Re-Skilling and Up-Skilling: A Labor Productivity Imperative for the New Economy

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The rapid spread of automation will collide over the next decade with the demographic reduction in the labor force, creating disruptive changes throughout the global economy. Disruption to the labor workforce will be exacerbated by tradeoffs between allocating capital towards automation vs. reskilling and up-skilling the workforce. A disproportionate allocation of capital could result in inequitable distribution of income and job loss. Labor force productivity and participation in an age of AI-driven automation, will become a critical counter-balance necessary to drive economic and corporate growth. Estimates from Goldman Sachs Economic Research predicts 2/3rds of US occupations are exposed to some degree of automation by AI and up to 50% of job tasks in those occupations can be fully or partially substituted by AI. To keep pace with extraordinary advances in Automation and AI, will require deliberate and proactive effort to up-skill and reskill the labor force which is estimated to translate to $10Tr of GDP growth by 2030 (McKinsey Global Institute). Traditionally, we have looked to universities and post-secondary institutions as the bedrock of knowledge and for the cultivation of emerging talent. The magnitude of the scale of disruption and opportunity is so large that re-skilling of the workforce will have to be employer-led and supported by traditional academic Institutions and government policy. Re-skilling must be a strategic imperative for employers and governments to drive sustainable growth in output.

Complex Labor Market Dynamic

Economic growth is a function of the size of the workforce multiplied by labor productivity. While automation and AI hold the promise for improving productivity, we have a demographic counter-force in the declining number of people in the labor market. The full effects of the AI-driven revolution won't be realized for decades but the worrisome demographic trends are now and imminent. Regardless, it will require a skilled labor force to systematically re-design technology-enhanced workflows and business processes to fully absorb the innovations into our societies and economies.

The conundrum is, we need people to be productive in the workforce in order to harness the power of AI - the same AI that has the potential to disrupt human jobs.

Slow Down in Labor Force Growth

From 1950 to 2015 labor force growth in the US comprised half of all output growth. Since then, this trend has reversed and slowed down. Labor force growth through 2030 is projected to be a slow 0.5% according to the Bureau of Labor Statistics (BLS). The slowdown in young people entering the workforce will continue for at least the next two decades. While older workers are delaying retirement, younger workers delaying entry into the workforce and baby boomers moving into retirement collectively does not alleviate much of the global deceleration in workforce growth.

Addressing the Labor Force Productivity Paradox

Rising productivity offers the best and only hope for reversing the slowdown in global output growth. According to Bain's Macro Trends Group, productivity gains from automation will vary broadly across industries by 10%-15% with a 30% increase in average output per worker by 2030. Despite promising projections and advancements in automation and technology, productivity growth has been on the decline since 2005 - 1.4% growth in labor productivity vs a 2.2% average since WWII. Among the many ways to reverse the productivity trend, the most essential is by up-skilling and reskilling the workforce so they are better equipped to work along-side the incredible advancements in AI, digital technologies and automation. Many firms have not benefited from the technology, automation and digitalization of processes as a direct consequence of the skill gap, even though these technologies can impressively improve efficiency and productivity.

Job Disruption from AI and Automation

Studies reveal that by 2030, employers will need 20% to 25% fewer workers, equivalent to 30 million to 40 million jobs in the US. Automation technologies will affect each industry and occupation differently. The scale of job displacement can be catastrophic because a) as a social matter, we cannot leave behind a large pool of people b) we need the human talent to re-imagine and transform the operating models within corporations to fully harness digital innovations and c) we risk widening the income and wage gap.

Approximately 80% of the U.S. workforce could have at least 10% of their work tasks affected by the introduction of Generative AI, while around 19% of workers may see at

least 50% of their tasks impacted (Eloundou et al, 2023). The influence spans all wage levels, with higher-income jobs potentially facing greater exposure. In all scenarios in which automation displaces 20% to 25% of US workers, the lowest end gets hit the hardest. Workers currently making between $30,000 and $60,000 per year are likely to experience the greatest disruption from automation.

Reskilling is Imperative for the Future of Work

In the U.S. we will be required to retool 11.5 million people with the skills needed to survive in the workforce. By 2025, it is estimated that AI may significantly affect various sectors such as education, travel, insurance, and real estate. Professionals in these fields will need to adapt to new technologies and develop new skills to stay relevant in the job market.

The rise of AI may lead to the creation of new jobs in sectors like data analysis, cybersecurity, and AI programming. However, these jobs will require specialized skills and training. Skilling is the only practical and sustainable way to dampen the effects from the trifecta of aging populations, the adoption of new automation technologies and rising inequality.

Employers in the Driving Seat

Traditional Universities and Colleges alone are ill-equipped to meet the labor market needs and moreover, their traditional models are incompatible with an earn and learn approach. The degree-centric model takes too long and costs too much. The urgency to train and equip workers to absorb the technological shifts, while allowing them to be productive in the workforce, is crucial. We cannot rely solely on traditional higherED institutions to carry this burden. Instead, employers must step up to the challenge or risk losing the labor productivity battle which directly impacts top and bottom line growth.

Based on our experience working within the workforce and education ecosystem, below are tried and true practices that employers must consider:

1. Implement bespoke apprenticeship programs or partner with hire-train-deploy providers to create pathways into in-demand jobs. Allow near-grads or those seeking to transition into new economy jobs, to acquire workplace skills and on-the-job training while minimizing financial burden.
2. Implement enterprise-wide skills-indexing clusters to determine required skills against skills available among the employee-base. Identify skill

adjacencies to help create job pathways for workers with transferable skills into jobs that emerge from automation and AI.

3. Implement skills-based hiring practices. Develop or adopt frameworks to validate competencies on the basis of skills vs degrees. Frameworks and rubrics must “attribute credit” to prior work experience as well as uniquely-human skills such as creative thinking, problem solving and resilience.
4. Make Data literacy an enterprise priority. Generative-AI promises big productivity boosts but 1/3 of workers don’t have basic foundational digital skills. This will ensure every employee has equitable access.
5. Invest in life-long learning and tuition benefits making it easier for the 39m workers who have some college, to complete college or earn an alternative credential.
6. Make the shift towards Talent and Career Development (T&CD) and away from Learning & Development (L&D) by coaching employees to navigate career lattices of lateral jobs by acquiring adjacent skills.