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EDITORIAL: edit@epw.in

CIRCULATION: circulation@epw.in

ADVERTISING: advertisement@epw.in

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GANPATRAO KADAM MARG, LOWER PAREL  
MUMBAI 400 013  
PHONE: (022) 4063 8282

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**J DENNIS RAJAKUMAR**

C 212, AKURLI INDUSTRIAL ESTATE

KANDIVALI (EAST), MUMBAI 400 101

PHONES: (022) 2887 3038/41

epwrf@epwrf.in

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**Stories of Science and Perils of Decolonisation**

The September 2022 issue of the *Organiser* provided a laundry list of actions of the National Democratic Alliance (NDA) government that would attempt to erase the legacy of colonialism. Items on the list range from the symbolic renaming of streets to the mundane change of the budget presentation date. In 2016, the minister of Ayush, apparently moved by a similar impulse, had characterised physicians prescribing non-ayurvedic medicines as “anti-nationals.” Some in the Hindutva movement have described these as gestures of “decolonisation.” A historical view of the rhetoric of decolonisation provides a helpful context to the Hindu nationalist appropriation of this progressive idea.

The term decolonisation refers to two related but distinct processes of dismantling the eponymous subjugating system. For colonial societies, decolonisation refers to the efforts of nationalist forces working to overthrow foreign rule. Whereas, in postcolonial societies, it refers to the healing of scars of colonial rule in realms ranging from the cultural to the administrative and the legal to the economic and the psychological. Over the past 150 years, the scientific discourse in South Asia has proven to be surprisingly amenable to the language of decolonisation.

Popular narratives about science in the subcontinent are by and large ersatz blends of history of indigenous science, texts of Hindu mythology, modern European science, and colonial apologetics about the intellectual superiority of the West. This discourse provides a window on the prevailing political proclivities in society at large. A line of argument commonly offered in both the pre- and post-colonial subcontinent consists of some variation of the assertion that findings of modern science were already contained in Hindu scriptures.

One would infer that there was much in Western science that was usurped from the classical learning of the subcontinent. Such hyperbole from that era should be understood as an attempt to appropriate that agency in knowledge production which,

under the colonial regime, had been suppressed in the political and economic domains. The imagining of a scientific past was a means to building a case for nationhood by calling into question the colonial claims of Western superiority in scientific knowledge. In short, they constitute efforts towards decolonisation. The lure of an idealised past, however, led to serious distortions and exaggerations which carried within them seeds of an illiberal and xenophobic supremacist ideology which subsequently took root in postcolonial India.

One of the promises of Hindu nationalism is providing a safe space for a belligerent pride in an idealised Hindu past. To bolster its ideological appeal, distinctions between Hindu mythology, and science and history have been blurred by its leaders in public pronouncements and by their surrogates in papers read at scientific conferences. Claims about the existence of interplanetary travel in ancient India or the holding up of Lord Ganesh as a proof of plastic surgery are only the best-known examples.

Perhaps lesser-known, but no less absurd, declarations were heard from members of the ruling party in 2014. Addressing the party's national council, the president of the Bharatiya Janata Party at the time cited Werner Heisenberg's 1929 visit to India during which Heisenberg learned that certain elements of modern physics, which he was having trouble reconciling with common sense, had been integral to Hindu philosophy since antiquity. This realisation supposedly reassured Heisenberg about the validity of quantum physics. Pursuing the same line of magical thinking, he then claimed that the credit for the discovery of Higgs boson should also go to Hinduism since the name boson honours the physicist, S N Bose, a Hindu.

A humane and future-facing attempt at decolonisation worthy of a democracy would concern itself with dismantling disparities and injustices arising from vestiges of colonial atrocities. Jawaharlal

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Nehru's vision of science, for instance, aimed to use science for eliminating poverty, destitution, and the onerous baggage of superstition. In contrast, Hindutva ideologues use the rhetoric of decolonisation in the service of their project which reinforces superstition, widens disparities, and heaps injustice along religious and caste lines. In the name of ridding us of a mindset of inferiority, it exhorts us to return to a mythical *sanatan* culture which demands bulldozing the richness of difference that has long nourished our civilisation.

Even while some of the resulting rhetoric linking modern science to ancient Indian thought bordered on the farcical in colonial times, it was driven by an underlying politics of liberation. In its postcolonial iteration, however, the narrative has taken on a decidedly tragic turn through its role in a militant advocacy for a repressive social order. Mythology is science and science mythology. That is the semantic challenge we are faced with, and it has existential implications.

Rajive Tiwari

BELMONT

## Pressures of Academic Publishing

The dream of publishing one's scholarly work in databases like Scopus has evolved into a pervasive and troubling phenomenon, casting a long shadow over the academic landscape of developing nations. As early career academicians, we feel compelled to address this critical issue that distorts research priorities, widens the gap between the "first-world" and the "third-world" scholars, and threatens the very fabric of global academic discourse.

The Scopus database, owned by publishing giant Elsevier, has become the de facto standard for measuring academic output and impact worldwide. While it serves a valuable purpose in aggregating and indexing scholarly work, it has inadvertently created an unhealthy obsession among researchers, particularly those from the global South. This fixation on Scopus-indexed publications has led to a perverse incentive structure that prioritises quantity over quality, often at the expense of locally relevant and potentially transformative research.

Universities and funding bodies in developing countries have increasingly adopted policies that place an undue emphasis on Scopus-indexed publications for hiring, promotion, and grant allocation. This approach is fundamentally flawed, as it fails to account for the significant barriers faced by scholars from these nations. These obstacles include language barriers, with English dominating high-impact journals; financial constraints, as many journals charge substantial publication fees; and systemic biases that favour Western perspectives, methodologies, and research agendas.

We are witnessing an unprecedented brain drain as talented researchers abandon their home institutions for opportunities in the West, depriving developing nations of crucial intellectual capital. Vital research on region-specific problems is being sidelined in favour of topics more palatable to international journals, potentially stunting local development and innovation. The pressure to publish in Scopus-indexed journals has fuelled the growth of predatory publishers, compromising academic integrity and exploiting researchers' desperation.

Perhaps most alarmingly, the dominance of Western-centric academic standards perpetuates a form of epistemic injustice, marginalising knowledge production from the global South. This not only deprives the global academic community of diverse perspectives and insights but also reinforces existing power imbalances in the production and dissemination of knowledge.

To address these pressing issues, we must undertake a radical reimagining of our approach to academic evaluation and cultivate a more equitable scholarly ecosystem. First and foremost, universities and funding bodies must adopt a more holistic approach to assessing academic output, considering factors beyond mere Scopus-indexed publications. This could include alternative metrics, impact on

local communities, and contributions to teaching and mentorship.

There must be increased investment in and support for high-quality, locally focused journals. Efforts should be made to improve the visibility and credibility of these publications, including working towards their inclusion in international databases. Significant resources must be allocated to improving research infrastructure and skills in developing countries. This includes providing language support, training in academic writing, and access to cutting-edge research tools and databases.

The peer review process needs a comprehensive overhaul. Journal editorial boards and reviewer pools should be diversified to mitigate bias against research from the global South. This would ensure a fairer evaluation of diverse research methodologies and perspectives, enriching the global academic discourse.

Lastly, open access initiatives must be accelerated and expanded. By making research freely accessible to both readers and authors, we can reduce financial barriers and democratise knowledge dissemination. This is crucial for bridging the gap between well-funded institutions and those with limited resources.

