How to Prevent the End of Economic Growth

Last September e-commerce giant Amazon acquired Twitch, a live-streaming video company, for $970 million. Not long ago a new billion-dollar company would have been a boon to job creation. Yet Twitch employs just 170 workers.

The story of Twitch illustrates an important lesson about the digital economy: at the same time it has generated enormous wealth for shareholders and entrepreneurs, it has resulted in few new jobs. In fact, the digitization of the economy may have far-reaching implications for the future of growth and employment.

In a series of recent articles on the state of the digital economy, former U.S. treasury secretary Lawrence Summers revived the notion of secular stagnation, an idea first presented by economist Alvin Hansen during the Great Depression. Hansen's theory suggested that as population growth slows and the rate of capital-absorbing innovation (that is, investment opportunities created by the arrival of new technologies) tapers off, investment will fall, leading to slower economic growth and fewer new jobs.

During the growth miracle of the postwar period, Hansen's theory proved spectacularly wrong. Technological advances during the 1930s and the increase in capital investment associated with World War II did enough to stave off stagnation. After that, the baby boomer generation entered the workforce, pushing the economy ahead. Then, in the 1980s and 1990s, investment in computer and information-processing equipment surged, facilitating a wide range of entirely new computer-related occupations.

But after 2000, when the first wave of IT investment peaked, the demand for new work in the U.S. declined. Hansen famously wrote that “when a revolutionary new industry … reaches maturity and ceases to grow, as all industries finally must, the whole economy must experience a profound stagnation …. And when giant new industries have spent their force, it may take a long time before something else of equal magnitude emerges.” Without new job-creating industries to take the place of those that came before, the

economy might stagnate.

The problem is that most industries formed since 2000—electronic auctions, Internet news publishers, social-networking sites, and video- and audio-streaming services, all of which appeared in official industry classifications for the first time in 2010—employ far fewer people than earlier computer-based industries. Whereas in 2013 IBM and Dell employed 431,212 and 108,800 workers, respectively, Facebook employed only 8,348 as of last September.

The reason these businesses spin off so few jobs is that they require so little capital to get started. According to a recent survey of 96 mobile app developers, for example, the average cost to develop an app was $6,453. Instant-messaging software firm WhatsApp started with a relatively meager $250,000; it employed just 55 workers at the time Facebook announced it was buying the company for $19 billion. All of which explains why new technologies throughout the 2000s have brought forth so few new jobs. According to my own research with Thor Berger of Lund University in Sweden, in 2010 only about 0.5 percent of the U.S. workforce was employed in industries that did not exist a decade earlier.

Summers is likely to be proved right as digital technologies lead to insufficient investment and growing inequality reduces spending. Yet there is much that governments can do to prevent stagnation. They can redistribute income to those with a higher propensity to spend. They can also support investment into industries that might foster more new jobs than digital technologies—jobs for solar photovoltaic installers, wind energy engineers, biofuels production managers and transportation planners.

Finally, while digital technologies may create fewer jobs than previous innovations, they also substantially reduce the amount of money it takes to start a new digital business—and that will make it possible for more people to become entrepreneurs. Indeed, self-employment might become the new normal. The challenge for economic policy is to create an environment that rewards and encourages more entrepreneurial risk taking. A basic guaranteed income, for instance, would help by capping the downside to

entrepreneurial failure while boosting spending and combating inequality.