

INSIGHTS

Artificial Intelligence Has a Consumer Problem: The AI Consumer Crisis: De-Agrarianization, Labor Displacement, and the Demand Trap in Cambodia

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The dominant narrative about artificial intelligence focuses on jobs. Will AI replace workers? Which sectors are most vulnerable? How should we retrain displaced employees? These are important questions, but they miss a deeper problem. Price cannot fall to zero. A company that produces everything but sells nothing has no purpose. A resource-rich country that distributes cash to citizens still needs external buyers for its exports. If every country automates simultaneously, there are no external markets. This paper argues that AI has a consumer problem that is global, not local. Using Cambodia as a case study, we demonstrate three mechanisms: de-agrarianization, youth migration into AI-vulnerable urban jobs, and the structural impossibility of return to agriculture. We formalize de-agrarianization as the permanent removal of the reservation wage floor, which makes the AI displacement trap inescapable. We then trace the macroeconomic collapse loop: erosion of the wage base leads to consumption collapse, profit contraction, tax base evaporation, and ultimately state failure. Drawing on the technology governance literature and the work of scholars such as Daron Acemoglu, David Autor, and Dani Rodrik, we situate Cambodia's experience within broader debates about automation, labor demand, and the political economy of technological change. The only sustainable remedy is preemptive redistribution of AI productivity gains through universal dividends and distributed ownership, coordinated at regional and global levels. Without such intervention, the productivity of AI becomes self-defeating. The question at the heart of this paper is deceptively simple. If artificial intelligence performs the majority of productive labor in the future, who will purchase the goods and services that AI produces? This is not a science fiction scenario. In 2025 and 2026, major firms including Meta, Amazon, Salesforce, and Block announced significant workforce reductions explicitly attributed to AI-driven efficiency gains. Yet the dominant policy discussion continues to frame AI as a productivity miracle, not as a demand-destroying force. This problem is global. No country can solve it alone. If only Cambodia automates, it can export to non-automated neighbors. If every country automates simultaneously, there are no external markets. Using Cambodia as a case study, this paper demonstrates mechanisms that will operate in every developing economy. Cambodia is not unique. It is a warning. The foundational insight of macroeconomic theory is that wages serve dual functions. To the individual firm, wages are a cost to be minimized. To the aggregate economy, wages are the primary source of demand. When AI substitutes for human labor, firms reduce costs at the micro level, but the wages eliminated would have circulated as consumption spending. This creates the automation paradox: individually rational automation decisions aggregate into collectively destructive outcomes. Formal modeling calls this the AI Displacement Trap a prisoner's dilemma where each firm benefits from automation, but when all firms automate, demand destruction leaves

everyone worse off. Existing literature has largely ignored the role of a fallback sector. In traditional development economics, agriculture provides a reservation wage: if urban wages fall below subsistence, workers return to farming, creating a demand floor. This paper extends the displacement trap model by incorporating de-agrarianization as the permanent removal of that reservation wage floor. Using Cambodia's empirical evidence (Yagura, 2024; Touch et al., 2024), we show that return to agriculture is structurally impossible due to land fragmentation, aging farmers, skill atrophy, social aspiration, and marriage migration networks. When the fallback floor disappears, the aggregate demand curve loses its lower bound. The trap becomes inescapable: displaced workers have no exit, consumption falls without limit, and the economy spirals downward without a natural stopping point. The technology governance literature provides essential tools for understanding this crisis. Acemoglu and Restrepo's (2019) task-based model of automation distinguishes between the displacement effect (machines replacing human labor in specific tasks) and the reinstatement effect (new tasks being created that require human labor). The net effect on labor demand depends on which effect dominates. Acemoglu and Johnson (2023) challenge what they call the "productivity bandwagon" the claim that innovation always benefits workers because productivity gains lead to lower prices, increased demand, and higher wages. They identify two countervailing effects: the consumer demand effect, where lower prices increase demand for goods and services, and the automation effect, where machines directly replace human workers. Whether labor demand rises or falls depends on the relative magnitude of these effects. Acemoglu and Johnson introduce the concept of "so-so technology" innovations that produce only small cost savings, where the automation effect outweighs the consumer demand effect. Acemoglu (2024) estimates that AI will increase US GDP by only about 1% over the next decade, partly because the labor cost savings from AI are likely to be small. In a 2026 interview with MIT Technology Review, Acemoglu cautioned against the hype surrounding AI agents, arguing that they are better understood as tools to augment human work rather than replace entire jobs. He has also raised concerns about the direction of AI development, arguing that the current trajectory focuses excessively on automation, driven by the ease of creating lucrative business models for Big Tech. This "automation bias" creates inequality, dislocation, and imbalances between capital and labor. The development economics literature, particularly Arthur Lewis's dual-sector model, has long recognized agriculture as a buffer sector. Lewis posited that surplus agricultural labor could be absorbed into the modern industrial sector, with agriculture providing a reservation wage that set a floor on urban wages. Dani Rodrik's work on premature deindustrialization offers a parallel insight: when countries industrialize too early or too late, they face structural challenges that create