The pressures of publishing in corporate-owned databases like Scopus should not come at the cost of diverse, locally relevant, and potentially groundbreaking research.

Abhishek Thommandru, SABBAVARAM

Varda Mone, BENGALURU

Ammar Younas, BELJING

## Corrigendum

In the paper, "Ideal Social Discount Rate for Public Sector Projects in India: An Assessment" by Ravindra H Dholakia, Sitikantha Pattanaik, and Ajitesh Kumar (*EPW*, 13 July 2024), in Table 1, the columns of elasticity ( $\eta$ ) and growth rate ( $g$ ) needed to be interchanged:  $n$  was in place of  $g$ , and vice versa.

The error has been corrected on the *EPW* website.

## EPW Engage

The following articles have been published in the past week in the *EPW* Engage section ([www.epw.in/engage](http://www.epw.in/engage)).

- (1) The International Sport System and the IOC under the Lens of Gender and Sexuality — *Tanya Kini*
- (2) Disability Sports and the Quest for True Inclusivity: A Critical Analysis — *Akshay Trilokinath Maurya*

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The EPW editorial team reserves the right to slot an article in a specific section, as deemed fit.

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# Budget Accepts Trickle-down Economics Does Not Work

*Employment incentives and skilling opportunities alone will not dent the brunt of κ-shaped recovery.*

Despite the electoral setback, the much-awaited first budget of the third National Democratic Alliance (NDA) government threw up no big surprises. Overall, the budget pressed ahead with the fiscal consolidation stance for the fourth consecutive year. The total budget spending, which peaked at 17.7% of the gross domestic product (GDP) following the implementation of the revival package to aid the post-pandemic recovery, has now reduced to 14.8% in the budget estimates for 2024–25. However, the relative budget size is still more than a percentage point larger than that of the pre-pandemic level.

The countercyclical fiscal consolidation has also been aided by the pickup in economic growth in recent years. Unfortunately, the focus of the fiscal consolidation efforts on expenditure compression and the acceleration of capital spending have not helped boost the sagging consumer demand or crowding in private investments to accelerate production and employment. Instead, it has not only resulted in the underfunding of public welfare programmes but also choked the feeble redistribution efforts even in the face of growing income and wealth inequalities.

A quick glance at the macro numbers shows that the fiscal consolidation efforts have shrunk revenue spending by around 4% of the GDP, from its post-pandemic peak of 15.4% to 11.4% in the 2024–25 budget estimates. But more than half the shrinkage in revenue spending has been facilitated by the squeezing of subsidies whose share fell by close to two-thirds to 1.3% of the GDP during this period. The focus on shrinking subsidies and revenue spending has also helped the government divert more funds for capital investments that have now soared up to 3.4% of the GDP in 2024–25, which is around twice the levels than in the pre-pandemic year.

The reason for the excessive dependence on shrinking subsidies and revenue expenditure to boost the fiscal consolidation efforts is the government's lopsided approach to revenue mobilisation. Though the budget estimates show that the tax-to-GDP

ratio is expected to reach 11.8% in 2024–25, almost touching the peak level of 11.9% in 2007–08, after stagnating at around 10% during the second half of the last decade, the move towards a more progressive tax structure has been deferred in recent years.

A significant achievement of the reforms initiated in the early 1990s has been the tripling of the share of direct taxes in the total taxes to more than 60% by 2009–10. However, the share of direct taxes in the total tax revenues has either fallen or stagnated during the last 10 years of the NDA regime. In fact, the budget estimates show that the 57.7% share of direct taxes in 2024–25 will still be marginally lower than the levels achieved in 2015–16.

The major reason for the stagnation and decline in the direct tax ratio has been the sharp cut in corporate tax rates. Consequently, the ratio of corporate taxes to GDP, which was 3.4% of the GDP when the NDA government assumed office, has dwindled down to 3.1% in the budget estimates for 2024–25 despite the pickup in the economy in recent years. This is in sharp contrast to the trends in income tax collections whose share in GDP has almost doubled during this period from 2.1% to 3.6%. Unfortunately, the corporate tax cuts have not only failed to accelerate corporate investments and boost revenues but has also weighed down the growth of direct taxes.

Similarly, the trends in the indirect tax collections have also been very disparate. On the one hand, the share of excise and customs duties has declined by around half and one-third to 1% and 0.7% of the GDP during the NDA regime. But, the share of the goods and service tax, which was 3.1% of the GDP in 2018–19, has now moved up a little to 3.3% after marginally declining in the early years.

A major setback on the tax front is the union government's reluctance to share the recent buoyancy of tax collections with the states. The implementation of the recommendations of the Fourteenth and Fifteenth Finance Commissions had raised the share of union government taxes devolving to the states from



FROM 25 YEARS AGO

**ECONOMIC AND POLITICAL WEEKLY**

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**Stock Market Development and Economic Growth: Dubious Relationship**
*Makoto Nagaiishi*

Does the stock market play a positive role in the process of economic growth? This remains matter for debate. One line of research says it does: another line regards the role as negligible or even negative.

Although the question is unsettled, most developing countries have adopted policies to foster their stock markets since the 1980s. India's stock market is no exception; today it is undoubtedly one of the biggest markets among developing countries due to a massive expansion from 1980s onwards. As a matter of fact, the expansion is remarkable in terms of the number of listed companies, market capitalisation and value traded.

The aim of this paper is to examine the contribution of Indian stock market development to its economic growth. A Singh, R Nagaraj and R Levine's achievement in this line is significant and this is an attempt to develop their work. [...] The main findings and suggestions of this paper are as follows:

(i) So far as the function of domestic savings mobilisation is concerned, Indian stock market development from the 1980s onwards has not played any prominent role. In particular, both gross domestic savings (GDS) and the share of financial assets of the household sector have been stagnating during the 1990s, that is, in the post-reform period. If this tendency is robust, we cannot attribute the rationale of stock market reforms to their contribution to savings mobilisation.

(ii) Foreign portfolio inflows (FPI) into India have been insignificant compared with Mexico, Korea and Thailand. However, if there is further deregulation of the stock market to attract more FPI, there seems to be no way to avoid similar

problems as these countries, such as more volatile movement of domestic stock prices and unstable BoP positions. The contribution of FPI to sustained economic growth is, at least so far, just a fond hope.

(iii) Indian stock market and financial intermediaries have generally achieved hand-in-hand development since the 1980s. However, it is challenged by the contradictory fact that bank credit to the commercial sector has no positive relationship with indicators of stock market development. If it is the case that there is substitutive function between stock market and financial intermediaries in terms of financing private investment, an increase in financing the primary market does not necessarily lead an economy to a higher growth scenario. [...]

The results indicate that the functional relationship between stock market development and economic growth is dubious in the Indian context. In other words, our findings support Singh and Nagaraj's arguments rather than those of Levine and the World Bank research group.

FROM 50 YEARS AGO

**ECONOMIC AND POLITICAL WEEKLY**

VOL IX, NO 29

JULY 20, 1974

**Feeding Petty Chauvinisms***D Prempati*

After witnessing the many and various post-Independence educational reform measures — each coming to grief with the same alacrity as it was hailed with — one cannot believe that the creation of autonomous colleges is going to be the ultimate solution of the ills of higher education. The manner in which this proposal is being bandied about, almost like a swear-word, goes only to reinforce the impression that our academics have lost even the capacity to deduce lessons from one experiment before rushing on to another. One does not have to be cynical to conclude that as we tackle one problem, we create ten other problems, that being perhaps the only knack we have.

