

No easy answers

Artificial Intelligence poses both opportunities and threats

Two Silicon Valley titans recently crossed swords on social media. Tesla co-founder Elon Musk and his counterpart in Facebook Mark Zuckerberg disagreed on the potential dangers to humanity that could arise from artificial intelligence (AI). Mr Musk has argued that AI poses a danger to homo sapiens and he is certainly not alone in holding that view. Stephen Hawking is one of many other public intellectuals who have expressed such fears. Mr Zuckerberg's take is that these doomsday scenarios are really negative and in some ways "pretty irresponsible". In response,

Mr Musk dismissed Mr Zuckerberg's statement by saying "Mark's understanding of AI is pretty limited".

Mr Musk's fears are as follows. Eventually, AI will be smarter than its creators and capable of replicating and upgrading its capabilities by designing new hardware and developing more skills. This overtaking of the human race is sometimes referred to as the "singularity". It is true that AI may take a long time to develop a specific skill. For example, computers took 40 years to start beating world champions in chess and even longer to understand idiomatic lan-

guage. But once a specific skill is acquired, it can be perfectly transmitted infinitely.

What is more, unlike biological species, computers are immortal — programming, memory and data can be passed on forever. As AI takes over more vital tasks, it is becoming indispensable. In effect, AI will be a new species (or several new species), albeit a species of non-biological origin. The goals of a super-intelligent new species may not coincide with humanity's goals, and humanity will, by then, be incapable of preventing AI from superseding human beings on the evolutionary pyramid, if it so chooses.

Interestingly, Mr Zuckerberg has been programming his own do-it-yourself AI "Jarvis", to be a domestic help. But in his world view, even though AI may become more intelligent than its creators eventually, this is likely to occur a millennium

down the line. So it is not worth worrying about. At this instant, as the Facebook CEO has blogged, it takes a lot of painstaking programming to have AI contextualise simple tasks.

Both may be right and wrong at the same time. AI is already handling tasks that require ethical decisions. That leads into a moral minefield. Mr Musk deals in self-driving cars, for instance. Insurers need to know how autonomous vehicles tackle the well-known "trolley problem" in real life. Let us say a self-driven car has to choose between hitting a pedestrian or risk killing its own passenger by taking dangerous evasive action. What does it do?

Similarly, let us say AI managing a smart hospital diagnoses a short-circuit that could cause a devastating fire. But if it switches off power supply, patients on life support sys-

tems may die. What does it do? There are more nuanced ethical decisions for AI as well. For example, a social media network may use AI to moderate content. How does AI abide by the guidelines of free speech while removing content that is hateful?

There are still other issues. AI has already taken over most manufacturing jobs and is taking over many white collar tasks such as providing advice on finance and tax planning. This will lead to a tectonic shift in the re-skilling of workforces, quite possibly with the help of AI itself.

One member of the "Zuckerberg camp" recently remarked the doomsday race extinction fears were akin to worries about overpopulation on Mars. But it is also true that in the near term, AI will have to learn to make ethical judgements and humans will have to learn new skills to beat obsolescence.

Futility of 'high-frequency' jobs data

Real improvement in employment conditions in India can only come from economic growth and structural change, and these are matters of long-term strategies

