even more severe ageing, Japan embraced automation and robotics. IMF research using Japanese data found that increased robot density was associated not only with greater productivity, but also with local gains in employment and wages.

Switchboard operators at the Singapore Telephone Board in 1961. The AI revolution will be no different from previous technological transitions. Yes, some jobs will disappear. But humans will adapt by finding new ways to create value, solve problems, and improve lives. ST FILE PHOTO

Singapore offers early glimpses of this next wave. The city-state expects AI skills to command even higher premiums, but the most intriguing trend is the growing value placed on uniquely human capabilities, such as creativity, critical thinking, and relationship building.

Why? With labour literally disappearing due to retirement, automation fills gaps. It does not displace workers. Stanford research on Japanese nursing homes found that robot adoption led to 3-8 per cent more staff, better care quality, and reduced worker burden. Far from replacing humans, the robots freed them up for higher-value "human touch" tasks.

Singapore faces a similar opportunity. In 2021, it was reported that the city-state needed 1.2 million additional digitally skilled workers by 2025. AI can help each remaining worker be far more productive while tackling Singapore's labour shortages. This is not about eliminating jobs. Instead, it is about amplifying human capability in a shrinking workforce.

MANAGING THE SHARP EDGES

Acknowledging AI's potential does not mean ignoring transition challenges. Real people face real anxiety about keeping up with technological change. Singapore's response demonstrates how to manage these sharp edges thoughtfully.

The expanded SkillsFuture programmes now include AI and GenAI training, with the number of participants increasing from 520,000 in 2023 to 555,000 in 2024. DBS' approach of letting people go through "natural attrition" instead of mass layoffs is also instructive. It allows gradual transition while the bank invests in upskilling 10,000 employees in AI and data skills. This represents a different model encompassing managed transformation rather than sudden disruption.

Singapore's tripartite system which brings together government, employers and unions ensures that technology adoption serves all stakeholders. The Ministry of Manpower has clarified that, regardless of AI tools used, employers must comply with fair employment practices. Workers concerned about AI discrimination can approach the Tripartite Alliance for assistance.

The key insight from Japan's success: automation works best when combined with human development. Singapore's approach of pairing AI adoption with comprehensive retraining creates pathways for workers to move into higher-value roles rather than being left behind.

THE INNOVATION WE CANNOT YET IMAGINE

The most profound changes always surprise us. In 1995, who could have predicted YouTube creators, app developers, or social media managers? These jobs did not exist because the problems they solve, such as sharing videos globally, building mobile experiences, managing digital communities, were not even conceivable.

Singapore offers early glimpses of this next wave. The city-state expects AI skills to command even higher premiums, but the most intriguing trend is the growing value placed on uniquely human capabilities, such as creativity, critical thinking, and relationship building. What if AI's greatest gift is not automating human work, but freeing humans to tackle challenges we have never had time to address?

Climate change, ageing populations, mental health, space exploration – these require precisely the creative problem-solving and collaborative thinking that humans excel at. Consider Singapore's healthcare sector, where AI adoption is accelerating but demand for human healthcare workers continues growing. AI handles diagnostics and data analysis, while humans focus on patient care, treatment innovation, and complex medical decision-making.

Thirty years after Windows 95 transformed offices worldwide, we live in a more prosperous, connected, and capable world than anyone had then imagined. Not despite technological change, but because of human adaptation to it.

Singapore's demographic challenges make this adaptation not just possible, but necessary. As Prime Minister Lawrence Wong recently observed, "We can do it in Singapore. Because we have the ability as a compact system, with our strong tripartite partnership, with the relationships we have with employers and unions, to discuss before the technology is rolled out, to think about how we redesign jobs, how we retrain workers, how we pace out the technological changes".

The AI revolution will be no different from previous technological transitions. Yes, some current jobs will disappear, just as typing pools and manual bookkeeping did. But humans will adapt by finding new ways to create value, solve problems, and improve lives.

Singapore's experience offers a road map: embrace change, invest in human potential, and trust in the same adaptability that carried us through every previous technological revolution.

The future of work is not about humans versus machines. It is about humans with machines, reaching new heights of capability and prosperity in a society that needs every bit of productivity it can get.

As we learnt in the 1990s, and during the Industrial Revolution before that, betting against human ingenuity is always a losing proposition.

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