The most pressing problem of higher education is of identifying and tackling

the problem of undergraduate teaching. The problem is so frightening that no academic wants to continue with ugly undergraduate teaching beyond the first five years of his career. The attractions of research and post-graduate teaching, as also of university and college administration, have been in no small measure due to a desire born of frustration to escape from undergraduate teaching. Understandably we have hardly any professors in our colleges who may have been recognised as such for their contribution to the organisation and teaching of their disciplines at the undergraduate level. Among the consequences have been a sharp devaluation of the college lecturer and a general erosion of the undergraduate teaching responsibilities of the senior faculty members. In the existing varsity structures which vary only slightly from centre to centre, the college organisationally is neither an academic constituent of the affiliating university nor a viable nucleus of higher learning. The shaping of the Indian college is so outlandish that it does not have the organisational scope to

allow a senior faculty to grow, nor does it have any measure of prestige and attractiveness to retain the few bright youngsters who may have chanced upon this stepping stone.

Some such colleges are said to have reached a certain growth point where if given some academic autonomy they could further develop. Such autonomy means: (1) framing syllabi (2) enrolment (3) recruitment and determination of service conditions (4) teaching (5) conducting examinations and awarding degrees. Though the concept of autonomy from one affiliating university to another varies, the type of autonomy now being pressed for boils down substantially to framing syllabi and awarding degrees through home-examinations. To insist on this meagre basis that academic autonomy exists and can gainfully operate in the present Indian society which is a battlefield of big and small sectarian interests is on any reckoning a feat of naiveté or a subtle gambit to accommodate the thousand and one contradictions of this disintegrating order.





# Global NATO and the Expanding Theatres of Escalation

ANURADHA CHENYOY

The NATO agenda is stated clearly during its 75th anniversary summit that it will go all out to ensure Western dominance globally. It has identified the “enemy countries” that are roadblocks to this goal. There is continuity in this perception but also a change in its strategy going forward that steps up escalation and expansion to construct a global grid-like alliance structure that integrates with the transatlantic alliance.

The North Atlantic Treaty Organization (NATO) of 32 Western countries has formally declared its security interests to be global, despite its title and founding mandate as a transatlantic security alliance. The 75th anniversary summit held in Washington (10 July) conceptualised its security as a “360 degree approach,” indispensable and essential. The reason to extend its operations are because the threats to NATO are “global and interconnected.” It is the instrument for the “rules-based order” which NATO demarcates from international law. NATO signals that it will operationalise its strategic reach globally anywhere any time and will likely be intolerant and indifferent to the security needs of those outside this exclusive club.

The Washington Summit Joint Declaration has clear and subliminal messages running through it. Threat escalation and NATO expansion through partnerships and alliances in new areas is a priority agenda. Russia is seen as the “most significant and direct threat,” a repeat of earlier positions and NATO policies to weaken Russia will step up. NATO has declared that the greatest “systemic challenges to Euro-Atlantic security” are from China which is mentioned 14 times as a threat and the prime reason for NATO expansion into the Indo-Pacific. Asia is the key security domain with the United States (US) networked agreements with Indo-Pacific allies Australia, New Zealand, South Korea, and Japan, all of whom were present at the Washington summit as proxy NATO members. The China fear that came into NATO documents after former President Barrack Obama’s “pivot to Asia” (2009) is central as under the US’s lead NATO’s attention shifts to Asia.

NATO explanation for expanding into West Asia and Africa is that conflict and instability in the region especially Iran’s

“destabilizing actions” are a threat to transatlantic security. To attend to such nuisances, NATO will henceforth have a new regional centre in Kuwait, a liaison office in Jordan, and NATO missions in Iraq, adding to the NATO missions in Africa. Fifteen NATO countries have military bases in Africa and since Russian, Chinese, and Turkish militaries also operate here, West Asia and Africa will continue to witness proxy conflicts. NATO does not mention Israel or the Palestine genocide in this document, though the massive funding to Israel is no secret. NATO emphasises the threat of terrorism, which signals that they could revoke, whenever necessary, the “forever wars” decade after the September 2001 attack on the US that had led to interventions and wars in Afghanistan, Iraq, and Libya.

As part of its global reach, NATO will engage in the Western Balkan region and the Black Sea, where they are likely to cross swords with Russia. NATO will militarise the Arctic with its three new members, Finland, Norway, and Sweden, all of whom will have new bases and missiles pointing at Russia. The escalation of security paranoia and expansion into the Indo-Pacific and the global South is the freshly reconstructed arch of NATO that is determined to militarily hold up Western supremacy in a changing geopolitical international system.

Another NATO message from Washington is offensive deterrence and forward defence postures by significant increases in defence expenditure, the 18% increase in defence expenditure in 2024 by several NATO members like Canada is lauded in the joint declaration while the European members are urged to spend at least 2% of their GDP on military budgets. More nuclear weapons and the right to use them put an end to the ambiguity of “no first use” policies by the West and Russia. This shatters decades of nuclear disarmament talks and agreements and increases the risk of a nuclear war.

NATO members are accepting US proposals of “burden sharing” as they increase their defence budgets at the cost of social and welfare expenditures.

The author is grateful to Reiner Braun, Joseph Gerson, Walden Bello, Francis Daehoon Lee for discussions on NATO.

Anuradha Chenoy ([chenoy@gmail.com](mailto:chenoy@gmail.com)) is adjunct faculty, Jindal Global University and a fellow of the Transnational Institute.

This “burden sharing” includes contributing troops on the ground and sharing the burden of body bags in some conflict theatres, where East European states’ populace can be of use. So, European nations and other allies will share the burden of the us wars across the globe and pay for us–NATO bases. Many bilateral agreements that the us has with its strategic partners contain clauses for “intra-operability” and logistics agreements for us navy ships which intersect with NATO commands.

NATO’s operational strategy is being played out in key theatres of conflict and in regions of aggressive competition.

### The European Theatre

The Washington NATO summit stepped up its intention to defeat Russia via Ukraine by throwing more money and weapons. NATO will dedicate another \$43 billion (after the earlier \$60 billion) for more and better weapons. The carrot for Ukraine’s sacrifice is the promise of an “irreversible path” towards NATO membership made again in Washington, just as it was in 2008 Bucharest and other summits, but not formalised since NATO does not want a direct war with Russia that Article 5 of NATO entails. The escalation in the European theatre is announced with “interoperability” between Ukrainian and NATO militaries, closer integration in the war effort, increase in joint analysis, supply of information and surveillance, closer training of Ukrainian command and forces and positioning a senior NATO representative on the ground in Ukraine and the first NATO–Ukraine Innovative Council.

Further, the us will bring nuclear weapons to Europe and deploy intermediate-range missiles in Germany, facing Russia, which were earlier banned under the Intermediate-Range Nuclear Forces (INF) Treaty that the us withdrew from in 2019. In a move signifying dangerous escalation, NATO has endorsed that the us will allow Ukraine to bomb deep inside the Russian borders with us-supplied F-16 missile-carrying jets, something that the us had considered a step towards direct war earlier. This already led to the Sevastopol, Crimea bombing by Ukraine (23 June 2024) followed by

the Russian foreign ministry summoning the us ambassador to say that the us had effectively become party to the war and then Russian lethal retaliations followed. Recently, us Defense Secretary Lloyd Austin and Russian Defense Minister Andrei Belousov held phone conversations (25 June and 12 July 2024) which emphasised the importance of maintaining lines of communication, thus indicating an attempt to manage escalations.

