The cable contortions

Trai's tariff order raises old questions with new convoluted answers

MEDIASCOPE

VANITA KOHLI-KHANDEKAR

What will this Friday bring? That is the deadline for the implementation of the Telecom Regulatory Authority of India or Trai's tariff order of March 2017. "It will create a lot of turmoil, it is too elaborate and convoluted for consumers", reckons Dinyar Contractor, editor and executive director of Satellite & Cable TV magazine. That is, not surprisingly, the first immediate impact that almost everyone predicts.

The order details the dos and don'ts of every aspect of the complex relationship between broadcasters such as Zee and the people who distribute TV signals. These could be multi-system operators or MSOs such as Hathway, cable operators and DTH firms such as Tata-Sky. From the revenue share (45:55) between broadcasters and distributors to the maximum a channel can be priced at as part of a bouquet (₹19) the order stipulates every little thing.

Once it comes into force, a subscriber has to pay ₹130 plus 18 per cent GST as a network capacity fee to get 100 channels. That is about ₹154. Of these, 24 Doordarshan channels are mandatory, so essentially you will pay for 76 channels. The amount remains ₹154 only if those channels are free-to-air. If they are pay channels, such as HBO, then you pay the price for each of these. Out of approximately 850 licensed TV channels about 400 are pay channels, reckons Contractor. An addition of 20 channels over and above the first 100 will attract a network capacity fee of ₹25. This fee will be split between the MSO and the cable operator.

The idea says Trai Chairman R S Sharma was to discourage bundling and bring transparency.

India's ₹66,000 crore TV industry makes roughly ₹39,300 crore from pay revenues. Of this only ₹9,900 crore or one-fifth goes back to broadcasters according to EY. The figure is closer to 70 per cent in most pay TV markets. The idea was that digitisation would give consumers the choice to order à la carte and force transparency by getting cable operators to show their real numbers. It hasn't quite worked.

Of India's 197 million TV homes, roughly 100 million are on cable. Of the rest eliminate the 20-30 million on Doordarshan's DTH service, DD Freedish. That leaves just over 60 million homes with private DTH operators. Since DTH was digital to start with, each of these are accounted for. DTH pays more in taxes and revenue share to broadcasters than cable companies, say operators.

The average cable operator in India has about 1,000 homes. How many of them have the subscriber management systems needed to facilitate 100 million homes choosing their own bouquets, channel by channel is a big question mark. You could argue that MSOs will make that investment — but will the operator give him access to each of his subscribers. Note that three years after 100 per cent foreign direct investment was allowed into cable, not a single investor has walked in. Last mile ownership remains a huge stumbling block.

It is also the reason every attempt at transparency and addressability in cable has failed — from the Conditional Access Amendment to the Cable Act in 2002 to digitisation in 2011. "The last mile ownership thing is an issue between the cable operator and the MSO. The current regulation has clearly demarcated the functions, revenue share has been specified," says Sharma.

The second more long-term impact of the tariff order is that it will increase your monthly pay TV bills — because bundling subsidises. By forcing à la carte both sampling and actual TV consumption will go down. Contractor reckons cord cutting or people giving up their TV connections will happen. Maybe. But the fact remains even with inflated bills, pay TV rates in India remain among the lowest in the world. And there is huge headroom for growth — India has 267 million homes of which only 197 million have a TV. So a 5-10 million swing doesn't matter.

Sharma reckons (rightly) that unbundling will unleash market forces. Broadcasters will have to decide between pay or ad as a revenue stream. Currently they use bundles to push the reach numbers for weak channels and make ad revenues on it even if very few people are actually watching it.

However, for something born of a 'consultative process' the order faced quite a bit of litigation. It still remains very complicated. And it doesn't solve the fundamental issue of last-mile ownership. It will be a full year before the implications are clear. Wait then for the end of 2019.

http://twitter.com/vanitakohlik

CHINESE WHISPERS

Facepalm moment

Guess the most frequently asked question by Indians to Google Assistant. Google India has announced through its official Twitter handle that one of the most-often-asked questions to the artificial intelligence-powered smart speaker is "will you marry me?" If you thought that was the only such quirk of the average internet-wielding Indian, think again. A year ago, the US-based *Wall Street Journal* carried a report on how millions of "good morning" text messages and photos exchanged by Indians on social media at daybreak were freezing up smartphones.

PUBG *pe charcha*

China-based game developer Tencent's PlayerUnknown's Battlegrounds (PUBGs) craze is well-known among gamers, particularly among teenagers. It appears even kids are taken in by it — many are insisting on PUBG-themed cakes for their birthdays and wearing T-shirts depicting the game's characters. With board exams round the corner, the topmost worry for some parents is whether their kids would overcome the PUBG-fever and appear for their exams. During the latest *Pariksha Pe Charcha*, when a parent complained about her kid's game addiction, Prime Minister Narendra Modi wondered if she was talking about the child's PUBG-addiction.

