The implications of AI for employment and inequality

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Recent advances in artificial intelligence (AI) has sparked concerns regarding a potential future where automation renders human labor redundant. While AI represents a departure from past technological advancements, anxiety surrounding automation's displacement of human workers is not new. Discussions and policy deliberations on this topic date back at least to the 1960s, as exemplified by the National Commission on Technology, Automation and Economic Progress set up in the US by the Council of Economic Advisors in 1964 to examine whether rising productivity might outstrip the growth in demand for labor.

Undoubtedly, technological progress is indispensable for economic growth and addressing pressing global challenges such as climate change, disease outbreaks like COVID-19, and malnutrition. However, the benefits of such advancements are not uniformly distributed. Currently most individuals in developed nations earn a decent living through paid employment, but the rise of AI could threaten this equilibrium. AI's potential to outperform humans in various tasks could lead to widespread unemployment or exacerbate existing inequalities by favoring a select few with specialized skills.

Historically, technological improvements aimed at enhancing the efficiency of production, often entailed the replacement of human labor with machines. Yet, contrary to fears of widespread job loss, overall employment levels are higher today than in the past. David Autor (2015) argues that there are at least three mechanisms which offset the direct labor-replacing impact of automation technologies. Since the tasks that are automated are usually combined with other, non-automated tasks in production, the demand for workers who can provide the latter can increase, as suggested in Kremer's (1993) O-ring theory of production. Moreover, by increasing aggregate income technological improvements have two additional effects. Higher prosperity leads to increased demand for existing goods and services, and it can also lead to the invention of new types of goods and services, and hence to new types of jobs. All these mechanisms increase the demand for labor.

Therefore, the main concern with new technologies should not be the quantity of jobs, but the quality of remaining and newly created jobs, and whether the resulting prosperity is equitably shared. Since the early 1980s, a divergence between average productivity and median worker compensation has underscored this issue. Factors such as declining labor income shares and widening income inequality have contributed to this trend.

Acemoglu and Johnson (2023) take a historical perspective to examine the conditions necessary for technological change to foster shared prosperity. They argue that there are two main conditions for this. First, for labor demand to increase, it is not sufficient for the average labor productivity to increase, but also the marginal productivity of workers needs to increase. Second, the institutional environment should support workers' voice and incentivizie and facilitate the sharing of economic rents with workers. Unfortunately, since the 1980s the institutional environment has changed due to de-unionization and a shift towards a new corporate vision with the sole goal of increasing profits, and

most technologies have focused on automation technologies, without increasing the marginal productivity of workers.

Looking ahead, AI holds both a peril and a promise for the future of work. The peril lies in AI's potential to automate tasks and devalue human expertise, while the promise lies in its capacity to augment human capabilities and enable individuals with less expert knowledge to perform more expert tasks. Shaping the trajectory of technological change to ensure shared prosperity requires appropriate regulation and bolstered institutions. Policymakers and society at large have a pivotal role in guiding technological advancements towards fostering inclusive growth and equitable prosperity.

In conclusion, proactive measures are imperative to support workers, promote inclusive economic development, and harness the transformative potential of technology for a fairer and more prosperous society.

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