The NATO narrative that if Vladimir Putin is not stopped or if he wins Ukraine war then he will move to conquer the Baltics and central East Europe is a reworking of the earlier domino theory used in the Southeast Asian wars where one country falling to communism would lead to a succession of falls. However, there is no evidence or intent of such Russian intentions. The Russians since the Soviet disintegration and since 2008 have reiterated: no to NATO expansion to Ukraine, even as they reluctantly accepted NATO expansion in the Baltics and central East Europe; they offered five sets of peace agreements on Ukraine—with two Minsk agreements in 2015 (endorsed by the UN Security Council), attempted negotiating with the us in December 2021, two sets of talks in 2022 in Belarus and Turkey and supported China’s attempts at mediation, all of which have been sabotaged or rejected by the NATO bloc.

NATO will continue to use Ukraine as a battering ram to weaken Russia, with little interest in the massive loss of life and damage to Ukraine, a devastated country which is dependent on Western assistance. Military analysts do not see a victory for Ukraine. Yet, the war drags on, at least till the us elections in November 2024. This NATO meeting was concerned with “Trump proofing” the war effort (in case of Donald Trump’s victory and his opposition to this war) so that the NATO plans continue. Negotiations and diplomacy that the global majority asks for are not part of NATO’s toolkit.

### The Indo-Pacific Theatre

NATO’s forward policy into the Indo-Pacific frames China as the big threat and “a decisive enabler” of the Russian–Ukraine war. North Korea is the second

us target here because of its new military partnership with Russia. This is leading to changes in the military–security landscape. The us/NATO’s method in the Indo-Pacific theatre is to fuse itself onto existing regional tensions that were earlier bilaterally handled. These tensions include those between the Philippines and China; North and South Korea; Vietnam and China; India and China and so on. NATO’s scheme is to superimpose its own agenda here by creating intersecting networks of military agreements like Australia, United Kingdom, us (AUKUS) that will provide Australia with nuclear submarines; additional us bases and military arrangements in the Philippines that will bring Japanese and Australian troops as the Philippines’ relations with China deteriorate; the South Korea–Japan–us triad that puts South Korea in a us-led extended deterrence called “the Korean Three-axis system” with a first strike pre-emptive strategy that targets North Korea.<sup>2</sup> In response, North Korea has signed a military agreement with Russia. Russia has the option to assert its role as an Indo-Pacific power and as a strategic partner to China and North Korea. Indo-Pacific is on a dangerous path of militarisation.

American pressure on India increased as us ambassador Garcetti’s publicly stated that India’s “strategic autonomy” cannot apply in times of conflict, and repeated that Russia will not help India if China attacked and so India and us must work towards principles upholding the rules-based order. India responded by saying that the strategic partnership with us has space for disagreements and Indian external affairs minister clearly stated that “India does not have the NATO mentality.” However, this has not deterred the us from pressurising India, as it

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increases its interest in South Asian geopolitics. So, all countries in Asia are facing us pressure to be acquiescent to NATO but most countries (outside the close allies) have chosen neutrality and do not want to be part of a great power conflict in the Indian and Pacific oceans and believe that multipolarity is allowing them this option to choose.

### In Conclusion

The NATO agenda is stated clearly during its 75th anniversary summit that it will go all out to ensure Western dominance globally. It has identified “enemy countries” that are roadblocks to this goal. There is continuity in this perception but also a change in its strategy going forward that steps up escalation and expansion to construct a global grid-like alliance structure that integrates with the transatlantic alliance. NATO’s schemes include expanding membership in Europe

and military alliances in the Indo-Pacific and the global South; gradual construction of potential proxies by dangling rewards like “most favoured partnerships,” money, weapons, high-end technologies and benefits from Euro–us military industries; “burden sharing” and interoperability; fusing regional conflicts into NATO interests; unilateral economic measures that include sanctions, trade control, confiscating strategic reserves; controls on high technology for exclusive Western use and so on.

NATO has become a tool for American geopolitical ambitions. The European elite is willingly co-opted in the American project and many analysts see it draining European resources into American wars, away from the human security of their own people. There is some dissent within NATO from leaders like from Hungarian Prime Minister Victor Orbán and Czech President Rico, who

advocate negotiations with Russia and peace in Europe.<sup>3</sup> They are joined by much of the global majority who want to see an end to this war, a multipolar world safe for international negotiations for climate change, trade, and human development. NATO on the other hand appears to prioritise its own dominance and victory. History will tell who prevails.

### NOTES

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# On Lateness and Its Revolutionary Possibility

## The Legacy of R B More

RADHIKA SARAF

The slavery that untouchability entails cannot be described by saying that the state made slaves of human beings. The practice of untouchability originated from a feeling of hatred and revenge. An emotion of class hatred lies behind it. It arises out of a class arrogance based on racist hatred.

— R B More (p 53)

In the battleground of revolutionary ideology in the subcontinent, the historical dissonance between anti-caste radicalism and Marxism rests on a fundamental question: What is the primary contradiction or the principal axis of social stratification in India? The apparent irreconciliation of this debate between caste and class owes to an emphatic inability of communists to consider the significance of the question of caste.<sup>1</sup> The reasons for this unwillingness to reckon with India's social reality on the part of communists have been cited variably: upper-caste bias; Moscow's rigidity of strategy; eurocentric analyses that render a refusal to consider the role of caste in India's colonial mode of production; the fantasy that revolution through class struggle would inaugurate a new world in which oppressive social relations of the past would automatically wither away, etc.

Consequently, the worlds of class and caste activism have become separated, with "working class" and "Dalit" inhabiting polarising subjectivities. Rather than grappling with this divide, histories of labour and anti-caste politics too have resounded this demarcation; thus, rarely is the tapestry of communist history punctured with serious engagement with caste reform practices, or Dalit participation and leadership.<sup>2</sup> Conversely, it is not often that anti-caste discourse concedes the Marxist political motivations and commitments of Dalits.<sup>3</sup> The translation of Ramchandra Babaji More's (RBM) memoir and Satyendra More's (SRM) biography of his father, both texts

### REVIEW ARTICLE

**Memoirs of a Dalit Communist: The Many Worlds of R B More** by Satyendra More, translated by Wandana Sonalkar, edited and introduced by Anupama Rao, *New Delhi: LeftWord Books, 2019; pp 293, ₹450.*

compiled and edited by Satyendra More's son, Subodh More (SM), sheds new light on this historiography through the writing of the lifeworld of what might today be considered an oxymoron—a Red family that is also Dalit. Yet, this says more about the limitations of our own political present than it does of the period of flux which inaugurated a rich and diverse set of intersecting political trajectories.

RBM (1903–72) was born in Ladwali and grew up in Dasgaon in Raigad district in the Konkan. Dasgaon was near Dapoli, where well-to-do educated Dalit military pensioners from Mahar and Chambhar castes had purchased land and settled, including Gopal Baba Walangkar who left behind a legacy of Dalit education and anti-caste activism in the region. Walangkar was related to RBM's family by marriage and had educated members of RBM's extended family, including his maternal grand-uncle Vitthal Joshi (Rao, p 22).

RBM's family, too, was part of an educated, well-to-do elite in the community but his father was cheated of his property and died early, leaving RBM's mother to take care of him and his little sister. Without a male head, the family was humiliated; they were forced to give up their house and pay rent to live in a paternal uncle's outhouse. Members of the "big house" would even pocket money from his scholarship to attend Mahad's English high school, as well as the money he sent back when he started working in Bombay, leaving his mother with constant financial scarcity. His early life was structured between his desperate attempts at

receiving an education and supporting his impoverished family (Rao, p 24).