Troublemakers within

In Madhya Pradesh, old guards of the Bharatiya Janata Party (BJP) are creating fresh trouble for the party every other day. After former chief minister Babulal Gaur's veiled threats, another rebel leader, former minister Ramkrishna Kusmaria, has indicated that he might contest the coming Lok Sabha elections on the ticket of "another party" (read Congress). Kusmaria, who recently met Gaur, had been denied the party ticket for the Assembly elections. He told the media, "I am a warrior and will never surrender." Congress leader and Chief Minister Kamal Nath is visibly happy with the infighting in the state unit of the BJP. When asked about the remarks of Gaur and Kusmaria, he said, "Everyone has the freedom to speak their minds." When asked if his party would offer them the ticket for the Lok Sabha elections, he said, "We welcome social workers irrespective of their party affiliation."

Phased manufacturing problem

The Make in India policy for electronics has achieved modest targets and manufacturers balk at stiffer ones

SURAJEET DAS GUPTA

Electronics, principally mobile devices and telecom equipment, were the cornerstones of Prime Minister Narendra Modi's "Make in India" policy to reduce the burgeoning import bill on these items. To this end, the government announced in 2017 an ambitious phased manufacturing programme (PMP) to transform India into a major hub for domestic mobile device production and increase value addition by creating a large component vendor base. Backing this was a punitive import duty on components that were not manufactured in India during the financial year set under the policy.

To boost "Make in India" the government also offered preference to companies that met the mandated local content levels in public procurement contracts.

Did the two policies help achieve the "Make in India" dream?

According to the Indian Cellular Association (ICA) —the association of mobile device players — it has been a raging success. ICA says it has achieved the PMP target of ₹500 billion for domestic component manufacturing a year ahead of schedule (2019-20). And its members have manufactured over ₹1,650 billion in terms of value of mobile devices in the country, ahead of the target of ₹1,500 billion. Also, over 120 manufacturers have set up units in India and imports as a percentage of total production has fallen to 10 per cent.

TAKE TWO

A closer look tells a different story. Local manufacture of crucial components has still not taken off as a result of which the average industry value addition on mobile devices is around 20 per cent, though the target is double that by FY2020 for smartphones. Indeed, ICA admits that production of microphones and receivers, die-cut parts and camera modules have not taken off though they were listed as key components under the 2017-19 PMP programme.

To this incipient problem came a move by the government last fortnight to advance by two months the target for locally manufacturing a new set of key components — display assembly, touch panels, cover glass assembly, vibrator motors and ringers — under the 2018-19 PMP, creating an uproar in the industry. The reason: Manufacturing these components requires large investments and between 18 and 24 months to set up, and most manufacturers have not invested yet. So manufacturers are demanding the deadline be postponed for a year. If not, they say the stiff 10 per cent duty on importing these components will increase the cost of producing mobile devices in India and encourage many manufacturers to simply import the entire device.

"All we are asking is that we should strengthen our domestic manufacturing base for products like camera modules and other items which are under the earlier PMP, rather than adding more components to the list for which large investments would be required," said Pankaj Mohindroo national president of ICA.

COMPONENTS WHERE THERE ARE CHALLENGES

Component	Year of which it was part of PMP	₹ bn (value of production in India)
Die cut parts	2017–18	7.5
Microphone and receivers	2017–18	7.5
Mechanics	2017–18	30
Connectors	2018–19	12.5
Camera modules	2018–19	35
Display assembly and touch panels	2019–20	50

Source: ICA and MEIT

Display panels alone account for 25 per cent of the cost of a mobile device. Even Samsung, which is investing $100 million to put up a display plant near Delhi, says that it will temporarily stop local production of flagship Galaxy S9 and Note 9 and import them. This route, say trade experts, makes sense for many global players that have factories in countries like Vietnam from where they can import without duty under the free trade agreement.

The preferential purchase policy to domestic manufacturing has not created the magic either. One, government contracts account for just one sixth of total equipment value (Rs 20,000 – Rs 30,000 annually) and the rule does not extend to private mobile operators. Two, domestic manufacturers complain that public sector tenders are often tweaked with additional specifications, so that they cannot participate, leaving it to global players.

The Telecom Equipment Manufacturers Association (TEMA), which represents Indian telecom equipment makers, say they should follow the auto industry policy, where high import duties were imposed to force indigenisation. Says TEMA chairman emeritus N K Goyal: "We are against a deferment of duty on displays. If import is cheaper than manufacturing in India we should increase duty to 35 per cent instead of 10 per cent to 20 per cent on devices and components."

Global players say they would like to manufacture more in India but the value addition norms are too steep. "The local content requirement ranges from 50 to 100 per cent in 2019-20 and that is impossible to do so as the component vendor base is poor. Even in Vietnam and Taiwan the value addition is less than 20 per cent," says a senior executive of a leading global telecom gear manufacturer.