persistent unemployment and inequality. In Cambodia, however, this buffer has eroded through what scholars term "de-agrarianization" the structural transformation away from agricultural livelihoods. This erosion has occurred so rapidly that the traditional fallback floor has effectively disappeared. Cambodia's population is approximately 18.05 million with an annual growth rate of 1.14%. The fertility rate has declined to 2.49 births per woman, above the replacement rate of 2.1, indicating continued growth but a clear downward trajectory. The median age is 26.4 years, offering a demographic dividend window of roughly twenty to thirty years. Critically, the agricultural population is aging rapidly while youth have exited en masse. De-agrarianization in Cambodia is among the fastest in mainland Southeast Asia. Agricultural employment as a share of total employment fell from 77.736% in 1994 to 33.405% in 2025 (World Bank/ILOSTAT, 2026). Yagura (2024) identifies three drivers: marriage matching at migration destinations (youth marry other migrants, severing rural ties); decreased parental land endowments (fragmented plots too small for viable farming); and low profitability (92% of smallholders reported income decline between 2020 and 2022, with fertilizer prices up 157% while rice prices stagnated). Notably, agricultural output and exports have grown strongly exports reached \$4.18 billion in the first ten months of 2025, a 30% increase (Ministry of Agriculture, Forestry and Fisheries, 2025). The crisis is not aggregate production but livelihood distribution. The AI Asia Pacific Institute (2025) estimates that 54–59% of ASEAN jobs are highly affected by AI (augmented, disrupted, or eliminated). Sixty-six percent of ASEAN business leaders would not hire candidates lacking AI skills. Cambodia's garment sector, which employs approximately 700,000 workers (mostly young women who left farming), is highly exposed. The International Labour Organization has warned that 57% of Cambodia's employment approximately 4 million jobs faces automation threats. In textiles specifically, this figure rises to 88%. Return impossibility means these workers cannot go back to agriculture. The COVID-19 pandemic proved this: when urban jobs collapsed, youth returned only temporarily, then left again as soon as possible. A common counterargument is that AI-driven production will lower prices so dramatically that even reduced incomes will suffice for consumption. This argument fails for a simple arithmetic reason: a worker whose income falls from \$200 to zero cannot purchase any positive-priced good, regardless of how cheap it becomes. Zero multiplied by any price reduction remains zero. For housing, land is not scalable through AI, and mortgages require income. Even a 90% reduction in construction costs does not make a house affordable to someone with no wage. The counterargument confuses substitution effects (buying more of a cheaper good when income is unchanged) with income effects (buying less of everything when income falls). When AI eliminates wage income entirely, the income effect dominates. A

neoclassical rebuttal might invoke the Lump of Labor fallacy the idea that AI will create new industries and new wages. However, the velocity of AI adoption in manufacturing and services (e.g., Phnom Penh's garment sector) vastly outpaces human reskilling. The resulting structural demand deficit cannot be bridged by a developing economy's thin social safety net. Moreover, price cannot fall to zero because firms require positive prices to cover non-labor inputs and capital costs. Even a government that distributes cash, like Kuwait with its oil wealth, still needs external buyers for its exports. If global demand collapses due to worldwide automation, sovereign wealth funds lose value and internal redistribution fails. The following sequence describes the structural degeneracy of an economy under full automation without redistribution. First, AI replaces workers, leading to the erosion of the wage base. Second, with no wages, personal consumption expenditure collapses. Third, with no consumption, corporate profits contract and business investment stalls. Fourth, with no profits and no wages, corporate and personal income tax bases evaporate; consumption taxes also disappear. Fifth, the government loses fiscal capacity no revenue for public goods (roads, police, courts, schools, hospitals). Sixth, the state fails to provide basic functions, leading to social and institutional collapse. Seventh, with no society and no consumers, AI itself loses its economic purpose. This is not a cycle; it is a one-way spiral. In a normal recession, automatic stabilizers (unemployment benefits, price adjustments, interest rate cuts) provide recovery. In this spiral, there is no rehiring because the jobs are permanently eliminated. The fallback floor (agriculture) is gone. The tax base cannot recover because production without consumption generates no taxable surplus. The only intervention that can arrest the spiral is preemptive redistribution taxing AI production before the collapse and channeling the proceeds directly to households as universal dividends or distributed ownership shares. From a technology governance perspective, this analysis reveals a fundamental coordination failure. The technology governance literature emphasizes that technological change is not exogenous but shaped by institutional frameworks, power relations, and policy choices. Acemoglu's concept of "directed technical change" suggests that innovation is not neutral it can be steered toward socially beneficial outcomes or toward outcomes that benefit capital at the expense of labor. The current trajectory of AI development, driven by the business models of large technology firms, reflects a governance failure: the absence of mechanisms to align technological development with broader social welfare. The redistribution proposals in this paper address this governance gap by creating institutional mechanisms to ensure that the benefits of automation are shared broadly. No country can solve this alone. If Cambodia redistributes AI gains but its neighbors do not, Cambodian firms face higher costs and lose competitiveness. The only sustainable path is regional and global coordination.

ASEAN should develop a Consumer Demand Protection Protocol that links automation adoption to redistribution requirements. Cambodia's recent proposal at the 89th ASEAN COSTI meeting for a high-level ASEAN Ministerial Forum on STI provides a promising platform for such coordination. The ASEAN Science, Technology and Innovation Fund (ASTIF) Call 2026, a \$1.2 million initiative themed "ASEAN Grand Challenge: AI-Enabled Competitive and Resilient Region," similarly offers a mechanism for regional cooperation on AI governance. Parallel to this, national AI wealth funds (modeled on Alaska's Permanent Fund) should be established, giving every citizen a direct ownership stake in AI productivity gains. Agricultural transformation must accelerate not to return displaced workers to traditional farming, but to create tech-enabled, attractive livelihoods for those who choose them. The window for action is narrow but open: Cambodia has roughly twenty to thirty years of demographic dividend. Other countries have even less time.

The AI consumer problem is not Cambodia's problem alone. It is the problem of every society that relies on wages to fund consumption and taxes to fund the state. The macroeconomic collapse loop is not a distant threat it is already beginning in the layoffs of 2025 and 2026. The only sustainable future is one where the productivity gains of automation are systematically redistributed to households as a dividend from collectively owned technological progress. Without that redistribution, there will be no consumers. Without consumers, there will be no purpose for AI itself.

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