Mass surveillance

Face recognition technology and its use in surveillance by sundry governments is deeply contentious

TECH-ENABLED

DEVANGSHU DATTA

The ongoing protests and the response have led to a focus on face recognition. In multiple places, police have taken photographs using drones, and then used facial-recognition software to identify individuals in crowds, including many minors. This raises concerns about all-pervasive state surveillance.

India may soon have one of the largest facial recognition databases. In June, the National Crime Records Bureau (NCRB) tendered out for technical help to build a database for the police match "persons of interest" with pictures, including pictures from sources like newspapers, social media and TV grabs, etc.

The system should allow the police to carry out "fast and accurate face recognition" in a "live environment", according to the tender. The NCRB says this would help to identify missing persons. The face-recognition database would not, according to the NCRB, be integrated with Aadhaar, which includes photographs and other biometric data.

The NCRB also said, in a written response to the Internet Freedom Foundation, that the system would not use images from CCTV in public places unless a crime was committed. The data would be hosted on a centralised application "made available for access to only police".

The protests are likely to lead to an accelerated adoption of such systems. It's anyone's guess if the NCRB will actually abide by its commitment not to link to other databases like aadhaar. In addition to that database, CCTVs are up and running in both public spaces and closed environments. It's likely that your image is being captured multiple times on a normal day on multiple CCTV cameras, with the data stored and processed by multiple organisations. The police already uses CCTV images to levy traffic fines.

This ambitious surveillance programme would be considered overreach in democratic countries. It involves collection and processing of private personal data without consent. However, India's proposed Personal Data Protection Bill, which has not yet been passed in Parliament, does not contain specific protections against this. It proposes to give all government agencies and organisations an open licence to collect and process data, without consent.

The original draft contained a provision that government agencies should only collect data without consent, when it was necessary and proportionate. That was deleted in the draft circulated to the Lok Sabha in early December. That means there are currently zero checks and balances against state surveillance and if the Bill is passed as is, there will continue to be zero checks and balances.

Digital photographs of people are among the easiest things to collect without consent, or knowledge. In the Eurozone, where this is considered private personal data, the "right to forget" clause of the General Data Protection Regulation can be invoked to ask for erasure of such data. It is not clear if such a request could be made under the proposed Personal Data Protection Bill, 2019 although it does contain a right to forget clause.

Face recognition technology comes in many types, for many purposes. There are one of one matching systems, such as laptops or mobile device, which stores the digital picture of one individual and matches faces of users upon login. There is one versus few, such as a small database of employees in a given organisation. In both these cases, there is consent which can be withdrawn.

One from many matches occur when the police match a picture of a person of interest (or a corpse), versus a large database. There are also many from many systems when the police take pictures of large crowds and match every face versus other large databases. There may not be consent, or knowledge in either of these.

Fooling modern facial recognition programs isn't easy, though these do throw up both false positive and negatives. An air-filter mask may not fool a modern face-recognition program. Make up streaked in odd lines can work, but is conspicuous. A scarf, or earrings, or anything worn close to a person's real face, with images that look like a face may confuse the software. Special baseball caps with LED /infrared lights can work while being invisible to the human eye. So can privacy visors, which look like normal sunglasses but reflect light back in odd ways.

Face recognition technology and its use in mass surveillance by sundry governments is deeply contentious. It has been banned in several jurisdictions. It also has technical flaws — for example, false positives lead to innocents being harassed. Courts and judges may not be sufficiently techno-savvy to understand the limitations, or the scope for framing and digital forgery if this is used for police work. However this is now widely prevalent in India and it will remain legal and all-pervasive, going by the data protection bill.

CHINESE WHISPERS

Phule going solo

Savitribai Phule, the Dalit leader of Bahraich district of Uttar Pradesh, who joined the Congress after leaving the Bharatiya Janata Party (BJP) ahead of the 2019 Lok Sabha polls, has resigned from the grand old party. The Congress had given the ticket to Phule to contest from the Bahraich parliamentary constituency but she lost to the BJP nominee. Following her defeat, Phule was left in the political wilderness as the Congress became busy restructuring its state unit. After resigning from the Congress, a sulking Phule is gearing up to hold a convention in Lucknow next month when she is expected to announce her next move.

Money platter

Legend has it that a man prayed for money and then became rich by growing multiple plants from one — giving the plant its name. Not sure if that was the case here, officials in Odisha over the weekend unearthed property worth over ₹1 crore in the possession of a gardener-cum-horticulture extension worker employed by the state government. On a tip-off officials raided the house of one Udhab Behera and that of his relatives in Mayurbhanj and Balasore district and found a neat stash. Besides the cash, Behera owned a three-storey house, 12 plots of land, a poultry farm, three two-wheelers, big-ticket deposits and investments in banks plus a huge amount of gold ornaments.

