SOCIO-ECONOMIC VOICES

Impact of AI on the Economy

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We are at a crossroad, management consultants keep telling us about 16 trillion dollar impact of AI on the global economy; at the same time IMF has forewarned that AI will affect almost 40% of jobs around the world. According to IMF 60% of the jobs in the advanced countries would be impacted by AI; for emerging markets it is 40% and for low income countries it is 26%. Currently , we are a bit unsure about how this technology will unfold; will it be like electricity and steam engine which became all pervasive and impact productivity, economic growth, consumption, return on capital and real interest rate positively? Or will it end up showing a few blips in the historical productivity series. To put it in AI parlance, we still do not have sufficient data to train our predictive models about this new technology. The best option is perhaps to built scenarios taking into account the disruptive potential of AI. Most of the studies in the field tend to indicate a 'do nothing' approach by policy makers is always going to be worse than a proactive policy regarding AI. After all its impact on society, employment, wages, income and labour markets cannot be overlooked by policy makers in a democratic country. It can seriously affect voters behaviour in future. Another important aspect is, AI can have impact across sectors- agriculture, manufacturing, services like health-care, education, banking and finance, etc. We'll restrict ourselves to the macroeconomic policy impact and not focus on areas like defence, aerospace cyber security , etc.

At this stage we need to first recognise that AI is a new technology on which we have high hopes because it can learn, reason and solve a problem. So we are hoping it can do wonders for the economies and firms which will be able to use it appropriately. One is reminded here of the so-called Solow paradox about IT, when he indicated that computer age is visible everywhere other than in long term productivity index of USA; notwithstanding the high investment in IT, the worker productivity in USA did not go up, it could have even gone down in certain years. The productivity growth in USA and Europe post early seventies was dismal barring a brief interlude between late nineties and early part of 2000. It is expected, AI can reverse this trend significantly in future.

The key issues which are being raised in the context of AI relate to its impact on productivity, labour market, income inequality and concentration of economic power including future pricing power. While these developments are likely to affect supply side, higher productivity buttressed income growth will affect the consumption growth positively leading to the introduction of new products and services. In fact, new sectors could open up which are not in the evoked set currently. Drawing a parallel one can cite that when mobile telephony was introduced then few had the vision that hereafter entertainment and WhatsApp would become key deliverables. Even in the employment front the loss of jobs can get compensated over a time horizon. In an emerging economy like India steady increase in aggregate productivity could lead to higher economic growth which would lead to higher aggregate demand and employment opportunities.

The loss of jobs due to introduction of AI would finally get compensated by new jobs. However, the speed of adjustment is critical, consequently one would need an active intervention by government policymakers. This is particularly critical for India which has large addition to labour force every year.

So far labour market is concerned, empirical research on IT industry suggests automation of middle income jobs have sharpened income inequality. Current developments in the field of AI may yield almost similar results, the middle income jobs would disappear however jobs at the lower end of the spectrum and jobs at the the higher end requiring creativity and strategic decision making would be retained. At the end of the day, AI is essentially a smart enabler, people who can use it for higher value addition would always be retained by the firms. Another way of looking at it would be jobs which have an individual touch like nurses, primary teachers, delivery persons for goods, plumbers , etc., are unlikely to be replaced. However, jobs like that of a book keeper, a basic accounting person, legal assistant, customer service representative operating from call centres, basic data analyst even radiologist and pathology laboratory technicians, etc., can get replaced or restructured. At the top end those who can use their abilities and skills to harness AI facilities and use them for business, they would see an increase in demand. Even in the middle level some of the AI models can improve productivity- Co-pilot is an example, this can help in repetitive tasks.

AI can also lead to industrial concentration and provide higher pricing power. It is anticipated that larger firms would be in a better position to make higher investments needed in the field of AI and they would do so to protect their market shares and growth. However, this is a linear assumption, policy makers need to remember that smaller firms which are able to use AI more innovatively, can always hope to do better. This is important for any technology adoption process. It is more useful for policy makers to create an enabling environment for smaller firms than constrain the larger ones having the advantage of scale economies. Fixed cost in the AI game is quite high, training of models take place on large data sets, most small firms cannot afford the cost. So one would need horses for courses both large firms which have proprietary AI, scale economies and cost efficiency are needed along side with innovative small firms relying on open source AI models would co-exist. In emerging countries, some upfront investment for building AI models, both can co-exist. In emerging countries like India some upfront investment for building AI models maybe facilitated by the government. After all, this is going to be a forward looking policy, which will be needed in future for fields like agriculture, education and healthcare. Facilitation of investment by Government will also allow academia, research institutions, smaller firms, public policy bodies to participate in the development and dissemination of A.I. for long term economic growth.

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