At the heart of the problem is inadequate incentives to set up a global component base. Unlike in the auto industry, global vendors for key components are limited to five or six big players and they prefer to set up a few mega plants to leverage cost through volumes. So they set up units in countries from where they can serve at least a fourth or fifth of their global market. "By merely increasing duty on components and hoping manufacturers would be forced to come to India, is far-fetched. They are not looking only at the domestic market but at an export hub. For that they are looking at how efficiently they can export, the government's incentives and ease of doing business," says a senior executive of a leading global component manufacturer. India, he says, has to compete with countries that have more aggressive policies to woo them like Vietnam.

The slowdown in China and the trade war has offered new opportunities as mobile device manufacturers and telecom equipment makers and their vendors to search for an alternative. India has an opportunity, but it is Vietnam and Malaysia that are grabbing the spoils.

DECODED

Ishan Bakshi explains why an outgoing government needs to present an interim Budget at all, and the precedents that the finance minister can go by while doing so later this week.

In the meantime

What is an interim Budget? What prevents an outgoing government from presenting a full-fledged Budget?

As the financial year in India ends on March 31, no money can be spent after that from government coffers without obtaining parliamentary approval. Thus governments of the day present an interim Budget, which is essentially a stop-gap arrangement, that ensures that it has the necessary funds to spend so that the working of the government does not come to a standstill once the financial year ends. The interim Budget is followed up by a full Budget that is presented by the new government that is sworn in after the elections.

What are the things a government can and cannot do in an interim Budget?

By convention, governments have shied away from announcing any new proposals or policy changes in interim Budgets for the upcoming financial year. That is the prerogative of the new government that is sworn in after the elections. However, some finance ministers have in the past shied away from convention by announcing a spate of new proposals in the interim Budgets.

Who presented the last three interim Budgets? And what was the state of the Indian economy when they were presented?

The last three interim Budgets were presented Jaswant Singh in 2004 under the Atal Bihari Vajpayee led NDA government, Pranab Mukherjee in 2009 and P Chidambaram in 2014, under the Manmohan Singh led UPA governments.

In 2004, when Jaswant Singh presented the interim Budget for 2004-05 the Indian economy had just embarked on a high growth phase. The economy was projected to grow at 7.5 to 8 per cent as per the then GDP series. The centre's centre's fiscal deficit which was budgeted to rise to 5.6 per cent of GDP in 2003-04 was brought down to 4.8 per cent in the revised estimates. Singh had budgeted it to decline further to 4.4 per cent in 2004-05.

Pranab Mukherjee's Interim Budget of 2009-10 was presented against the backdrop of the financial crisis of 2008. As the then UPA government had already rolled out a fiscal stimulus to deal with the crisis, the centre's fiscal deficit had risen to 6 per cent of GDP in 2008-09, up from the budget estimate of 2.5 per cent in 2008-09. Mukherjee proposed to bring the deficit down to 5.5 per cent in 2009-10.

When Chidambaram presented his interim Budget for 2014-15 oil prices were on the rise and the economy was the midst of a slowdown (according to the earlier GDP series). Chidambaram had then proposed to bring down the fiscal deficit to 4.1 per cent of GDP in 2014-15, from 4.6 per cent in 2013-14 (RE).

What are the precedents before the current government to choose from?

Of the three past interim Budgets, only the one presented by Pranab Mukherjee, shied away from announcing any new tax proposals. By comparison, both Jaswant Singh and P Chidambaram announced a slew of proposals.

By convention, governments have shied away from announcing any new proposals or policy changes in interim Budgets for the upcoming financial year

For instance, in the interim Budget of 2004-05, Singh announced that fiscal benefits available to new projects in the power sector that were earlier available till 2006, would be extended up to 2012. He further proposed that exemption from long-term capital gains tax available for listed equities acquired on or after March 1, 2003, be "extended for a further period of three years so as to provide stability". He also announced that as the salaried class had the "best track record of compliance", the standard deduction that was allowed for the purpose of calculating income-tax burden be revised.

On the indirect tax side, Singh announced several proposals to benefit the capital goods segment, power equipment and fuel oils used for power generation. He also proposed several administrative changes so as to reduce the compliance costs in customs and service tax.

In the interim Budget of 2014-15, then finance minister P Chidambaram announcement that the UPA government had accepted the principle of One Rank One Pension for the defence forces. "This decision will be implemented prospectively from the financial year 2014-15. The requirement for 2014-15 is estimated at ₹500 crore and, as an earnest of the UPA Government's commitment, I propose to transfer a sum of ₹500 crore to the Defence Pension Account in the current financial year itself," he stated.

Chidambaram also tinkered with various indirect tax rates. For instance, in order "to stimulate the growth of capital goods and consumer non-durables", he proposed to reduce the excise duty from 12 per cent to 10 per cent. He also cut excise duty to provide relief to the automobile industry and restructured the excise duties for all categories of mobile handsets in order to encourage domestic production of mobile handsets.