Hyperlocal promise

Election is tough competition, even if it is of local bodies. In Tamil Nadu, where panchayat elections are taking place in two phases — one was held on December 27 and the next is scheduled for December 30 — a candidate took the traditional way to win over people's trust. During her door-to-door campaign, Padmavathi, a candidate in Mylambadi village, Erode district (where the election is to be held on December 30), handed over a betel leaf and nut to prospective voters, promising to fulfil every promise made in her manifesto. Touching the betel leaf and nut is a traditional way to guarantee something and gaining trust.

Indian banking: Challenges in the new decade

Shall we see the closure of the bad loan saga in the new decade? There is no Lehman or East Asian crisis to blame; it's our own doing

BANKER'S TRUST

TAMAL BANDYOPADHYAY

Today, the Reserve Bank of India (RBI) will conduct the second phase of Operation Twist by simultaneous buying and selling of government securities. It will buy long-tenure bonds and sell short-term ones to bring down the bond yields and flatten the curve, narrowing the term premium. The 10-year bond yield, which rose to 6.8 per cent in the recent past fearing higher government borrowing to bridge the widening fiscal deficit, is now hovering at 6.5 per cent.

Operation Twist "manages" bond yields, brings down the cost of borrowing for the government and saves banks from treasury losses. Banks, in fact, can make money trading bonds but nobody knows how long the RBI would continue the exercise and how much it would buy. Therein lies the challenge for the banks.

What are their challenges in the new decade?

For the record, a decade ago, the 10-year bond yield was 7.59 per cent and 11.22 per cent in December 1999. The gross annual government borrowing figures for fiscal year 2000, 2010 and 2020 have been ₹99,630 crore, ₹4.92 trillion and ₹7.1 trillion respectively.

The kitty of bank credit, which is ₹99.25 trillion now, was ₹29.42 trillion in 2009 and ₹4.15 trillion in 1999. The credit pile grew 609 per cent in the first decade and less than half of it in the current decade. The deposit portfolio of banks, which is ₹1.31 trillion now, has grown 213 per cent in the current decade, roughly half the growth in the first decade (from ₹7.91 trillion in 1999 to ₹41.84 trillion in 2009). How has the economy been growing? In 2000, it was ₹20.13 trillion and in 2010, ₹64.78 trillion (both 2004-05 series). The estimated size of the Indian economy in 2020 is ₹211 trillion (2011-12 series).

Finally, a look at the pile of bad assets. In March 2019, the gross non-performing assets (NPAs) of the Indian banking sector was 9.1 per cent of the loans, the highest among emerging markets. It may rise to 9.9 per cent next year. The figure was 2.39 per cent in March 2009 and 14.6 per cent in March 1999. After making provisions, the net NPAs of the industry in March 2019 was 3.7 per cent, higher than 1.12 per cent in March 2009 but much lower than 7.5 per cent in March 1999.

The current decade started with enormous fiscal and monetary stimulus to ward off the feared impact of the collapse of US investment bank Lehman Brothers Holdings Inc. The government went all out spending money and the RBI followed an ultra-loose monetary policy, flooding the system with liquidity and bringing down the policy rate to its historic low. That sowed the seeds of the problems that plagued the financial sector for an entire decade, threatening to spill over to the next.

Has the central bank been too aggressive in cleaning up the system?

Former RBI governor Y V Reddy — initially a much-disliked central banker for his refusal to open up the banking sector — turned into a hero after the Lehman collapse for ring-fencing the Indian economy by not opening up the sector. In the current decade, there has been partial opening up but that is not the reason for the enormous pain that the Indian financial sector has been experiencing. Unlike in the past when only the banking sector bore the brunt, the problem has spread across the financial system — to non-banking finance companies, mutual funds and rating agencies. There is a clamour for fiscal stimulus even as monetary easing continues.

How did we get into the mess? Probably, each decade has its own contribution. Some are blaming the abolition of development financial institutions (DFIs) in the 1990s that forced banks to lend for projects without the core competence. They are extremely slow learners of the tricks of the trade; the leisurely development of the corporate bond market also did not help the cause.

A few are holding the Reddy regime responsible for the current troubles as the economy grew at over 9 per cent for three successive years then and the credit growth was phenomenal, leading to overheating. Then, of course, there was the exaggerated response to the global crisis in the aftermath of the Lehman collapse. And, finally, there are others who are blaming former Prime Minister Manmohan Singh and former RBI governor Raghuram Rajan for the mess. India presents a unique case study of financial sector woes spilling over to the real sector. And there is no Lehman or East Asian crisis to blame. It is self-inflicted.

