

Collect the right data

Big Data per se can provide little insight

SWAPNIL SHEKHAR/
KAAMILA PATHERYA

Everyone seems to be talking about Big Data. Organisations across sectors are buying into the premise of data-driven decision-making and growth. Studies show that the overall adoption of data science and analytics at large Indian firms has been as high as 64 per cent. Analytics, data science, and Big Data in India are set to become a \$20-billion industry by 2025.

Despite this revolution, organisations still face challenges when trying to acquire the most fundamental of datasets — those on consumers. While Big Data insights — generated through social networks, the Internet of Things (IoT), large business databases, etc — continue to grow in number, they often fall short when organisations need simple behavioural insights on consumers, their choices and usage patterns. A growing concern is whether the right information is being used to drive decisions that directly impact the well-being of consumers.

The problem today is not about harnessing more data, but rather capturing data that is actionable. Amidst the excitement surrounding Big Data, one needs to reaffirm the merit of primary consumer data that directly reflects the choices, demands, and consumption patterns across socio-economic and demographic scales.

Data on consumption is integral not just to private players, but to an entire spectrum of organisations, including governments and philanthropies. When it comes to rural consumers, data becomes even harder to find. This gap is a clear reflection of the lack of representation of rural choices and demands in existing data sources.

Without social and demographic information on consumers, it is impossible to contextualise the vast amounts of tech-enabled datapoints. Without information on how farmers use fertilisers, seeds, or irrigation techniques, any sensor

or satellite data on agriculture is devoid of crucial human and behavioural elements.

It is faulty, even dangerous, to make decisions that directly impact rural consumers without primary socio-economic and demographic data from the demand-side. Big Data might not necessarily be the magic solution for impactful decision-making. However, social and demographic indicators that may offer 360-degree insights on consumers can be.

The low levels of primary data usage might be a result of its own shortcomings. Household data on social and demographic indicators is limited to over 10 large-scale surveys, such as the NFHS and the NSSO, and several smaller isolated and fragmented surveys. While these are excellent sources, the scope to derive cross-cutting insights across indicators and geographies is low given the overall lack of integration.

Further, surveys are expensive affairs beset with long turn-around times. Data, like other commodities, comes with an expiry date. To enable effective decision-making, it must be consistent with the fast and ever-changing nature of the social landscape. Indicators as dynamic and fast-moving as health and consumption require data collection that moves and reflects changes in real-time.

There is a pressing need to reorient how we think about primary demand-side data. Innovation might be where the answers lie.

The conversation must move from solely speaking about Big Data, drones, satellite imagery, GIS, etc to how these can be integrated with knowledge that represents people and their choices. Research think-tanks, universities and government entities together must take the lead in driving forward this innovation and seismic shift in the possibilities of quality data.

Shekhar is Director, Sambodhi Research. Patherya is Programme Manager, Sambodhi Analytics



How millet farming empowers women

‘Millet Sisters’ and backyard poultry are helping the rural women of Telangana beat poverty and malnutrition

SUBIR ROY

VALUE FOR MONEY

An unannounced change is taking place in the way some rural women are going about their lives. Simultaneously, public healthcare is paying better attention to what affects them fundamentally. If these changes take root and go forward on their own momentum, they will bring about a significant change in the well being of women and also society as a whole.

After Mogulamma lost her husband she had to take charge of their small two-acre farm in Telangana and fend for herself. The 36-year old has thereafter received national attention and accolades for becoming a successful millet grower through organic farming. Millets are a source of important nutrition and their cultivation consumes less water.

Last year she received the Nari Shakti award from the President on behalf of the All India Millet Sisters Network for her achievement.

This year she journeyed to New York to receive the UNESCO Equator prize for environmental conservation.

Millet cultivation

It is her mother-in-law who first came under the influence of the Millet Sisters Network. Then when she passed away a couple of years ago and Mogulamma’s husband became ill and bed-ridden, the whole responsibility of fending for the family fell on her shoulders. She bore this manfully and with time her work changed her self-perception.

The Millet Sisters Network trains women across the country in organic farming by using vermicompost, farm manure and panchgavya (made from cow products) for both crop nutrition and pest control. It was initially an

uphill task — first losing her ailing husband and then struggling to learn how to cultivate successfully.

Initially on some days it was difficult for her to organise a meal. She found solace in a network of local women and slowly more and more of her time has gone in working with the network which brings within it fold village women who want to travel the same path.