RBM's daily experience of caste discrimination, especially with regard to his frustrated efforts in completing schooling because of segregation along caste lines, made him turn to activism early. From establishing a tea shop which became a resting place for Dalits who were not allowed to use public amenities, especially drinking water, to becoming a key organiser in the movement for access to water tanks and government property, which would inspire the 1927 Mahad satyagraha, RBM formed a crucial link between local struggles in the Konkan and Dalit politics in Bombay. He also played a key role in a number of civic Dalit associations such as the Bahishkrit Hitakarini Sabha and the Mahar Samaj Seva Sangh, and the publication of B R Ambedkar's first newspaper, *Bahishkrit Bharat*. By 1930, however, he parted ways with Ambedkar to become a lifelong card-carrying member of the Communist Party even as he remained a consistent critic of its avoidance of the caste question (Rao, p 24).

RBM's unfinished autobiography is set in a time of transition—the first three decades of the 20th century—when anything was possible,<sup>4</sup> when "caste" and "class" were not yet fixed conceptual, ideological, or political categories but were being made and remade in periods of flux,<sup>5</sup> and when the anti-caste and communist movements were not separate but enmeshed. The book's signal contribution is a genealogical account of how Bombay Marxism came to rely on anti-caste organisation, and how anti-caste activism in turn came to be constituted through the politics of labour in the city. In so doing, it gives expression to RBM as a practitioner of negative dialectics; thus, rather than aiming for a synthesis

between the concepts of “proletariat” and “untouchable,” he holds up the contradictions between them, even as he resists subsumption under either of their totalities, of both revolutionary vanguard and the victim of oppression.

This is perhaps enabled by his early life; “a fortunate and much-loved child, enjoying a carefree life filled with toil but not exploitation” (Sonalkar, p 18), he describes his birth as coinciding with the fading end of the jatra of Chhabina of Mahad, where not only are the main elect of the gods of the temples selected from among the Mahar people, but “people do not distinguish between ‘touchable’ and untouchable” (RBM, p 50). This lack of inferiority marks his early childhood, and while there is the practice of untouchability, which he experiences when he starts going to school, he is able to make “a gentle mockery at the absurdity of it” (Sonalkar, p 16), even as he observes that “all castes become equal when they are labouring side by side” (Sonalkar, p 16). Thus, it is only when he has to make a night stop at Indapur on his journey to Alibag for the high school scholarship examination and is not allowed to enter the dharamshala that he first feels like an outcaste. “Before this I had never felt the anguish of untouchability” (RBM, p 59).

In this, RBM is not dissimilar to his contemporary Zora Neale Hurston, the Black American writer, anthropologist, and folklorist. Growing up in the culturally affirmative environment in Eatonville, Florida—United States’ (US) first incorporated Black township—she was neither indoctrinated in inferiority nor did she lack evidence of Black achievement, paving the way for her audacious attempt to document Black culture in its fullness.<sup>6</sup> Then, like Hurston, whose wanderings and search for Black resistance began soon after the early death of her mother, the early death of RBM’s father spurs him onto a life of meanderings, of a recurring cycle of leaving home sprinkled with sporadic returns, of living in the space of the in-between, in search of a new world.

And in fact, RBM was a translator, inhabiting the worlds of both the anti-caste and communist movements, and

thus being able to build bridges between both. For him then, politics was critical engagement with the present *for* action, to create political *and* social freedom for all, and he demanded a critical rethinking of the means to achieve the categorical imperative that both Marxists and Ambedkarites desired—to arrange thought and practice such that the unfreedom of caste and capitalism is made extinct. His son SRM, in a highly detailed translation of his own, which brings to a conclusion in a sense the task RBM was unable to a complete, stands witness to his father’s forgotten legacy. In the evocative rendering of the Marathi texts in the English language, Wandana Sonalkar (p 19) urges her readers to consider how “the human story of a complex political actor, written by two hands” might inspire the dynamic possibilities of thinking class *with* caste, *and* of caste *with* class.

Through the genre of memoir and the lens of family history, the book asks us to consider, in what ways do the political emotions<sup>7</sup> of the More family enable us to engage with a revolutionary *imaginary* and Dalit working-class culture in Bombay, hitherto congealed from both anti-caste and Marxist history? In doing so, it intervenes to reclaim lost legacies of communism within Dalit activism even as it affirms the inadequacy of Marxism as a prism to understand Dalit resistance. Not unlike the Black radical tradition then, which insists on analysing race and class *together*,<sup>8</sup> the book signals toward the possibilities for minor histories of communism (Deleuze and Guattari 1986), which SRM’s biography painstakingly details. Through a meticulous process of naming, SRM summons the “people (who are) missing” (Deleuze and Guattari 1986); for instance, Comrades Raghu Kadam, Baburao Garud, and Sikandar Shaikh of the Friends’ Union cultural troupe, a precursor of the Indian People’s Theatre Association; Matunga railway workers, Comrades Kachru Gangure, Hari Sakpal, and KD Khavale; and Dalit activists from Delisle Road, Comrades Dagadu Shirke, Baloo Pawar, Arjun Surve to name a few (SRM, pp 170, 188, 196). By remembering and making visible these historical actors, he invigorates

a process of initiating a minor archive of 20th-century communism in the region.

Reading the autobiography of R B More, who strode the worlds of both Ambedkar and Karl Marx to search for a meaning of freedom in his present, is then not so much a quest to excavate the past and preserve it from anxieties of loss in the desire for future recuperation, and neither is it a call to explore potentialities of the future. Rather, akin to Chris Moffat’s (2019) inquiry into the revolutionary lives of Bhagat Singh and his comrades as constitutive of a “potentiality outside of futures, founded on a relationship with the ‘truth’ of a given present,” the book urges us to ask, “what does it mean to commit to revolution in perpetuity?” (Moffat 2019). While I suggest that the fragmentary nature of RBM’s text, like his life, renders him a figure of negation, incapable of assimilation into the fullness of form of either Marxist or Ambedkarite politics, I ask that we, the readers, become the political heirs of the task of fidelity to our present, of bringing to bear an expansive communism, yet unfinished, that RBM set out to accomplish.

### Translatability

Originally published in Marathi in 2003, the autobiography/biography of RBM and SRM titled *Dalit va Communist Chalvalicha Sashakta Duvā: Comrade R B More* (A Powerful Link between Dalit and Communist Movements: Comrade R B More) is transformed, in the English translation, to *The Memoirs of a Dalit Communist: The Many Worlds of R B More*, even though in her introduction, the editor Anupama Rao (p 25) correctly states that

More ... played a generative role in imagining a political utopia that transcended the divide between caste and class.

What then are the stakes of the book as expressed in the new title? Is the designation of “Dalit Communist” romantic nostalgia for past utopias of a future that is already our past and no longer feasible? Does it attempt to exceptionalise RBM and hence gesture towards insufficient representation of Dalits in the Communist Party? Is it an insistence on the past as *unfinished*, as not-yet, as time that remains, and thus

a mimesis of RBM's own role as translator between the anti-caste and communist movements?