In the past too, Indian banks were saddled with bad assets but there has never been such a crisis of confidence (which forced the RBI to issue a release saying depositors' money is safe in the banks). Has the central bank been too aggressive in cleaning up the system? Should it and the government have thought of the solutions before raising the red flags? When bankers are hounded by investigative agencies for credit decisions going wrong and defaulters are treated like outcasts, who will borrow money and who will lend?

The endgame in the politician-banker-corporate house nexus has not played out yet. Once it does, the new landscape for the Indian financial system will emerge. In some sense, the Indian banking story has remained unchanged for decades. Banks have kept on changing their assets — from steel to infrastructure to telecom to retail — and corporate India kept on leveraging up even as the regulator was generous in offering forbearance to banks. Periodically, new currency in the form of the treasury gains has been used to clean up banks' balance sheets. How long can it continue? At some point, there won't be anybody to lend barring the government — the last bastion. This is a classic story of debt stagnation and fiscal dominance.

In the new decade, we will see the emergence of large banks through consolidation; probably better-governed public sector banks with a smaller market share; the entry of many small banks; and even the return of DFIs in some form. Let's hope and pray that we also see the closure of the bad loan saga.

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INSIGHT

Data protection law: Enhancing the ecosystem

MANISH SEHGAL

The chatter on data privacy is slowly growing into a heated discourse as technologies at the forefront of innovation are pitted against the fundamental right of individuals to protect their privacy. Harnessing data lies at the core of the digital revolution, thus earning it the moniker "oil of the 21st century". Data and the ability of corporations to leverage data is fuelling economies across the globe and giving rise to differentiated businesses and business models. India's commercial ecosystem has immensely benefited from this data revolution. India has close to 500 million internet users and these users are aggressively using internet-based services ranging from food delivery to online shopping. The proliferation of e-commerce platforms and the many start-ups that are providing services and goods over the internet are relying heavily on the collection of personal data. At present, the Information Technology Act is the framework available for organisations to integrate data protection within their processes and prospectively, the Data Protection Bill of 2019 (PDPB) will subsume the requirements governing personal data.

The Bill proposes controls that include the concept of consent manager wherein individuals may use it to give or withdraw consent to the organisation collecting their data and transparency requirement to provide notices to individuals subjected to data processing activities in addition to conducting data protection impact assessments.

A raging debate around the implementation of data privacy laws is that it will be a drag on innovation. Rather than a threat, such laws should be perceived as enablers. Innovation and privacy are like the two sides of a coin — seemingly on opposite sides but only hold value when together. The key value proposition for a host of e-commerce companies and fintech operating in the financial services space is the ability to harness customer data in order to provide clients with more customised solutions. An attempt to create "wow" moments along the customers' journey. Data becomes central to understanding a client's proclivities and accordingly fashioning the desired solutions. However, the concern around data privacy laws strangling innovation is largely unfounded. Data privacy does not mean that corporations and start-ups will not have access to data and will thus not be able to innovate. It only means that there will be more accountability for the data that they collect, process and store. At its core, the concept of privacy also empowers the data owner, that is, the individual. It promotes the individual to have control over how his/her personal data is being collected and/or used. The traditional relationship between a corporation and an individual was skewed in favour of the corporation. Data privacy laws simply level the playing field by empowering the consumer.

Scalable innovation cannot be done without adequate privacy safeguards and data privacy laws have the potential to encourage innovation by enabling an ecosystem where things are done in the right way. A case in point is the State of California, home to the Silicon Valley and widely considered as the innovation hub of the world. The California Consumer Privacy Act which became the California law in June 2018, is one of the strongest legislation on data privacy in the United States. Technology and e-commerce businesses in the state continue to evolve as they gear up to comply with these new laws. The aim of such laws is to curtail the activities of those who are exploiting data for more than its intended use and put the reins in the hands of the data owner as per her preference — this goes a step beyond consent and lets the individual decide how his data is going to be harnessed.

The question is, "Whom does the data belong to?"

Corporations should consider their role as a custodian of individual's personal data similar to how banks are custodian of an individual's money. The money that we deposit in banks cannot be used by the banks as per their whim or requirements. Banks cannot choose to invest our money in the equity market or even open a fixed deposit without our explicit consent. At the same time, they have a duty to protect our money.