Backyard poultry

The Millet Sisters Network stretches across the country but something as deep-rooted and wider in reach is growing in rural India.

Rearing backyard poultry is taking off in a big way. Between two livestock censuses of 2012 and 2019, total poultry in the country has gone up by 17 per cent, but backward poultry (as opposed to commercial poultry) has gone up by 46 per cent.

This single initiative, led by women of farm families, is able to address three deep rooted problems — poverty, malnutrition and gender bias. It allows the women to give their families, particularly children, eggs and occasionally poultry meat, thereby adding a nutritional supplement. Buying equivalent food from the market would be unaffordable.

The benefits of this practice are so obvious that it has caught on in a big way, as the findings of the census would indicate.

The women raise country chicken in free range conditions and are increasingly going in for genetically improved varieties of indigenous low input technology birds which fend for themselves and are increasingly going in for improved country type chicken are resilient to weather changes and able to defend themselves better from predators. The backyard poultry raising is particularly useful to rural families of indigenous people living in remote areas which are away from big markets.



The All India Millet Sisters Network has bagged a national award for its role in women's empowerment G RAMAKRISHNA

Plus, the fact that the women of the households raise and look after the poultry improves their status within the family and adds to their empowerment.

In view of the importance of backyard poultry rearing, State governments have adopted poultry development programmes. Under the centrally sponsored programme, families below the poverty line get chicks. The norms include women making up at least 30 per cent of the beneficiaries. Financial help is given to build night shelters for the birds.

Government help is also given to run mother units which take care of brooding and vaccination of chicks.

As rearing backyard poultry is a low cost operation, a woman can earn a profit of ₹3,000 in each three-month cycle. In this way by rearing backyard poultry women are able to supplement their family income and nutritional re-

quirements the same way as looking after a couple of milch cows has done for decades now under Operation Flood.

Better health

A remarkable change is also simultaneously taking place in the health and life expectancy of women. The maternal mortality rate, measured by the number of maternal deaths per hundred thousand live births, has gone down sharply by 27 per cent, from 167 during 2011-13 to 122 during 2015-17.

This has bettered the millennium development goal and is on track to reach the sustainable development goal of 70 by 2030. The southern States, already at 77, are near that goal.

The government attributes the improvement mainly to the rise of institutional deliveries across the country with almost 80 per cent of deliveries now taking place under institutional care,

compared to 40 per cent a decade ago.

To get more poor women to come and get admitted to hospitals for delivery, the government has been improving the public healthcare system.

Free drugs and diagnostics are being offered as encouragement to pregnant women to make institutional visits as a pregnancy progresses, creating the mindset to come and get admitted to the health facility when delivery time comes. Also, more women are being treated for anaemia.

The fall in MMR is also attributed to changes in social attitudes. There is a slow decline in child marriages and teenage pregnancies. As rural women help their families earn and live better and get better care during childbearing, both their status and the nation's well-being get a push forward.

The writer is a senior journalist

5 THINGS to WATCH OUT for TODAY

■ **The Supreme** Court is scheduled to pronounce its verdict on petitions seeking a review of its judgment giving a clean chit to the Modi government in the Rafale fighter jet deal with French firm Dassault Aviation. The apex court will also give its verdict on pleas seeking review of its order to allow entry of women of all ages into Sabarimala temple.

■ **Karnataka Deputy** Chief Minister Ashwathnarayan CN said the disqualified MLAs will join the BJP after the Supreme Court upheld the former Karnataka Speaker's order. The MLAs will contest the December 5 bypolls in the State.

■ **The Central** Marine Fisheries Research Institute will kick-start its food and aqua-agri fest. The three-day event will offer a range of quality items produced by organic farmers and companies. It will also have a special section for organic products from Lakshadweep and an exhibition of farming technologies.

■ **Bharti Airtel** is likely to announce its second quarter results. The telecom company had deferred its Q2 and half-yearly results as it had sought clarity on the issue of adjusted gross revenue. In the first quarter, Airtel had posted a net loss of ₹2,866 crore, its first loss in 14 years.

■ **Vivo** is all set to launch Vivo S5 in China. The latest Vivo smartphone will run on Android 9 Pie OS and come with a unique diamond-shaped three camera set-up. Vivo S5 is likely to be priced around ₹20,000.

What Apple Card's sexism row tells us about algorithms

JINOY JOSE P

THE CHEAT SHEET

Forgive my ignorance, what's an Apple Card?