In his classic essay on "The Task of the Translator," Walter Benjamin (1972: 10) notes that translation takes on the form of the afterlife of the original text and ensures its survival; the original is then a whole comprising its realised and possible translations (Erturk and Serin 2016). So was it with the communist corpus; if the October Revolution, as evidence of the fulfilment of the promise of freedom, required similar revolutions in the colonies for world revolution and hence of the continued persistence of its very own freedom, it presented to Indian Marxists the opportunity of a "dual birth" (Bardawil 2016). In permitting translators to retain the significance of the event of October 1917 for simultaneous claim and hence translations into their respective contexts, it inherently entailed that Marxists in the East reject relegation to the "waiting room"<sup>9</sup> of History, and make instead a claim to the "now" as the appropriate time for revolution.

However, while the October Revolution enabled radical possibility, it could not be repeated ad nauseam without paying attention to the material conditions in which it unfolded. In fact, at the Fourth Congress of the Communist International on 13 November 1922, Lenin (1965: 5–30; Thomas 2020) described his concerns about not being able to present the Russian experience to foreigners, "not because it is written in Russian—it has been excellently translated into all languages" but because it has not been translated in a way that might help foreigners "assimilate part of the Russian experience." Thus, the task of the translator is not fidelity to the original, or a mere reproduction, but the production of something new in a different context, or *translatability*, which, as Antonio Gramsci suggests, is the social condition of possibility of translating one paradigmatic discourse into another (Shapiro and Lazarus 2018). This was the task RBM set for himself, recognising the import of Marxism to anti-caste radicalism even as he continuously set about correcting the blind spots of the communists.

Thus, informing Ambedkar of his decision to join the Communist Party, RBM says:

Even though I am setting out to do the work of freeing mankind from all oppression, the struggle for the social and political rights of Dalits in the present framework of capitalist landlordism, which you have started, is also important, and that is the direction of Communist thinking. (SRM, p 167)

Similarly, and in unrelenting fashion, at the International Labour Conference held in Paris in 1945, he became the first communist at an international labour convention to explain the unequal treatment faced by "untouchables;" "not allowed in the higher-paying textile section of mills in Bombay," they "were not treated equally even as workers" (SRM, p 218). Moreover, in 1953, he wrote a memorandum of dissent to the party's neglect of the caste question. Taking issue with its "mechanistic position that the problem of caste would be solved once economic reforms took place" (SRM, p 252), he urged the party to consider the question of caste, a necessary task according to Marxist principles. The inclusion of this note in the translated work would have been of immense interest, and its omission is not without consequence, as SM notes.<sup>10</sup> In particular, the omission gestures towards the ways in which the task of moving closer to the essence of the work renders interpreting and recreating the original impulse and spirit of the work as necessary.

### Between the Universal and the Particular

Is the new title and its use of "Dalit" as an adjective then symptomatic of the temptation to slip from imaginary to ideology; from cultural production to categorical fixity; and from a future of radical possibility to one whose horizons are now foreclosed? Does it mirror the emphasis on "indigeneity" and hence reification and ossification of "identity" inscribed in the modernity/coloniality dyad in decolonial thought? For, while decolonial approaches have encouraged the production of knowledges from the global South, anti-colonial, anti-European critiques remain bracketed as non-interventionist additions to the content of Western epistemologies. In this context,

the designation of a "Dalit communist" runs the risk of reproducing capitalism's attempt to collapse difference into identity, even as it reserves the position of the universal for the hegemonic.

As SM insists, why is a non-Dalit communist simply a "communist" but a Dalit communist must be marked and exceptionalised as a "Dalit communist"?<sup>11</sup> This recalls bell hooks' (1999: 138) insistence that she did not consider herself a "black feminist" but rather "an advocate of feminist politics." She wanted to be engaged with for her contribution to feminist discourse, not as "a token, a nod in the direction of political 'correctness'" and "current popularity" (hooks 1999: 135). Thus, she says,

Even though it had already become popular to speak of "black feminism" I chose not to use this phrase precisely because I did not want to support the notion of a racially distinct and separate-but-equal feminism. I wanted to make it clear that black women were primary to the making of feminist theory for everyone. (hooks 1999: 145)

It is crucial to note here that this refusal to be bracketed as an adjective by both, hooks and SM do not negate the importance of representation; rather, they insist that representation, while necessary, is not sufficient. For, an adjectival inclusion will render the experience of the marginalised, at best, distinct, but never enough to alter the very power that creates hegemonic discourse. Their struggle is, thus, for a transformation in the very constitution of the universal.

It is in the context of SM's dissatisfaction that it becomes crucial to read Rao's (p 28) contention that if "Bombay's distinctive urbanity"—a central characteristic of which was working-class politics—was "both a framing device and a key protagonist in shaping More's political worlds," then RBM's autobiography implies an important role for Dalits in the development of a popular "vernacular Marxism." For, even as the adjectival use of "vernacular" to describe the specificity of Marxism in the colony—here, colonial Bombay—ascribes universality to metropolitan Marxism and thus perpetuates the hegemony of Europe, the focus on "Dalit Bombay," despite the rich descriptions

and imperative role of the Konkan in the history of the More family and of the anti-caste movement, is a repetition of the urban bias that was a distinctive feature of Soviet Orientalism and its focus on the industrial proletariat, which became the conditions of failure of the communist movement in India.

Thus, even as RBM's praxis served to forge a link between the anti-caste and communist movements, the rural and the urban, and the particular and the universal, reading the texts today is not to understand the ways in which caste contributes to a universal history of class within a modernity claimed as a European legacy. Rather, the attempt is to examine how a minoritarian Marxism offers the possibility to transform the very structural logic that creates and governs the distinction between the universal and the particular, between class and caste, and between the agrarian and industrial proletariat. The task then might be, as Susan Buck-Morss (2010: 175) suggests,

It is not a matter of learning lessons from history, or even adding parts to history that may have been forgotten, but of inhabiting an indeterminate, in-between space, rummaging around in its historical traces until a new possibility of mapping comes into focus as a necessary precondition for thinking the past at all.

However, this space did not merely exist; it had to be produced. In his dizzying article, Rudolf Mrazek (2016: 157) writes of the Indonesian communists exiled in Digoel, in the New Guinea jungles, that they were "producing a space as they ran—utopian space on the run; utopian space of language ... of an irreducible heterogeneity and internal untranslatability." RBM, too, in his life on the run, was producing a language space of utopian promise. Restless because of an incomplete education and struggling to survive between odd jobs at the Khadki arsenal, at the Alexandria docks, at temples singing bhajans, RBM (p 82) wonders "where to go now, what to do next," interspersed with brief returns home or to relatives' places until he packed his meagre possessions and left again. In the gap between escape and arrival, exile and belonging, was RBM also attempting to produce space, to

account for what is untranslatable, not what one cannot translate, but what one keeps on not translating in order to sustain a revolutionary code?

### Political Will

Inspired by the Mahad satyagraha, an attempt in building self-respect among Dalits and social awareness among non-Dalits towards equality, RBM reasons that the struggle against untouchability would be strengthened by coalescing around a common problem that would ease the troubles of both Dalits and non-Dalits. Since British imperialism had perpetuated feudal relations, organising cultivators and agricultural labourers in their capacity as workers was crucial. The Dalit needed to find liberation as untouchable *and* as an exploited toiling class, for, to his own rhetorical question "in the end, who is the Dalit?" SRM (p 158) replies:

He is neither a capitalist nor a landlord, he is a worker like all other workers. He is a cultivator, an agricultural labourer, a factory worker, a casual labourer. Today he is treated as untouchable but his fellow workers are also farmers and farm labourers ... So it also a need for the Dalit movement to organize caste Hindus and untouchable farmers on class lines. That is why Babasaheb began to organize farmers' conventions as soon as the Mahad conference was over.