Corporations in the digital world have a similar responsibility. As custodians of our personal data, they do not have the authority to leverage our data as per their preferences. They should be held responsible for protecting our data from cyber infringement and misuse. Structured and well-defined laws on data privacy can help preserve the sanctity of data and deter its misuse.

The consumers are clear winners as data privacy laws ensure that they have a say in the way their personal data is being harnessed. Corporations stand to benefit as well. In 2017, India experienced the second-highest number of data breaches across the world (₹37 per cent of the overall data breaches). Enterprises face a significant risk of data breach by 'insiders', that is, employees or third-party vendors with access to data. The economic and reputational cost of data breaches can be high. Corporations can avoid this by complying with the prevailing data privacy laws and building new systems that allow them to safely explore, validate and analyse data. On the other hand, one must concede that data (personal) may no longer be as easily and freely available as in the past. Businesses need to ensure that their operating environment is enhanced and change the way they deal with an individual's data. Thus, corporations should strive for a "privacy-enabled environment" and not just a "privacy-compliant environment". The former can help businesses create a competitive advantage as individuals may prefer them and feel safe to transact and engage with such business.

Far from stifling innovation, privacy requirements and regulations are designed to give an impetus to the data economy and provide organisations with innovative ways to engage with customers, address the mushrooming trust deficit and build a competitive advantage. The successful organisations will be those who can see beyond the regulatory constraint and use it as a catalyst for digital transformation and for creating an enduring competitive advantage.

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LETTERS

Things can only better

As the year comes to a close, it's a good time to reflect on the impactful events that the year has witnessed. From Narendra Modi's emphatic victory to Balakot that marked a discernible shift in our security policy, Modi 2.0 wasted no time in taking big political decisions. The abrogation of Article 370 and the bifurcation of the state of Jammu and Kashmir into two union territories caught everyone by surprise. The government could muster support in Rajya Sabha and got the Triple Talaq Bill passed. And towards the end of the year, the Citizenship Amendment Act happened. Clearly, the ruling dispensation, riding on the back of a huge mandate, is not shy of taking its political belief to its logical conclusion. On the economic front, the year hasn't been kind to us. Despite the stimulus announced by the government, signs of recovery are not yet visible. That said, everyone likes to believe that the slowdown has bottomed out and it can go only up from here. It is hoped that the year 2020 would bid goodbye to the economic crisis bringing growth back on track.

Sanjeev Kumar Singh Jabalpur

Scope for improvement

This refers to "Time running out for PSBs" (December 27). It is true that private banks have a stronger capital base and less of non-performing assets (NPA) in contrast to public sector banks. The former also laid emphasis on customer satisfaction and service quality to attract and shore up business unlike the lackadaisical approach of many public sector banks. Nevertheless, the significance of public sector banks cannot be overlooked. What is required is meaningful -- and not merely target-oriented lending -- to improve asset quality and prevent capital wastage.

Stricter systems and procedures are essential to regain customer confidence after a series of frauds. Private banks already have taken care of this aspect. Capital infusion can be restricted but not abolished in public sector banks given their compulsion to implement social welfare programmes. The spate of mergers and acquisitions reflect poorly on them. Growth in challenging times is key to survival. Public sector banks have to adopt new technologies and security measures to project a better image and make themselves less vulnerable and globally competitive.

C Gopinath Nair Kochi

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HAMBONE

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Bring banks on track

Credit market ecosystem needs better governance and oversight

The banking sector is showing signs of a turnaround, though challenges remain. The latest Financial Stability Report (FSR) of the Reserve Bank of India (RBI) says that gross non-performing assets (GNPA) of scheduled commercial banks could rise from 9.3 per cent in September 2019 to 9.9 per cent in September 2020, largely due to change in macroeconomic conditions, marginal rise in slippages, and declining credit growth. Slower economic growth is a risk for both the banking and non-banking financial sectors. Nominal growth in the Indian economy slipped to 6.1 per cent in the second quarter of the current fiscal year — the lowest in about two decades. Lower nominal growth will affect revenues of businesses, which will have a bearing on their ability to service debt.

Apart from NPAs, the macroeconomic and policy environment can make things difficult for banks, especially those in the public sector. Credit growth is now lagging deposit growth. While part of the banking system is not in a position to expand its balance sheet, Indian companies are increasingly borrowing from abroad. As a recent report in this newspaper showed, fundraising through dollar bonds jumped nearly five-fold to $23.6 billion in 2019. Monetary policy accommodation in advanced economies has eased conditions in global financial markets. The slower pace of transmission in the Indian banking system, which has not allowed companies to fully benefit from lower policy rates of the RBI, also made borrowing from abroad more attractive. The rise in foreign currency borrowing, apart from affecting the banking system, could also complicate policy management for the central bank.