LETTERS

Kudos to judges

Apropos your lead editorial, "A resounding nod", (January 29) on the judgment given by a two-judge bench of the Supreme Court on petitions questioning several aspects of the Insolvency and Bankruptcy Code, I would say that the judges deserve kudos. They have taken a practical, business-like stand on this important new law, unlike many legal minds who miss the spirit of the law.

Perhaps it is time for separate tribunal/s with powers of the high court to be formed to fast-track all cases pertaining to several commercial laws. This would not only ensure timely justice but also improve cash flow for banks and the government coffers, revitalise dormant assets, remove hardship for suffering employees and create new employment.

Ramesh A Vaswani New Delhi

True greatness

This refers to "All charm, no politics" in the Chinese Whispers column (January 29). Rachna Fernandes says that she was "awed by his (Rahul Gandhi) charm and modesty". I could not help thinking whether she would say the same about Narendra Modi if the circumstances were similar. The fact is Modi makes himself accessible to all — notwithstanding the Z-category protection that he has to live with because of his position. Yet no one thinks that Modi's engaging with ordinary people is such a great thing. Is Ms Fernandes' outpouring of emotion the result of our own mindset? The notion that "first family" of Indian politics occupies such a hallowed space that we should perceive their friendliness as their greatness and benevolence? Modi makes himself accessible to common people all the time because he doesn't consider himself different from any of us — that is the hallmark of true greatness, in my opinion.

P N Krishnan Mumbai

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Follow the convention

Govt should stick to fiscal propriety in Budget

The National Democratic Alliance government has been careful so far about fiscal responsibility. In spite of some slippage in the last Union Budget, it has reaffirmed throughout its tenure its commitment to the path of fiscal consolidation. This is an important achievement of the government and it should not allow populist or electoral pressures in its final months to tarnish that record. Given the continuing necessity to ensure that private investment recovers in India in order to ensure a broad and sustainable foundation for high growth, fiscal responsibility is a must so that the public sector's borrowing does not crowd out other, more productive, destinations of capital. However, it is better to clearly announce fiscal slippage than to conceal it behind sleight-of-hand and off-Budget items. The Comptroller and Auditor General, in a report tabled in Parliament earlier this month, accused the government of shifting expenses that were earlier part of the Budget process to other, off-Budget items including the borrowing of public sector enterprises. For example, support for state-run airline Air India was not being carried out through budgetary support as previously but through dipping into the Small Savings Fund. It should be clear that any attempts to massage the headline fiscal deficit number will eventually be seen through. The credibility of India's fiscal arithmetic is more important than appearing to meet a fiscal consolidation target that is actually being missed. The Budget numbers should not imply fiscal distortions, but should present a clear and transparent picture of the real state of affairs.

It is also important that the tradition that an interim Budget presented before an election not introduce any substantive changes, but be a simple vote-on-account, be respected. The assent of a lame-duck Parliament shortly before it is dissolved for a policy change would not satisfy constitutional propriety. That is why previous governments have all largely avoided tying the hands of their successors. Even if the government is confident of re-election, it should postpone any changes that require the assent of Parliament to after the election, when all concerned can be sure that it will be around to see through the changes. In the interim Budget before the 2014 elections, for example, the fiscal consolidation goal was strictly adhered to. Before the 2009 elections, the then finance minister refrained from any new announcements in his speech — though a farm loan waiver had previously been announced. Before the 2004 elections, the interim Budget did contain eight proposals for reducing indirect taxes; these could be done through notifications, so no parliamentary vote was required. Apart from that, some procedures were simplified, and no new programmes involving spending were announced, although the coverage of existing programmes was widened.

This government should also stick to this bipartisan consensus. The correct place to announce spending plans if it is re-elected is not the Budget but in its election manifesto. The government has every right to promise electorally beneficial programmes — but it must do so in the correct forum, and receive the assent of the people before it seeks to draw on the Consolidated Fund of India.

Endgame in Afghanistan

India should be pragmatic in the wake of US withdrawal

Little hope should be placed on the reassuring words from the US Special Representative for Afghanistan Reconciliation on the fruitful progress of talks between the US government and the Taliban in Doha. All indications suggest that it is the extremist outfit that holds all the cards — principally because US President Donald Trump has openly revealed his desperation to withdraw troops from that country. The US is said to have agreed to the Taliban's demand to withdraw foreign forces. In return, the Taliban has agreed not to host any international terrorist groups (Al Qaeda or ISIS, for instance) or allow Afghan territory to be used for terrorism purposes. As a blueprint for peace and stability, this appears to be a good starting point. But there are several unpredictable variables in the mix, especially from India's standpoint.