AJIT K GHOSE

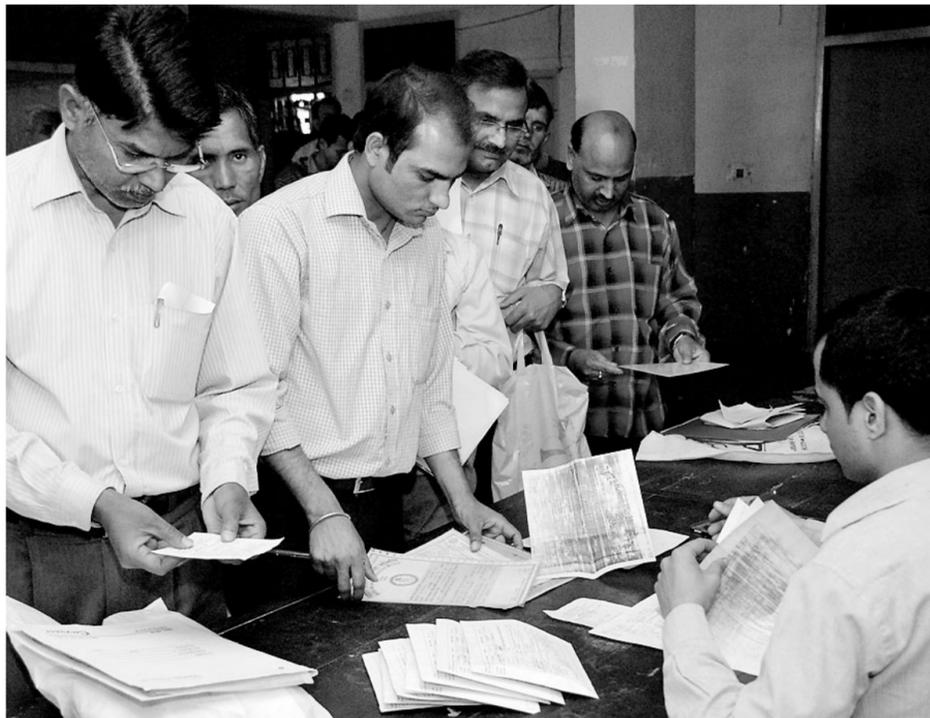
Of late, much has been said about the alleged paucity of statistical information on employment in India. Many commentators have lamented the non-availability of "high-frequency" data and have gone on to argue that availability of such data is very important for policy-making. Much has been left unsaid, however. Few have elaborated on the kind of "high-frequency" data that are required. And no one has said how their availability will help policy-making. The commentators seem to believe that answers to these questions are pretty much self-evident. But are they?

Suppose we start producing quarterly estimates of the unemployment rate. What would this tell us about employment conditions in a country where most people must engage in some kind of work to survive? But suppose we stop worrying about this question and believe that an observed rise (fall) in the rate of unemployment signals deterioration (improvement) in employment conditions or a slackening (tightening) of the labour market. How precisely should policy-makers respond? And what if a rise in the first quarter is followed by a fall in the second quarter?

It needs to be said, loud and clear, that India's National Sample Survey of Employment and Unemployment (NSSEU) has been a far richer source of employment statistics than the Labour Force Surveys carried out in many countries of the world. In particular, the NSSEU has produced statistics that are appropriate for understanding the nature and evolution of employment conditions in a developing economy such as India's. This is amply demonstrated in a recent document* that makes intensive use of the NSSEU data to develop perspectives on the evolving employment conditions, the challenge that confronts India's policy-makers and the policies that need to be adopted to meet the challenge.

But the NSSEU has thus far been conducted at five-year intervals and this certainly has been a problem. Starting from this year, however, it will be conducted annually in rural India and quarterly in urban India. This gain in frequency, though, will come at a cost in terms of "depth and breadth" of information; for the questionnaire to be used in "high-frequency" surveys must necessarily be much shorter than that used in quinquennial surveys.

To identify the kind of "high-frequency" data that would be useful, we need to have a proper understanding of the nature of employment, unemployment and wages. India is a dual economy with surplus labour. The organised sector — composed of the government, public-sector establishments and large private-sector establishments — offers formal employment



Men queue up at an employment exchange. India's is a dual economy with surplus labour

(i.e., in regular wage-paid jobs endowed with employment security and provisions for social protection and non-wage benefits) to a tiny proportion — around nine per cent — of the workforce. Another tiny proportion — around 13 per cent — is in regular-informal employment (i.e., in regular wage-paid jobs with no provisions for employment security, non-wage benefits or social protection), about half of them in the organised sector and the rest in the unorganised sector.

The vast majority of India's workers are either in self-employment or in casual wage employment in the unorganised sector. In these types of employment, there is ample scope for work-sharing; the same amount of work can be performed by a varying number of workers. Such work-sharing means underemployment of the employed, which is significant among self-employed and casual wage employees. Unemployment is low because few can survive without engaging in some kind of work.

In this setting, employment growth basically reflects labour force growth and is often accompanied by increased underemployment. Unemployment reflects queuing for formal jobs and is

basically confined to educated youth from better-off households. Wages are not determined by demand-supply equilibrium — there is no such equilibrium, as supply perennially exceeds demand — and hence cannot signal slackening or tightening of labour markets.

What types of "high-frequency" data might our surveys usefully generate? My choice would be the following: Employment in the organised sector by type; the extent of underemployment among the self-employed and casual employees; and wages of casual labour in different production sectors. Enterprise surveys are required to generate data on employment in the organised sector. We already have the *Annual Survey of Industries* but need an *Annual Survey of Services*.