Even though the macro environment is not favourable, a good deal can still be done to improve the resilience of the banking and financial system. RBI Governor Shaktikanta Das has rightly emphasised the need for improving governance, including in private banks, in the foreword to the FSR. In fact, there is a need to review governance standards in the entire credit market ecosystem. For instance, as the FSB has highlighted, it has been noticed that credit-rating agencies provided indicative ratings without written agreements. As these indicative ratings are not disclosed by rating agencies, it is difficult to track the possibility of rating shopping. However, the pattern of withdrawal of ratings by one agency and provided by another does indicate the possibility of rating shopping because the new ratings are often the same or better than the earlier ratings. Since ratings play an important role in credit screening, compromised evaluation by rating agencies could affect lending decisions. The Securities and Exchange Board of India recently fined rating agencies in the IL&FS issues. This should help send a message about the importance of following regulations.

Nonetheless, rating agencies are only one part of the ecosystem. The health of the banking system, to a large extent, also depends on the government and the central bank itself. The RBI has not been able to detect governance failure in several cases, both in banks and non-banking financial companies. Again, IL&FS is a case in point. Improvement in the oversight capacity of the regulator will help strengthen financial stability. Further, the government needs to implement governance reform in public sector banks to improve efficiency, so that they are not a drag on the financial system and overall economic growth.

Liquidity-driven rally

Lack of earnings revival will test investors' faith

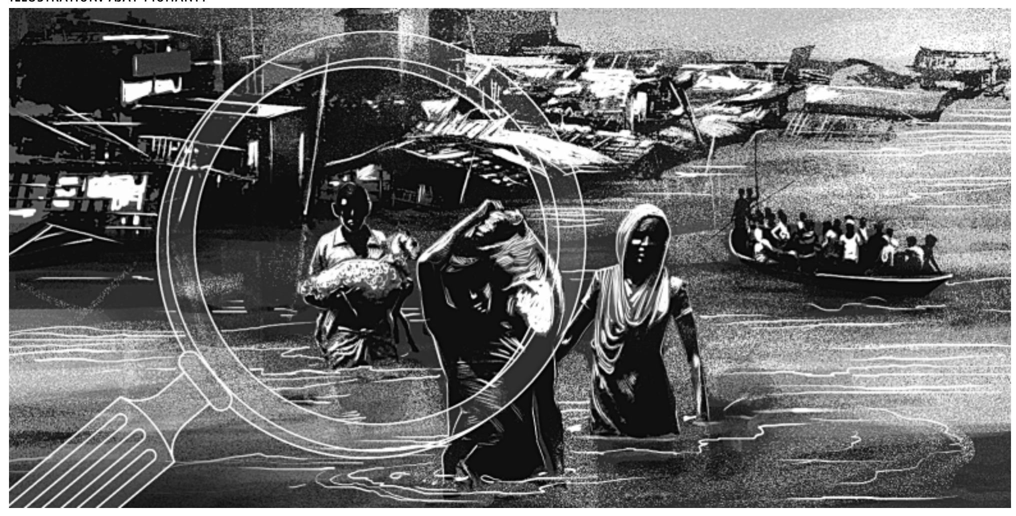
The most striking change that has happened in the equity markets in the past decade is the coming of age of individual investors. They have kept faith even as returns have been subdued. The Sensex and Nifty have been making new highs, but the 10-year compounded return at 9 per cent a year has not compensated for equity risk, given that real returns have been 2-3 per cent annually. But that has not bothered foreign and domestic investors, and valuations have only climbed to new highs this year.

While foreign investors have liked the fact that India is among the fastest-growing large economies, the behaviour of domestic retail investors has seen dramatic changes. In the past, retail investors used to enter the market towards the end of the bull run and end up taking the hit. But in recent times, retail investors have kept their mutual fund investments going through systematic investment plans (SIPs) of equity mutual funds. Such accounts have gone up from about 6 million in 2014 to 29.4 million now. Investors put in about ₹8,000 crore in SIPs every month — of the ₹7.6 trillion equity assets with mutual funds in November, they account for ₹3.1 trillion. Ten years ago, mutual fund equity assets were under ₹2 trillion. With most of the money coming in the past five years, mutual fund returns have also been as uninspiring as the broader market. But what investors at the aggregate level have done is to continue their SIPs while reducing their monthly commitment.