Well, it's a credit card from Apple, backed by financial services giant Goldman Sachs. It is stored in your iPhone, and you can use it wherever the card is accepted, just as you use a credit card from, say, American Express or HDFC Bank, in India.

Now, what's the scandal all about?

On November 7, social media witnessed a heated debate on Apple's alleged discrimination against women customers after David Heinemeier Hansson — a Danish computer scientist who developed the famous computer application framework, Ruby on Rails — alleged in a series of Tweets that Apple Card gave him a credit limit that was 20 times that of his wife's credit limits even though both shared the same financial and social conditions. An infuriated Hansson tweeted: “No appeals work. Even when she pays off her ridiculously low limit in full, the card won't approve any spending

until the next billing period. Women apparently aren't good credit risks even when they pay off the... balance in advance and in full.”

Ugh! That's sexism, plain and simple!

Yup! These allegations were soon endorsed by none other than Apple co-founder Steve Wozniak, who said he could borrow 10 times as much as his wife (whom other cards treat equally) on their Apple Cards. And Hansson tweeted that at Apple's customer support, nobody was “authorised to discuss the credit assessment process”. A response he received was “...It's just the algorithm.”

The algorithm, really?

Yes, and no. In case you're a newbie to the world of algorithmic discrimination, an issue that's fodder for raging debates across the globe now, where rights and privacy activists, academics and data scientists expose (human) biases that creep into codes that form the backbone of computing programs that governments, companies and other institutions use to find, profile and filter candidates for various schemes.

Interesting!

The old maxim that the code is neutral and algorithms and computers won't be affected by human biases do not hold water now. As Cathy O'Neil has explored in her book *Weapons of Math Destruction: How Big Data Increases Inequality and Threatens Democracy*, there is ample proof now that algorithm-based systems are inclined to discriminate against the poor and the vulnerable, thanks to the way prejudices are built into the systems that produce these programs.

Can't agree more.

In such systems, interestingly, lower class people, women, children, sexual minorities, and their ilk get filtered out of the ambit of business products and services such as credit cards, loans or venture funds and government welfare doles.

These discriminatory practices trigger and aggravate the gaps between the rich and the poor, the privileged and the underprivileged in society, as Virginia Eubanks observed in her book, *Automating Inequality: How High-Tech Tools Profile, Police, and Punish the Poor*.



That's shocking!

What's even more shocking is the fact that Apple Card is not the first high-profile product to be called out for sexism or algorithmic discriminations. A report from Reuters showed that products and services such as Facebook Ads, Amazon's recruiting services, digital assistants such as Apple's own Siri, Google's Assistant and Microsoft's Cortana, Google Images and many others have been accused of being sexist and biased against women.

And that shows it's high time users and consumers demanded more transparency in the way these digital products design their screening systems and processes.

We must, as more and more agencies, governments and companies are using them to evaluate us!

You said it. The learnings from the Apple Card controversy are important for India as well, since we are fast incorporating “digital tools” into our screening and filtering processes for finding beneficiaries of various welfare programs.

A weekly column that helps you ask the right questions

BusinessLine TWENTY YEARS AGO TODAY

NOVEMBER 14, 1999

Jalan sees softening of rates

The RBI Governor, Dr. Bimal Jalan, hinted at a possible softening of interest rates by pointing out that the last auction of government securities witnessed a marginal decline in the coupon rate. Dr. Jalan said that it was now left to the banks to effect interest rate cuts if found feasible after the steps announced in the busy season credit policy. While agreeing that the State Bank of India was in need of fresh capital, Dr. Jalan said that it was for Parliament to decide on allowing the RBI stake in the bank to go below the stipulated minimum of 55 per cent.

General Motors India unveils Corsa

General Motors India Ltd (GMI) has unveiled the Opel Corsa, its next passenger car offering in the domestic market. The Opel Corsa is one of the best selling cars in the General Motor's (GM's) stable worldwide. While company officials refused to reveal the pricing strategy for the Corsa, they, however, said that it would be positioned alongside the Ford Ikon, the Hyundai Accent and the Fiat Siena in the lower mid-size segment. The new Opel Corsa will be available initially in a notchback, sedan body style.