NSSEU, being a household survey, can generate the relevant data on self-employment, casual wage employment and casual wages. NSSEU, naturally, would also generate data on labour force, employment, types and sectors of employment in the economy, and unemployment rate. But these are slow-moving variables; they may show short-run fluctuations, which are not of much significance.

The difference between the growth

of organised sector employment and labour force growth (which is the same as employment growth) in the economy tells us about movement of workers from lower-productivity to higher-productivity jobs; such movement is substantial when the former is significantly higher than the latter. Growth of underemployment indicates deterioration of employment conditions in the unorganised sector. Growth of casual wage rate indicates productivity growth in self-employment and hence improvement in employment conditions in the unorganised sector.

Availability of such data will surely help in effective monitoring of ongoing changes in employment conditions in the country. But how will they help policy-making? Here, it must be recognised that real improvement in employment conditions in India can only come from economic growth and structural change, and these are matters of long-run strategies. The only short-run policy that the "high-frequency" data can influence is one relating to safety-net programmes delivered through special employment schemes.

*Ajit K Ghose, India Employment Report 2016, New Delhi (Oxford University Press). The writer is Honorary Professor at the Institute for Human Development, New Delhi

How China can resist devaluation pressure

ZHANG MING

In July 2005, the People's Bank of China announced it was implementing a managed floating exchange rate system based on market principles and with reference to a basket of currencies.

Between end-June 2005 and end-July 2015, the renminbi's (RMB's) exchange rate against the dollar rose to 6.12 from the previous 8.28, appreciating by about 26 per cent. The RMB's nominal effective exchange rate (NEER) and real effective exchange rate (REER) indices appreciated by 48 per cent and 57 per cent respectively over the same period.

That the appreciation of the REER of the RMB exceeded its NEER indicates that the inflation level in China during this period was higher than the global average.

Between 2008 and 2014, the effective exchange rate for the RMB appreciated steeply, although the RMB's exchange rate against the dollar remained stable. Therefore, the rapid appreciation of the RMB effective exchange rate was mainly due to the rapid appreciation of the dollar against other currencies.

However, while the strong appreciation of the RMB's effective exchange rate in 2008 was supported by the fundamentals of China's economy, a similar appreciation in 2014 was a distinct deviation, given the subsequent decline in China's economic fundamentals. This is why since the second quarter of 2014, depreciation expectations have taken hold, with the RMB's appreciation against the dollar in the market expected to be reversed.

In August 2015, the People's Bank of China again announced reforms in the RMB exchange rate regime, with the reform focus this time on the daily opening price of the RMB against the dollar in the foreign exchange market.

Before the exchange reform in August 2015, the central bank prevented excessive appreciation (or depreciation) of RMB against the dollar on a regular basis by artificially lowering (or raising) the daily opening rate of the RMB against the dollar. In order to promote the RMB's entry into IMF's SDR currency basket however, the essential aspect of the 2015 exchange reform was that the central bank would voluntarily give up its intervention in the daily opening rate of the RMB against the dollar.

At the beginning of this reform process, the daily opening price of the RMB against the dollar was set at the RMB's closing price against the dollar for the previous day. However, as the RMB faced significant devaluation pressure in the markets at the time, the decision of the central bank to abandon intervention in the opening price resulted in significant depreciation of the RMB against the dollar exchange rate. Between end-July 2015 and end-March

2017, the RMB weakened against the dollar, with the exchange rate falling from 6.12 to 6.89, devaluing the RMB by 13 per cent. During the same period, the RMB's effective exchange rate also depreciated remarkably.

As the Chinese government has gradually liberalised the capital account, the depreciation outlook for the RMB is now expected to reverse. China's previous net inflow of private capital has turned into an outflow; China had a sustained capital account deficit from the second quarter of 2014 to the fourth quarter of 2016, with the net outflow of private capital reaching \$984.8 billion during this period.

To avoid the potential risks of the RMB's rapid devaluation against the dollar, the central bank has adopted three new approaches since the RMB exchange rate reforms of August 2015.

First, the central bank has frequently bought RMB and sold dollars in the foreign exchange market to stabilise the RMB exchange rate. As a result, China's foreign exchange reserves have contracted, falling from a peak of about \$4 trillion in late 2014 to about \$3 trillion at present, down by about 25 per cent.

Second, China's central bank now fixes the RMB's daily opening price against the dollar taking into account two factors with respect to the daily opening price of the RMB against the dollar. In addition to the RMB's closing price against the dollar the previous day, it also maintains RMB's effective exchange rate against 24 other foreign currencies based on a 15-hour reference period before the opening of the working day. Both factors have equal weightage.