The decade began in the aftermath of the global financial crisis and thanks to the quantitative easing in advanced economies, a lot of money found its way into stocks, globally. The US market has been in a bull run with the broad-based S&P 500 index returning about 11 per cent a year — among the best-performing global markets. The India story, however, has sputtered due to a variety of reasons — whether it was the policy paralysis in the United Progressive Alliance government in the first half of the decade or the slowdown that has hit during the National Democratic Alliance government in the second half. In the stock market, there has been a wave of polarisation, both in the US and India, where high-growth companies with a first-mover advantage or quality managements have been valued more than others. While India's internet companies have shied away from raising funds in the public markets, some financial institutions and consumer companies trade at expensive price-earnings multiples for consistent and predictable growth.

At a broader level, even after a decade of financial crisis, it is still the monetary policies of developed countries that drive flows into equity markets, globally, and would remain an important determinant of foreign investment. However, for domestic investment to keep flowing into the market, the revival of economic growth will be critical. If economic growth and earnings fail to revive over the next few quarters, the patience of retail investors investing through SIPs could be tested. SIP flows have provided stability to Indian stock markets and a reversal could result in significant volatility. In absence of earnings revival, a liquidity-driven rally could further push up valuations and risk.

ILLUSTRATION: AJAY MOHANTY



Households after a natural disaster

The CMIE's CPHS data breaks the preconception of devastation and impoverished households being pushed to spending less

SNAKES & LADDERS

AJAY SHAH

Recent research has uncovered new insights into a major natural disaster, the Chennai floods of 2015. Curiously, there was not much of a change in household income. But household expenditure surged for about a year after the floods. There were sharp increases in expenses on health and on fuel/power. After this period, households reversed themselves and started spending less; they were probably repairing their balance sheets. The expenditure surge was smaller for the less affluent, even though the damage that they suffered is likely to have been worse. More access to borrowing would have helped.

Natural disasters are important phenomena in the life of a nation. Most of us will experience one or more major natural disasters within our life. There is a need to know more about what happens in a local economy after a natural disaster. Traditionally, researchers have camped in a disaster-affected zone and undertaken measurement, but there are two limitations. We have not measured conditions before the disaster, and we are not simultaneously measuring conditions in an unaffected area, which can be used as the comparator (also called "the control").

New possibilities for measurement flow from the Centre for Monitoring Indian Economy's (CMIE's) "Consumer Pyramids Household Survey (CPHS)", which measures 170,000 households every four months. Assuming a disaster typically falls in between two survey dates, we get a four-month period in which each household is met before the disaster; after the natural disaster takes place, the same households are met again. This measurement is done all over India, so it is possible to identify controls.

In a recent paper (*http://bit.ly/chennai2015*), Ila Patnaik, Renuka Sane, and I study the Chennai floods of 2015, as a test case of this new approach, to measure the impact of natural disasters upon households.

The first question is about income. At first blush, we may think that many firms were disrupted during the floods, streetside vendors could no longer ply their trade, and thus incomes would go down. But we should look deeper. Disruption of kitchens meant that vendors selling cooked food got a surge in demand. The moment the waters receded, all households were engaged in repair and reconstruction. The government spent a lot of money — about ₹2,000 per head — on relief and reconstruction. All these enhanced expenditures constituted a large demand shock in the local economy, which counteracted the flood-related disruption. As a consequence, the overall change in household income was about zero.

The second question is about expenditure. The traditional preconception is that there is devastation after a natural disaster, and impoverished households are pushed to spending less. This is not what happened in the data. Expenditure surged dramatically, by 32 per cent, during and immediately after the floods. Households were spending more on food, health care, and, most importantly, fuel/power.

In about 10 months, expenditures came back to normal, and after that, spending actually dropped to below the pre-flood levels, as households went back to repairing their balance sheets.

The richest households would have experienced the least destruction of housing stock or assets, and they are also likely to come through relatively unscathed on ill health when the upper floors of a house are not flooded. The richest households also have access to liquid assets and borrowings. So, the ideal response that we might see, for an affluent household, is a short surge of expenditure after which normalcy is restored.

The harm caused by a flood for poor people is greater, through the destruction of housing and assets, and health impact. Ideally, a bigger consumption surge is required after the event to repair the damage. However, in the data, we see a smaller consumption surge for the poor. This may reflect financial constraints, and greater hardships for the poor.

Finance should be a major part of the resilience of households when faced with a natural disaster. However, in the data for Chennai, we see a certain retreat from finance: Fewer households borrowed, saved or purchased assets after the flood. This raises concerns about the extent to which the Indian financial system is able to perform its functions in that moment of need when the average household requires finance the most. It is important to diagnose and identify the policy impediments, which are holding back profit-motivated financial firms from surging the lending to households in a disaster-affected area such as Chennai. These difficulties are consistent with the broader picture of a malfunctioning financial system.