First, the Taliban has not demonstrated in the past that it is a reliable partner in respecting international agreements. Second, the withdrawal of international forces places in peril the National Unity Government (NUG) under Ashraf Ghani. It is extremely likely that this popularly elected government could be ousted from power once the last foreign troops leave (the experience in Vietnam after the withdrawal of US troops in 1973 and in Afghanistan after the Soviet withdrawal in 1989 offer precedents). The Taliban remains well-funded through control of the country's poppy fields and a booming global market for opiates (including, ironically, in the US), whereas the NUG will be struggling for resources. Third, Afghanistan is virtually a client state of a client state aligned to China, and the role and motivations of Pakistan remain opaque. Its military-intelligence complex is said to be the proxy negotiators in the current process and with tensions rising with the US, hopes of a constructive role remain low. To be sure, the appointment of Mullah Abdul Ghani Baradar as Taliban's chief negotiator has been taken as a sign of good faith on the Taliban's part. But Mr Baradar had been arrested in a joint US-Pakistan operation and spent eight years under arrest in Pakistan. So he, too, is unlikely to have a free hand in the talks.

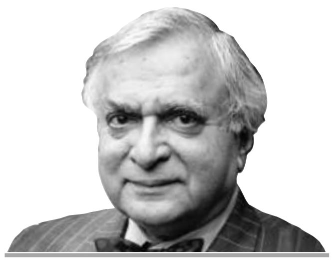
With the next round of US-Taliban talks scheduled for the end of February, it is vital that India finds some sort of access to the negotiating table. India enjoys a popular reputation in Afghanistan as much for its humanitarian projects (which are extensive, whatever Mr Trump may suggest) and the welcoming of Afghan refugees during the post-Soviet civil war as for its soft power through Bollywood. The question is whether India should talk to the Taliban in the light of recent history when the country supported the anti-Taliban Northern Alliance, headed by the late Ahmad Shah Massoud. Given the possibility of Pakistan's military and ISI nurturing Kashmir-focused terror outfits on Afghan territory, such participation would make sense. Besides, India has some vested economic interests in peace and stability in the region in terms of accessing the Afghan market through the Iranian port of Chabahar. Few long-time observers hold out much hope for long-term stability in Afghanistan once US troops leave, and India needs to adopt the pragmatic policy of extreme vigilance in the months ahead.

Migration and miscegenation

The ancient history of India's population

In his 1994 magnum opus, *The History and Geography of Human Genes*, the great Italian geneticist Luigi Luca Cavalli-Sforza synthesised what was known about humanity's deep past, and argued that the genetic differences amongst present day populations would allow a reconstruction of the great historical migrations. But beginning in 2009, the study of ancient DNA from hundreds of thousands of year old skeletons, using techniques pioneered by Svante Paabo at the Max Planck Institute in Germany, and extended by David Reich at Harvard, led to what has been labelled the "ancient DNA genetic revolution". This has overturned many of Cavalli-Sforza's conclusions.

Instead of studying tiny slices of the past contained in our maternal mitochondrial DNA and Y chromosomes from the paternal line, the new ancient DNA methods study the entire genome, including the mutations that have occurred in the genes of unrelated genomes. The higher the density of differences in the mutations separating two genomes on any segment, "the longer it has been since the segments shared a common ancestor as the mutations accumulate at a more or less constant rate over time." (Reich, p. 4)



DEEPAK LAL

In his important book, *Who We Are And How We Got Here*, Reich lucidly summarises this revolution. In an earlier column ("Caste, gene and history wars", November 2009) I had used Reich *et al*'s paper ("Reconstructing Indian Population history", *Nature*, 24 September 2009) to argue against the fashionable view of various historians and anthropologists that caste in India was invented by the British Raj rather than originating in ancient India, as I had argued in *The Hindu Equilibrium*. But today, the 'gene wars' have shifted to the question of whether Indian population's genetic origins are purely indigenous (as Hindu nationalists claim) or contain a foreign element (the Aryan hypothesis).

Two studies using the older methods of examining only the paternal Y chromosomes or the maternal mitochondrial DNA, came to contradictory conclusions (S Wells *et al*, *Proceedings of the National Academy of Sciences* (PNAS), vol.98, no.18,2001: and Reich (2018),p.128). The former showing a close connection to West Eurasians, the later showing the maternal line had been isolated within India without mixing with foreign neighbouring populations. Whilst a more recent study by Sanghamitra Sahoo *et al* (PNAS, vol. 103, no.4, 2006) finds that "the Y chromosome data consistently suggest a largely South Asian origin for Indian caste communities and therefore argues against any major influx from regions north and west of India".

