

# It's far from being all doom and gloom on the the economy

Given some of the latest economic forecasts, it would be easy to become depressed about the global economy.

For example, the latest estimates from the World Bank predicts that global growth is slowing sharply in the face of elevated inflation, higher interest rates, reduced investment, and disruptions caused by Russia's invasion of Ukraine.

In addition, the International Monetary Fund projected in October that global growth will fall to 2.7% in 2023 which, excluding the global financial crisis and the worst stage of the pandemic, would be the weakest year for the world economy since 2001.

Yet there are also indications that, despite this doom and gloom from a range of economists and commentators, there could be some optimism regarding important elements of the world economy.

Take, for example, the 2022 Global Innovation Index, which captures the innovation ecosystem performance of 132 economies and tracks the most recent global innovation trends.

Whilst it would have been expected that investments in research and development (R&D), intellectual property filings and venture capital would have reduced during the pandemic and in its aftermath, detailed research showed that the opposite happened.

For example, investments in global R&D in 2020 grew at a rate of 3.3% although most of this increase was accounted for by the United States and China.

In addition, major businesses increased their R&D expenditure

by more than 11% with most this taking place in four industries namely computer hardware and electrical equipment; pharmaceuticals and biotechnology; software and computers services; and construction and industrial metals.

Finally, venture capital deals grew by 46% in 2021, resulting in around 20,000 deals worldwide that were worth a total of £560bn.

There has also been an increase in technology adoption, with growth across a variety of technologies such as electric vehicles and broadband. Indeed, mobile broadband is now being within reach of most people worldwide and there are now twice as many inhabitants connected to fixed broadband as compared to 2011.

In industry, more automation through the deployment of robots continues to increase with estimates that the stock of industrial robots deployed worldwide has now passed three million, three times the number in 2010.

Yet despite this, there is also evidence that there has been a brake on technological progress in some key fields. For example, semiconductor speed, electric battery prices, the cost of solar energy and drug approvals in the United States show a slowdown from long-term trends.

There are also concerns that the growth in productivity, which is key to the development of economies in every nation, is at its lowest level for years with some economists advocating that low productivity will be a feature of the global economy for years to come.

Yet as the Global Innovation Index suggests, there could be two recent developments that could have a transformational effect over the next few years and boost productivity across a wide range of sectors.

The first development is the wave of digital innovation that

is built upon supercomputing, artificial intelligence (AI) and automation. This is on the verge of making significant impacts not only in science and technology sectors but across all industries especially those lagging in productivity such as education, health, transport and utilities.

For example, the recent introduction of AI tools such as Chat GPT has sent shockwaves through various professions including accountants, insurance managers, copywriters, marketing specialists, and customer support specialists. Within the university sector, the emergence of an AI tool that can write essays for students has already led to a major rethink of assessment procedures for degrees.

The second is related to breakthroughs in areas such as biotechnology, nanotechnologies, and new materials which are revolutionising health, food, environment, and mobility, namely those innovations which are becoming increasingly critical to societal development.

Such breakthroughs include developments in genetics and stem cell research generating new possibilities for the detection, prevention and cure of disease; the development of new materials such as ceramics and resins that will change products going forward; and a multi-disciplinary convergence of agronomy, biology, digitalisation, plant science, and robotics which is already transforming innovation in the field of agriculture and food.

More importantly, research has shown that new technologies are absorbed into households and firms faster today than in the past and that the transfer of technology from universities into the marketplace via new spinoff businesses, is becoming more efficient and effective.

In fact, the recent Covid-19 pandemic, along with other global emergencies in food and climate change, have not only accelerated the diffusion and adoption of new technologies but

are also increasing their acceptance by society.

Therefore, whilst it is easy to argue that the global economy is slowing down with consequences for all nations, the more encouraging view is that innovation is thriving across a range of important industries and that this will result in growth over the next few years.

More importantly, this will also have a significant positive impact on the World in the future and demonstrate that science and technology can directly impact on everyday lives in every nation.

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