In his texts on behalf of the Algerian National Liberation Front (FLN) in the 1950s, Frantz Fanon (2008: 179) said,

I do not have the right to allow myself to be mired in what the past has determined. I am not the slave of the Slavery that dehumanized my ancestors.

However, as Peter Hallward (2011) insists, it was not the Black world that lay down Fanon's course of conduct but rather his course of conduct that illuminated the devaluation of the blackened parts of the world. What drove him was not an orientation inherited by belonging to a community; rather, it was solidarity in the form of volition, or political will, manifest as an emancipatory will of the people. It remains crucial to note that "the people" were *people as such*, and not a group whose privileges or interests set them apart from "the people." Volition was then a commitment "to teach the people ... to interrupt if necessary the

rhythm of the world, to upset, if necessary, the chain of command, but in any case, and most assuredly, to stand up to the world" (Hallward 2011: 57).

RBM had been engaged in a similar gesture of political voluntarism in colonial Bombay. A turning point came when he rejected a job offer that would have made him "the first untouchable in the Bombay Presidency to be a candidate for a post as high as a Ranger in a Civil Service job in the government" (RBM, p 94). However, he says,

that ... time ... pushed me to kick away the golden handcuffs of a job in the government, and stimulated me to stand at the forefront of the battle for freedom of my class and *all the people*. (RBM, p 95; emphasis added)

But if the task was to "interpret the manifest will of the people," was "the proletariat" then synonymous with "the people"?

Proletarian consciousness has been a preoccupation of Indian labour historiography, which has located the failure of revolution in identity constitution, ranging from incomplete proletarianisation of labour and the persistence of peasant lifeworlds to rational choice that dictated acting against class and in favour of "primordial" interests, to the existence of multiple identities.<sup>12</sup> In its underlying privileging of the proletariat as the revolutionary vanguard, it mirrors the Marxists' bias on the urban industrial proletariat, itself a legacy of the Soviet Union. However, in *Black Reconstruction*, an analysis of the Reconstruction era in the US from 1860 to 1880, W E B Du Bois (1935) ruptures the fantasy of a singular, unified category of the proletariat by demonstrating how race is constitutive of capitalism so that there is a structural difference between White and coloured proletariat, with the former aiding capitalist exploitation on the backs of the latter. If Du Bois challenges the taken-for-grantedness of the category of the proletariat, Fanon (1961) goes even further, putting into question the very applicability of the proletariat as the revolutionary vanguard class in the colony. Instead, he argues for the peasantry and for the lumpen as bearers of revolutionary potential, owing precisely to the nature of capitalist exploitation in the colonial world.

Resounding Fanon's demand to expose the contradictions of the category of the proletariat outside the metropole, Manu Goswami's (2004) insistence that differentiation and uneven development are inherent to the logic of capital renders it necessary to interrogate the process by which imperial categories assume the mask of eternal time. Within the frame of this reading, Marx's theoretical categories can never fully correspond to the empirical realities in the colony; there remains between them a *missed encounter* (Bosteels 2012). The signifier, that is, the proletariat, can never be in a one-to-one correspondence with the signified, that is, the object that is named by the proletariat. In fact, the content of these categories is necessarily different precisely because the ordered space-time itself is inaugurated by capital.

Meticulous details of RBM's organisation of the historic conference of farmers from Mahar, Maratha, and Kunbi castes at Chiplun in 1929 provide evidence that RBM's instincts were already proving accurate. Demanding the abolition of the *khoti* system<sup>13</sup> and that tenants be entitled to the land they cultivated, SRM highlights how touchable and untouchable farmers at the conference dined together. He writes,

Even in a capitalist industrial city like Bombay, where the workers' movement and the workers' level of consciousness had reached a high level, caste Hindu workers still practice untouchability. In such times, it was a truly historic event that poor caste Hindu and untouchable farmers sat down together for a meal in a backward village in the Konkan. The importance of this revolutionary event lay as a class-based step forward for the removal of untouchability. This was the real beginning of a social and political revolution. (SRM, p 158)

However, he continues:

the workers' movement of the time had accepted this viewpoint, but did not have the courage to put it into practice ... Similarly, the independent movement of the untouchables did not take account of the revolutionary viewpoint of the working class ... in the days to come, there were efforts, largely brought about through More, to bring together the two sides in Maharashtra (the Bombay Presidency of the time) ... The real need was for a sustained unity, and that was not fulfilled. (SRM, p 159)

Similarly, even as RBM remained active in the farmers' movement through

Colaba District's Peasants' Association, and attempted to build an independent peasant movement under party leadership, "in those days, the Communist Party mainly worked with the working class ... in Maharashtra an independent farmers movement did not come up under the Party" (SRM, p 196).

Rajnarayan Chandavarkar (1994) insisted that the empirical reality of the Indian labourer is that he is also always peasant, so that a more appropriate category would be peasant-worker, even as Gail Omvedt (1994) persistently called for an expansion of the category of "class" to include agricultural workers. While political activity is readjusting its praxis to the reality that the social conditions of the peasantry are significant for any practical Marxist politics, labour history has not taken much heed. RBM and SRM's accounts then act as iterative reminders to resist the collapse of "the people" into "the proletariat." The proletariat cannot adequately name the people. The people are in excess of the proletariat. Moreover, RBM and SRM's accounts become insurgent evidentiary documents of the necessity for mobilisation of the revolutionary potential of the people for interventions in breaking with the past to rupture the present. As such, they act as both a chronicle and guide.

### Somatic Solidarity

In an important article on the first Marathi translation of the *Communist Manifesto* in 1931, Juned Shaikh has shown how the communists translated the lumpen proletariat as "mavali," a term used to denote the hilly tribes of the Western Ghats who were known to rebel against the regulation of law and order by the colonial police. Shaikh (2011) contends that the term "mavali," along with "dalit," became crucial in the communists' attempt to define the working class, not by a process of inclusion but of exclusion, through the identification of internal others. In my doctoral thesis, I develop this argument to demonstrate that the communists were replicating a systemic bias within Marxist theory and practice which relegated the lumpen to a modality of antagonism with the proletariat (Saraf 2022). In contrast, an interrogation

of the category of the lumpen within Marxist praxis, and especially in the colony, is useful.

Thus, as Fanon (1961: 129) forcefully contends, in 20th-century colonialism, where the industrial proletariat is but a minority, it is the lumpen proletariat that

constitutes one of the most spontaneous and the most radically revolutionary forces of a colonized people ... the pimps, the hooligans, the unemployed, and the petty criminals, urged on from behind, throw themselves into the struggle for liberation ... the prostitutes too, and the maids who are paid two pounds a month, all the hopeless dregs of humanity, all who turn in circles between suicide and madness ... will recover their balance, once more go forward.