How can these contradictory findings from the older genetic methods be reconciled? From the fascinating detective work of Reich and his associates, using extensions of their new ancient DNA methodology on the vast collection of DNA of 300 groups and 1,800 individual samples collected by students of Lalji Singh and Thangaraj Kumaraswamy for the Centre for Cellular and Molecular Biology in Hyderabad, Reich and associates have established a genetic history of the origins of the current Indian population. They find that today's Indians are a mixture of Ancestral North Indians (ANI) and Ancestral South Asians (ASI) who before their mixture were as different from each other as Europeans and East Asians today. The ANIs are related to Europeans, Central Asians, Near Easterners and the Caucasus. The ASIs are the descendants from people who have no relatives in any present day populations outside India. They show that the ANI and ASI mixed in India so that "everyone in mainland India today is a mix, albeit in different proportions, of ancestry related to West Eurasians, and ancestry more closely related to diverse East Asian and South Asian populations" (p.135). They find no support for the Sahoo *et al* position of a purely South Asian origin for Indian caste communities.

The explanation for the discrepancy between the Y-chromosome and mitochondrial DNA patterns from the older methodology is that most of the ANI genetic input came from males. They find that the ANI were a mixture of about 50 per cent steppe ancestry and 50 per cent Iranian farmer ancestry from the groups the steppe people displaced in their southern migration. The ASI were a mixed fusion of populations with 25 per cent due to Iranian farmers expanding eastwards and 75 per cent from the former indigenous hunter gatherers. This points to a remarkable parallel between the prehistory of the two similar sized Eurasian sub continents —Europe and India .

Reich finds that with the collapse of the Indus Valley civilisation (for which there is no genetic data) and the composition of the *Rig Veda* about four and three thousand years ago, there was a mixture of previously segregated populations. The Indian population came to have different proportions of ANI ancestry, with ANI ancestry deriving more from males than females. This is to be expected from "an Indo-European-speaking people taking the reins of political and social power after four thousand years ago and mixing with the local peoples in a stratified society, with males from the groups in power having more success in finding mates than those from the disenfranchised groups." (p.140)

Reich and associates also find evidence that there were six *jatis* of ANI ancestry who had a higher ratio of steppe relative to Iranian farmer ancestry than expected, and they were all in the Brahmin varna. This steppe substructure in the ANI is still present in Brahmin genes. They conclude that "not just Indo-European language but also Indo-European culture as reflected in the religion preserved over thousand of years by Brahmin priests, was likely spread by peoples whose ancestors originated in the steppes".

An essential part of this culture was the caste system with its myriad of endogamous *jatis*. In an interesting byway, Reich and his associates found that the degree of genetic differentiation among *jatis* was many times larger than genetic groups in Europe. They found evidence that like the Ashkenazi Jews, Hutterites and the Amish of today, these *jatis* are the products of 'population bottlenecks', where a relatively small number of individuals and their descendants have many offspring and remain genetically isolated from the surrounding peoples. These population bottlenecks lead to mutations being carried through generations, and when these mutations increase in frequency then there is a high chance of individuals in the group inheriting the same mutation from both parents leading to rare but group specific diseases like Tay-Sachs amongst Ashkenazi Jews. With India's huge population and an estimated one-third of *jati* groups descending from bottlenecks stronger than those in Ashkenazi Jews, searching "for genes responsible for disorders in these Indian groups have the potential to identify risk factors for thousands of diseases." (p.147)

Finally, this new genetic research indirectly confirms many hypotheses in *The Hindu Equilibrium*. First, the caste system is an ancient system not one invented by the British Raj. Second, the endogamous stratified system brought in by the Indo-European language speakers was adopted and adapted in India as it provided a decentralised method of social control to tie scarce labour to abundant land required for intensive plough agriculture in the vast Indo-Gangetic plain. Third, this successful social institution was transferred to the alluvial river valleys in the South by its custodians, the Brahmins, in return for land grants which allowed them to live in isolated cantonments maintaining their endogamous identity. Finally, that India's cultural "unity amongst diversity" was provided by the steppe religion brought in by the Indo-European language speakers which became Brahminical Hinduism.

NDA got more taxes from individuals than UPA

The National Democratic Alliance (NDA) government under Narendra Modi has presented five Budgets so far. How do they compare with those presented by the United Progressive Alliance (UPA) government under Manmohan Singh in two stints?

UPA-I had five Budgets from Palaniappan Chidambaram and UPA-II had four Budgets from Pranab Mukherjee and one from Mr Chidambaram. All the five Budgets under Mr Modi's NDA were presented by Arun Jaitley. The revised numbers for his fifth Budget are not yet available, but the deviations from the Budget Estimates to be seen on February 1, hopefully, would not be too significant to alter the broad trend.

NEW DELHI DIARY

A K BHATTACHARYA

On fiscal consolidation efforts, finance ministers under both the regimes have broadly adhered to the goal of reining in the fiscal deficit, with some slippages. The differences, however, have been quite noticeable in the manner of their spending and in the sources they have tapped for raising revenues.