India to push market access issue at WTO

With the deadline for the third ministerial meeting of the 134-member WTO drawing closer at Seattle (US), New Delhi contends that implementation issues of the Uruguay Round (UR) agreements focussed by India and other developing countries should form a part of the future work programme. Sources in the government said that the issues being raised by India include meaningful market access so far denied by the developed world, asymmetries and imbalances in the extant WTO pacts, and where the Special and Differential Treatment Provisions in the WTO pact need to be converted into contractual obligations

EASY

ACROSS

01. Confirm, make more certain (11)
08. Inappropriate, excessive (5)
09. Posy, bouquet (7)
10. Hard substance; unyielding (7)
11. Slackened off (5)
12. Before the present time (3,3)
14. Written permission (6)
18. Lay off bets (5)
19. Policy issuer (7)
21. Having a tune (7)
23. Suppress, abridge (5)
24. Theatrical makeup (6,5)

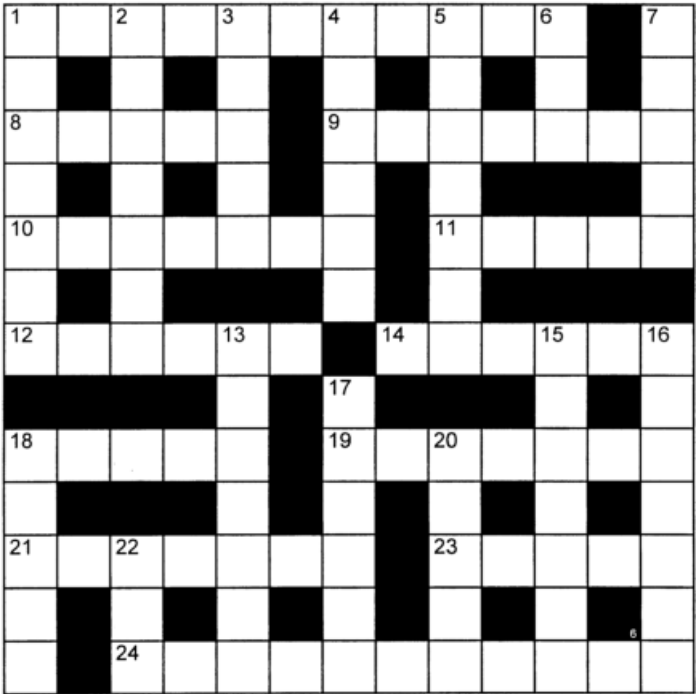
DOWN

01. Bravery, spirit (7)
02. Shine, put out rays (7)
03. Last Greek letter (5)
04. Highly decorated (6)
05. Harsh, Spartan (7)
06. Ovum (3)
07. Wood nymph (5)
13. Behind time for arrival (7)
15. 'Dry' cocktail (7)
16. Rushing stream (7)
17. Throwing event (6)
18. Moist, damp (5)
20. Use brush (5)
22. Protect pipes against frost (3)

SOLUTION: BL Two-way Crossword 1485

ACROSS 01. Arras 04. Confirm 08. Letter-carrier 10. Video 11. Eros 12. Flog 16. Irate 17. Independently 19. Erratum 20. Tuber
DOWN 01. As large as life 02. Rut 03. Sleeve 04. Cicada 05. Narrow 06. Initially 07. Morning-prayer 09. Provender 13. Tippet 14. Magnum 15. Select 18. Tub

BL TWO-WAY CROSSWORD 1486



NOT SO EASY

ACROSS

01. Confirm brace or root it out (11)
08. Unwarranted turn taken by the nude form (5)
09. A posy goes with any version of it (7)
10. Won't yield first person at going round the North (7)
11. Was given relief using a seed in the mixture (5)
12. Before this time, were no different (3,3)
14. It allows one time to arrange public relations with it (6)
18. Shuffle in argument he'd for instance returned (5)
19. He covers one at home, certain to go right (7)
21. Tuneful old mice dancing to it (7)
23. Cut off syllable the Spanish could die for (5)
24. Slap grapes in tea perhaps (6,5)

DOWN

01. Bottle got from it by the Dutch? (7)
02. A tirade one might put out all round (7)
03. A final letter gave me a go at arranging it (5)
04. Fancy art one makes of it (6)
05. It's severely simple, with South wind going east (7)
06. So urge one on to look silly with it on one's face (3)
07. No drinks on a day with a nymph in the woods (5)
13. Do revue turn — and not before time! (7)
15. Cocktail for the train I'm mixing (7)
16. Water rushing to river gets torn (7)
17. Copper is in Norfolk town for this event (6)
18. Wet atmosphere will smell strongly, having paid out half (5)
20. Take stake with tickets for the chimney cleaner (5)
22. Fall behind an old convict (3)