While the floods in Chennai were a terrible event for persons there, at a conceptual level, the post-disaster performance was perhaps as good as it can get in India. Tamil Nadu has high state capacity, Chennai is one of the most affluent places in India, the media reported on the events with great interest, which helped ensure that the government swung into action for relief and reconstruction with alacrity and heft. In other locations in India, we may perhaps expect outcomes to be a bit worse, on account of inferior state capacity, lower household affluence, a reduced presence of financial firms, and reduced scrutiny by the media. The evidence that we see about Chennai can perhaps be interpreted as the frontier and as the best outcomes that are obtained in India when faced with a natural disaster of the magnitude of the 2015 Chennai floods.

The significance of this work lies not just in understanding what happened after the floods in Chennai in 2015. The measurement strategy that has been developed here is general, and not just about the Chennai floods of 2015. Many researchers will be able to conduct such studies by applying these methods, through which a new body of knowledge can develop on understanding what happens to households in India when faced with a natural disaster. Direct comparison between different natural disasters will, however, be limited by the fact that no two shocks are quite the same. As an example, the floods in Kerala were not comparable with the floods in Chennai.

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The decade we leave behind and ahead

DOWN TO EARTH

SUNITA NARAIN

It's the end of a decade and the start of a new dawn, we hope. In the decade we leave behind — 2010-19 — the world, it would seem, has unravelled and come apart; our leaders are diminished; our economies are in trouble; and, there is conflict and strife everywhere we look. In this decade, we have realised that climate change is not in the distant future. It is happening and its impact will only grow. Every year in this decade has broken a new record — the highest heat and the most extreme weather. But it is not just about weather. It is about how people in the world view their present and think about their future.

We know that the young are restless — maybe more than in any past decade. In the richer world, young people are alarmed and insecure because they don't know how they will survive this increasingly warming world. But I think what worries the young the most is that they feel powerless to make the difference — what is intrinsic and essential in their lives is what is indicted as the problem. How will they change this? The young worry about this. As they must.

In the poorer world, the young want opportunities. But the future prospects look bleak where they live. They want to move — from the village to the city, and from the city to another country. They are not satisfied with the plight of their parents. Even if they don't have enough formal education (because governments have let them down), they are in tune with the present through their mobile telephony. They know about the bright lights; they know that the world is awaiting them. They want it, as they should. They also see the world around them crumbling — their farmer parents are not able to make both ends meet. The price and the weather risk of growing food increases each day, and each season increases the spiral of debt. They don't want this. Their generation is also different in another way. They are not meek or submissive. They are hungry for more but also impatient.

It is, therefore, no surprise that in almost every part of the world things can go out of hand very quickly. A simple hike in fuel or university fees can topple governments, bring the army on the road, and cause shooting, burning, and looting. It's a tinderbox world, on the boil.

It's also a divided world. Countries do not work together anymore. Every country thinks only of its own interests and nothing more. This is not to say that this was not the case before. But the pretence has gone — and this in an age of extraordinary inter-connectedness and inter-dependence has huge consequences. Let's be clear that in the last three decades — 1990-2019 — growth has stumped the environment; even if local air has been cleaned, emissions have been externalised — leading to this existential threat of climate change. Our inheritors should remember this.

There is other decadal learning as well — in our world, we are seeing unprecedented rates of internal migration and rural distress. I say this, not only because of the massive and often vile discourse over immigrants, but also because we know that our cities are growing in an illegal way and that this growth is massive and unmanageable.

This is also where the circles close. The fact is that Delhi cannot breathe today — our air is foul and toxic. Our health is compromised. What we must understand is that a large part of the problem of pollution — some 30 per cent — comes from industries that spew emissions into the air. This industry cannot afford to move to a cleaner fuel, like natural gas, because of the expense. It will use the dirtiest of fuels — pet coke — and if it gets banned then coal or anything else that is cheap. But if we in Delhi want clean air, then we cannot export this industry to the next region. The airshed is the same. Air pollution is a great leveller, as I keep saying. We need to ensure that this industrial growth comes without discounting the cost of the environment. We need growth, so that it is inclusive — rural and urban; for the rich and the poor.

This should have also been the lesson for the rich in the rich world. Their governments have worked overtime in successive climate negotiations to erase the very idea of equity and justice. But the fact is it is also a common airshed. If the rich emitted in the past, the poor will emit in the future. We also share a common future and it does not look so good anymore in terms of climate impact.