On subsidies, for instance, Mr Chidambaram's performance between 2004 and 2008 appeared impressive. From a subsidy expenditure of 1.6 per cent of gross domestic product (GDP), incurred by Jaswant Singh in 2003-04, Mr Chidambaram brought it down to 1.4 per cent by 2007-08. But this reduction was achieved largely through accounting jugglery. When the jugglery ended and the need arose for hiking the minimum support prices for agricultural crops and providing for higher costs on imported fertilisers, the share of subsidies in GDP shot up to 2.35 per cent in 2008-09.

In his Budget speech for 2008-09, Mr Chidambaram said: "I acknowledge that significant liabilities of the Government on account of oil, food and fertiliser bonds are currently below the line. This accounting arrangement is consistent with past practice. Nevertheless, our fiscal and revenue deficits are understated to that extent. There is a need to bring these liabilities into our fiscal accounting. As a first step, I have shown these liabilities clearly in *Budget At a Glance*."

In contrast, Mr Mukherjee was quite transparent about the need to raise expenditure on subsidies. By the time he presented his last Budget for 2012-13, the share of subsidies in GDP had gone up to 2.59 per cent. Mr Chidambaram, who returned to present the final Budget for UPA-II in February 2013, brought the subsidies expenditure down marginally to 2.27 per cent of GDP.

Mr Jaitley's five Budgets have seen a slow but steady decline in subsidies expenditure as per cent of GDP —from 2.07 per cent in 2014-15 to 1.5 per cent in 2018-19. Of course, the 2018-19 number may be revised later this week and show a slippage for a variety of reasons. And this slippage may be over and above the deferment of some subsidies payment to the following year. But the story of subsidies in the last 15 years is that no government has been able to bring it down significantly in a sustainable manner.

On defence, the expenditure as per cent of GDP has seen a gradual decline over the last decade and a half. From 2.18 per cent of GDP in 2003-04, defence expenditure has gradually fallen to 1.5 per cent in 2018-19. Mr Chidambaram and Mr Mukherjee kept the defence spend between 2.4 and 1.8 per cent of GDP in each of their Budgets, but Mr Jaitley's five Budgets saw a decline in almost every year – from 1.75 per cent in 2014-15 to 1.5 per cent in 2018-19. Neither the UPA nor the NDA has been aggressive in defence spending in these 15 years.

The decline in capital expenditure in this period is even more worrying. Jaswant Singh had raised capital spending to a high of 3.96 per cent of GDP in 2003-04. Mr Chidambaram kept it reasonably high at 3.6 per cent in his first Budget in 2004-05, but allowed it to slide to less than 2 per cent in all his subsequent Budgets, except the one he presented for 2007-08, when capital spending was pegged at 2.4 per cent of GDP.

Mr Mukherjee, too, could raise capital expenditure to above 2 per cent of GDP only once in 2010-11, but in all his other Budgets the figure remained at around 1.7 per cent. Mr Jaitley made no difference to this trend and allowed capital expenditure to hover between 1.6 and 1.9 per cent of GDP in his five Budgets.

On taxation efforts, Mr Chidambaram did well in his first four Budgets under UPA-I, by raising gross tax revenues from 9.57 per cent of GDP in 2003-04 under Jaswant Singh to 12.11 per cent of GDP in 2007-08. The need to provide tax concessions in the wake of the global financial meltdown meant that Mr Chidambaram's last Budget under UPA-I saw a dip in tax revenues to 10.98 per cent of GDP in 2008-09.

Budgets under UPA-II kept the share of gross tax revenues in GDP at around 10 per cent. But a sharp pick-up took place in the final four years of the NDA Budgets presented by Mr Jaitley and the share of tax revenues in GDP is set to cross the 12 per cent mark once again in 2018-19, a rise of almost two percentage points.

But it is important to note that this increase has taken place largely on account direct tax revenues. In these 15 years, the share of direct tax revenues in GDP has gone up from around 4 per cent to over 6 per cent, while that of indirect tax revenues has remained broadly unchanged.

This is partly because the contribution of customs revenue has seen a steep decline in this period. During UPA-I, it ranged between 1.8 per cent and 2.1 per cent of GDP. During UPA-II, customs revenue's share in GDP ranged between 1.3 per cent and 1.8 per cent of GDP. And during Mr Jaitley's Budgets, it has seen a further decline from 1.5 per cent of GDP in 2014-15 to 0.8 per cent in 2017-18, which is expected to fall further to 0.6 per cent of GDP in 2018-19.

Budgets under UPA-I and UPA-II have been different from those under the NDA in respect of corporation tax and personal income-tax revenues as well. For corporation tax revenues, their share in GDP has seen a steady rise from 2.31 per cent in 2003-04 to 3.9 per cent in 2008-09, before it came down marginally to 3.5 per cent under Mr Chidambaram's Budget for 2013-14. In contrast, Mr Jaitley's five Budgets have steadily brought down this ratio — from 3.44 per cent in 2014-15 to 3.3 per cent in 2018-19.