Third, China's central bank has significantly strengthened the regulation of capital outflows.

For a large open economy such as China's, the most appropriate exchange rate regime is a free floating one. China's central bank should further strengthen the flexibility of the RMB exchange system, so that the exchange rate is determined by market supply and demand to a greater extent. This means that the People's Bank of China should reduce or even abolish intervention in the foreign exchange market.

It may result in a significant devaluation of the RMB against the dollar in the short term, but it would also avoid excessive consumption in the foreign exchange market and strengthen the independence of the central bank's monetary policy. Weighing all the pros and cons, this may be the more sensible choice for China's central bank.

The writer is Director in the international investment research office of the Institute of World Economy and Politics, Chinese Academy of Social Sciences, Beijing. This article is part of a series by Chinese economists facilitated by the Institute of Chinese Studies, Delhi

OTHER VIEWS

With Nitish Kumar switching allies, BJP is the only winner

Opposition unity has without doubt suffered an enormous setback

Nitish Kumar's impending split from the Mahagathbandhan, or Grand Alliance, in Bihar had been the subject of speculation for months so that when it came, the only surprise was the swiftness and finality of the separation from Lalu Prasad's Rashtriya Janata Dal — and of his embrace of the Bharatiya Janata Party. Mr Kumar's record of shifting fast and loose between allies is a story of political expediency and it is not entirely clear what political compulsion or personal ambition the latest move was born of.

As Mr Kumar inched closer to the BJP, praising demonetisation, supporting its presidential candidate and even colouring a lotus at a public function, the war on corruption became his overriding theme once again. While it is likely he will steer the JD(U) on this political realignment in the days to come, a question mark remains on how long the new arrangement will last. In the BJP's take-no-prisoners project to expand its electoral footprint, a multi-cornered contest in Bihar, on the lines of the last Lok Sabha election, could be the best-case scenario for the party in 2019. Will it have any use for the JD(U) then? What is without doubt is that opposition unity has suffered a setback. The Mahagathbandhan was per-



ceived as the template for taking on the BJP nationally — what's more, there were many people who hoped, and once again naively, that Mr Kumar would be at the heart of it.

The Hindu, July 28

A case of judicial overreach

Court order on Vande Mataram flawed

In an order reminiscent of the Supreme Court direction in November 2016 on the compulsory singing of the national anthem in cinema houses, a single judge of the Madras High Court has made the recital of Vande Mataram mandatory in educational institutions (once a week) and government and private offices (at least once a month) in Tamil Nadu. This assertion of what has been called "popcorn nationalism" comes at a time when society is polarised and violence is perpetrated in the name of patriotism and nationalism. The order is at odds with the liberal values enshrined in the Constitution.

Justice M V Muralidharan's order is not just flawed, it could put in danger human

lives. It could give right-wing elements a handle to attack those who do not sufficiently prove their patriotism. Particularly vulnerable would be members of the Muslim community. After the apex court's order there were incidents of physical assault on those who did not stand up when the national anthem was played in theatres. Such forcible spoon-feeding of nationalism does not meet the approval of a majority of Indians who would not like to make a show of their nationalism under duress. Judges have enough of backlog to clear; they need not waste time on courting controversies or doing what is not required of them.

The Tribune, July 28

Crop insurance scheme works

But some flaws must be weeded out

Insurance companies have collected premiums totalling around ₹22,345 crore and paid out claims worth just ₹5,876 crore to farmers so far for the last kharif and rabi agricultural seasons under the Pradhan Mantri Fasal Bima Yojana (PMFBY). Insurance claim payouts are always low in normal years. Unlike in 2014 and 2015, India had a "normal" monsoon last year, with most parts of the country receiving above-average rainfall. Crop damage claims were bound to, then, be generally lower. That said, the PMFBY is not without flaws. To start with, the premium subsidy under the scheme is to be equally shared between the Centre and the states. One reason for delay in claim pay-

ments by insurance companies is the latter not releasing their part of the subsidy on time. Secondly, the companies themselves have no direct connection with the farmers. The premiums are collected and passed on by the banks that extend loans to the farmers.

One way to force the states to implement PMFBY properly is to bear the whole premium subsidy and link its release to their meeting prescribed operational schedules. Once insurance companies are assured of timely release of subsidy and also of crop yield data from the states, they will have no excuse for delaying claim settlements.

The Indian Express, July 28