So, let's please get real in this next decade. If not for our sake, then for the sake of the young, who will inherit this world — polarised, intensely unequal, and now greatly risked because of climate change. No more games. No more procrastination. The decade of the 2020s is the last chance we have to walk the talk. To make it right. Let's not lose it. Not again.

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Sun Tzu redux

BOOK REVIEW

DWIGHT GARNER

The most electric war plan in semi-recent American literature appears in "A Run Through the Jungle," a story by the much-missed Thom Jones. Here is that plan in its entirety: "Infiltrate Hanoi, grab Uncle Ho by the goatee, pull off his face and make a clean escape." Because warfare is rarely so simple, books of strategy are consulted.

The most venerable of these, alongside *On War* (1832), by the Prussian general Carl von Clausewitz, is Sun Tzu's *The Art of War,* written some 2,500 years ago. There have been many translations of *The Art of War,* and a new one, by Michael Nylan, will not be the last. It's a book that seems perpetually useful because it's a work of philosophy as much as tactics. Doves and hawks (even vultures) can approach it for meaning. The book suggests that the real art of war is not to have to go to war.

I've read Sun Tzu several times, in different translations. I'm not sure why I return to it: It's short, it's a classic, it's there. The book's lessons in deception seem not to stick with me. In my mind, I'm the least devious person in the world, my motives there for all to see. But that is what a devious person would say, isn't it?

Ms Nylan is a professor of early Chinese at the University of California at Berkeley, and the author of several well-regarded scholarly works. Her translation is the first in any modern language by a female scholar. (Her first name is no tactical feint, but if it were she would have Sun Tzu's admiration.)

Sun Tzu's more recent admirers include Tony Soprano and Bill Belichick. How much they have memorized of *The Art of War,* as opposed to merely name-checking it, is uncertain. A high name can be a fig leaf for low deeds.

THE ART OF WAR
A new translation by Michael Nylan
Author: Sun Tzu
Publisher: W.W. Norton & Company
Price: $24.95

Sun Tzu is a favourite of Steve Bannon's, Ms Nylan reminds us. Sebastian Gorka had a licence plate that read "Art War." Ms Nylan gives us former Secretary of Defense James Mattis's contextualising words about the book: "You've got to know Sun Tzu and Carl von Clausewitz, of course. The Army was always big on Clausewitz, the Prussian; the Navy on Alfred Thayer Mahan, the American; and the Air Force on Giulio Douhet, the Italian. But the Marine Corps has always been more Eastern-oriented. I am much more comfortable with Sun Tzu and his approach to warfare."

Mr Nylan suggests General Mattis put Sun Tzu's lessons to imperfect use while manoeuvering in Donald Trump's White House. Ms Nylan further reminds us in her introduction that after Nancy Pelosi defied Trump's demands for billions for a border wall, a congressional colleague, James Clyburn of South Carolina, referred to her as the Sun Tzu of our day.

This book gets off to an uncertain start. Ms Nylan's introduction is logy. A typical sentence: "Whenever we innovate, or whenever irregular, unpredictable or unprecedented situations arise, as they do so often in modern life, we take the plunge, whether we welcome it or not, trying to find our way to a constructive outcome." Sun Tzu says armies should avoid salt marshes. Ms Nylan leads her unwitting readers into them.

Nylan's translation of *The Art of War,* however, is marvellously pointy and plainspoken. Each sentence is a struck match. Her version of one well-known section begins:

Warfare is the art of deception.
So when you can, feign incapacity,
And when deploying troops, appear to have no such plans.
When close, seem to them to be far away,
and when far away, seem near.

Sun Tzu's admirers seek to apply his lessons in everyday life. More than once, I have heard the "seem to be far away" admonition applied to flatulence. Ms Nylan continues:

If the enemy commander is avid for advantage, use it to lure him in;
If he is volatile, seize upon that;
If he is solid, prepare well for battle;
If he is strong, evade him.
If he is angry, rile him.
If he is unpresuming, feed his arrogance.

Ms Nylan ran her successive drafts past "an international group of scholars drawn from multiple disciplines," including a former military officer and a poet, she writes in her introduction. Like the wisest commanders, she sought criticism and synthesised the best of it. Her translation is insightful and alert.

There is a lot we do not know about "*The Art of War.*" It is most likely a composite text, rather than the work of one author. The legendary general in the book, Sun Wu, may not have existed.

This is a book that, in chapters as small and neat as Nespresso pods, admires achievements in corpse-making. But Sun Tzu writes: "Winning a hundred victories in a hundred battles is not the best possible outcome. Best is to subdue the enemy's troops without ever engaging them on the battlefield."