The trend is somewhat different for personal income-tax revenues. Under UPA-I and UPA-II Budgets, their share in GDP stayed below 2 per cent, except in two years — 2.1 per cent in 2007-08 and 2.12 per cent in 2013-14. But under the NDA Budgets, this share has increased every year — from 2.1 per cent in 2014-15 to 2.62 per cent in 2017-18 and an expected 2.81 per cent in 2018-19.

It would appear that India Inc's tax contribution to the exchequer has grown at a slower pace during the NDA regime, compared to the rate at which they grew during the 10 years of the UPA rule. In contrast, personal income-tax revenues have been a key factor in the rise in direct tax collections during the NDA regime. This is largely an outcome of improved tax compliance and coverage. But can this alone be a sustainable area of growth for meeting the government's revenue requirements in the coming years?

The globetrotting tax expert

BOOK REVIEW

SUKUMAR MUKHOPADHYAY

Those in the economics and tax professions are familiar with Parthasarathi Shome's numerous professional volumes on economic and fiscal policy, and tax policy and administration. Having held various senior positions in the Indian and UK governments and at the International Monetary Fund (IMF), and having started out as an academic for several years, such writings are always anticipated from one of the most prolific authors in his profession.

The volume in question, however, stands apart. Despite the title, which is in line with Dr Shome's usual manner of expressing himself, the meaning of which I found in the text — "virtue in hard work or perseverance" — it is really the autobiography of an international economist. That said, the narrative is unique in successfully combining various professional experiences across the globe with select accounts of personal experiences in exotic locales. In fact, I found this book so interesting that I read it at one go.

Dr Shome begins with the circumstances of his decision to study in the US versus the UK and his initial years as a university professor in Washington and visiting academic positions in India, the UK and Australia. He interjects his wide-ranging research with travels to the far corners of the earth, and this combination of travelogue and research experience is what makes this memoir extraordinary. Dr Shome's travels range from the centre of Australia, western US, to tracking the routes of English Romantic poets and even exploring the Okavango River Delta in the Kalahari — where he says he experienced an epiphany — even as he expounds on such complex subjects as heuristic general equilibrium models, poverty and income distribution, contractual savings or social security.

After academia, where he acquired a tenured full professorship, Dr Shome joined the IMF as a rookie—his own decision—and took up the challenge with alacrity. He recounts various country experiences and the associated deep challenges he faced. He easily rose to the exalted position of Chief of Tax Policy, and the associated tasks in fiscal policy seemed to him straightforward enough. He traverses the variegated menus of his recommendations and explains why he made them. Though reading those terse portions of the book may pose a bit of a struggle, the volume would not be a "professional memoire," as Dr Shome designs it, without those passages. As he visited country after country in continent after continent, he steadily gained the trust of country authorities, in particular in Latin America, and his fluency in Spanish certainly helped. Indeed, in 2000, Brazil awarded him its highest civilian honour, "Commander of the Order of the Southern Cross."

Dr Shome's contribution to the Indian government lasted longer than a decade between 2004, when he entered North Block, as the sole adviser to the Finance Minister until 2015 when he completed his Chairmanship as Minister of State of the Tax Administration Reform Commission. In between, he served as the UK government's Chief Economist of Her Majesty's Revenue and Customs for three years between 2008 and 2011. During his years in North Block, his lead roles are widely known in the introduction of VAT, GST legislation, formulating the Direct Tax Code, the computerisation of tax departments, solving immediate taxpayer problems through a tax forum, though even earlier he laid the foundation for all of them as Chair of Ninth and Tenth Five Year Plan taxation task forces. These are recounted in detail not only in their professional content, but also through his working relationship with P Chidambaram, tax and administration officials, ministers and even the prime minister. He tends to glide over obviously confidential matters or embarrassing issues, reflecting perhaps his gentlemanliness. The reader may wish that he had been more candid at certain points. On the other hand, he casts his story as somewhat different from the recent tales of other ex-bureaucrats.

His story records his continuing reverence for elders and teachers. At the top of his list are A L Nagar in statistics, K L Krishna in econometrics, Amartya Sen and Sukhomoy Chakrabarty in general economic theory and Manmohan Singh in international finance. Actually, he mentions favourite teachers right from second grade through to his PhD. He mentions the internationally renowned Vito Tanzi often, a mentor through his professional life. The steady roles of his parents also feature throughout. His views on the oneness of religions are reflective. Thus, traits of a distinct personality emerge.

The epilogue is a poignant recollection of episodes from early childhood to adulthood that remain indelible in his life experiences. It reveals the ability of a consummate author to express himself far beyond a writer of economics treatises. There is also a set of nice pictures of media coverage. I recommend this book not only to economists and tax specialists but to everyone, for I found his mix of professional and personal to be genuinely attractive and rare.

VIRTUS IN ARDUIS:
I Did It My Way
Parthasarathi Shome
Orient Blackswan,
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