In my thesis, I contend that as the communists attempted to create proletarian consciousness during the interwar period at a time when the question of minority existence took on precedence, they engaged in a scapegoating mechanism. Consequently, even as they strove to create working-class unity in the context of rising communal disturbance, they ended up creating a victim of the figures most susceptible to minoritisation—but not yet a minority—in that particular moment. Thus, in the 1928 strike it is the Pathan, and in the 1929 strike, the Dalit becomes cast as the "mavali," the lumpen, the "other" of the worker. This was not owing to prejudice but because their revolutionary imaginary was unable to account for differences *within* proletarian identity; for them, the worker was a homogeneous category and revolution would be an all-encompassing moment that would eradicate social oppressions of the past as well as distinctions between workers' lives. Similarly, even when Ambedkar organises the 1938 strike, the scapegoating mechanism continues, except this time the victim—cast yet again as strike-breaker—is the woman (Saraf 2022). In contrast, RBM resists the totalising forms of communist and Ambedkarite political agendas, both of which remain tied to a developmentalist idea of time and progress. What would it mean then to read RBM against both Ambedkar and the communists' notion of linear teleological time, in order to understand the meaning and practice of resistance today, when revolution has been made near impossible?

In his critique of Western philosophy, Theodor Adorno elaborates on the ways in which Enlightenment's privileging and homogenisation of categorical thought, guided by the imperative to know, has resulted in the separation of mind and body, so the object is reduced to the subject's conception of it. This reductionism causes a collapse of difference into identity; in other words, the difference embodied by the object is now only an identity given to it by the subject, or what he calls the "problem of identitarian thinking" (Adorno 2000: 23–39). However, he continues to argue that any concept is always inadequate to its object, that is, the object will always elude, or be in excess of the concept. There is always a non-identity between an object and any representation of it because there is always a gap between a concept and the reality it refers to (Adorno 1973).

In a world full of suffering and oppression then, in an antagonistic capitalist society, where the law of equivalence between exchange value and use value dictates that the difference between the various particularities of labour are eradicated and transformed into homogeneous abstract labour, what is required is a negative dialectics (Fritsch 2013). A form of thinking the world from the excess against the totality of any system's thought,

from that which does not fit, from those who do not fit, those who are negated and suppressed, those whose insubordination and rebelliousness breaks the bounds of identity, from *us* who exist in-and-against-and-beyond capital. (Holloway et al 2009: 15)

If the figure of displacement for the communists in the 1920s was the Pathan and mavali, RBM stages a withdrawal of these figures, but only after first embracing them. Thus, while in Bombay, he says

because I knew English, some hawkers became my friends. They were well-known gangsters from that precinct. Since they were *pheriwallas* and hawkers from among the butchers in the market, they were fierce to look at and affectionate at heart. If there was a *qawwali* or Ramleela programme somewhere far from the market area they would take me there and bring me home afterwards. My relatives and the other relatives of Family Lines often warned me not to go with them. But I did not listen to them and carried on chatting with my friends, roaming around the city with them as before. So everybody began to say that I had been spoilt: that I had become a *mawali*. (RBM, p 76)

When RBM qualifies himself as mavali, along with the Pathan, the first manifestation of the communists' scapegoating mechanism, he notes a process of othering that marks him as an antagonist to the worker, even as it places him squarely in the realm of Fanon's revolutionary potential, of excess that cannot be captured by Soviet Marxism's insistence on identity formation. At the same time, he became acquainted with the Mahar women who had become subject to Ambedkar's critique of ritual dedication and his perception of the adverse impact of their work on the struggle for Dalit male emancipation.<sup>14</sup> Thus, when he started acting in *tamashas* staged by the Kamleshwar Drama Company, he spent much time in the Batatyachi Chawl where their theatre room was located in the Safed Galli:

This Safed Galli was a big centre of the prostitution business. All the chawls in that area were buzzing with prostitutes. Prostitutes lived in some of the rooms in Batatyachi Chawl and *tamasha* players and other people lived in the remaining rooms. The *tamasha* of the Shivasambha Kavalpurkar company was very famous in those days. I had seen their show once before I came to Bombay. I knew both the brothers and also the well-known *tamasha* singer-poet Babu Pattherao and the dancer Pavali. (RBM, p 79)

Adorno (1998: 240) suggests,

"We become free human beings," "not by each of us realizing ourselves as individuals, but in that we go out of ourselves, enter into relations with others, and in a certain sense relinquish ourselves to them."

It is this very reaching out, drawing close to others, that characterises RBM's negation of a fixed identity and enables the development of a fragmentary consciousness that aids his radical impulse. For, the potential of the lumpen lay in its conversion from riff-raff to the subject; while this rested on its status as a figure of negation within the capital, that it would act as "shock-troops for the revolution" and not "foot soldiers for its repression" (Ingram 2018), depended on volition for political activity, for inventing a new time.

### Too Late, Much Too Late

In her sobering piece on Fanon and racialised time, Alia Al-Saji (2021: 185) explores the notion of lateness and its effect on racialised bodies that Fanon

describes. If colonialism renders the past as a stuck dimension of the present of European teleological time, such that the past of the colonised is either irrelevant or an empty landscape awaiting the coloniser to infuse meaning, the field of possibility for colonised subjects is already mapped out by the coloniser; it is foreclosed, "structured by lateness" such that there is a missed encounter between the coloniser and the colonised. Possibility is a closed map that allows repetition but never invention nor variation. This is not only a question of moral values and norms, Al-Saji (2021: 185) insists, but "of the practical significances of things, to the organization of lived space, and to our affective landscape." Thus, the colonised subject says, "Too late. Everything is anticipated, thought out, demonstrated, made the most of. My trembling hands take hold of nothing ... " The repetitive notion that "you have come late, much too late" (Al-Saji 2021: 184) is most significant in RBM's attempts at attaining an education, which perpetually seems out of reach.

After receiving his scholarship to study in the English school in Mahad, he was at first impatient for the two months to pass before the start of the school. However, when he reached, he was unable to attend because the owner of the school building threatened to stop renting the building if a Mahar boy was admitted to the school. So he returned to Ladawali, just when the rainy season had started before the Nagpanchami festival when the transfer of rice seedlings and the sowing of *nagli* and *wari* would be completed. He would lose himself every night in the singing and dancing in honour of the Gauri, not knowing how the rainy season passed. He then spent three months of the hot season with the other children bathing in the river and bringing down mangoes in Bhikoba's fields when nobody was looking. Again later, he returned to Dasgaon when he decided not to go to school in Tale because:

In the Mahad school they used to seat me separately outside the classroom, but at least the place was inside the school building. Here they are making me sit on a stage on the barren land behind the building; I don't like it at all. (RBM, p 72)

Without a job, he began spending his time in “useless activities like memorising wedding songs, imitating the manners of the people of the nomadic fakir, gosavi, gondhali, ghosi, bhaat and vaidu communities” (RBM, p 74). When he left for Bombay, he spent four or five months there but had still not found a job, and was unable to pay for his food. He then began to look for work at the docks:

Sometimes one could get work as a labourer on daily wages. If one stood in the queue for work, even if one wasn't selected as a labourer, one got one anna for attending the muster call. It was to the Alexandria Dock that I went most often. (RBM, p 77)

Adorno insists that giving voice to the suffering body is the condition of all truth because the body is the site where the history of oppression, pain, and injustice are experienced (Lee 2005: 32). In contrast with the non-Dalit communists' fixation on a unified identity at the cost of the reality of social experience, RBM recuperates the body as the site of critique, for, as Adorno writes, “what hope clings to ... is the transfigured body” (Adorno 1973: 400). The suffering body of the colonised subject, for Fanon, undergoes a useless spasming of the muscles. Al-Saji (2021: 188) reflects, “caught between the perpetual past and the dismembered possibility, the interval in which colonised subjects live is effectively overloaded, sensitive, and “tetanized.” Swinging between a past that does not go away and a future that does not yet come, RBM is often faced with “hardship, starvation, pain, indebtedness, and poverty.” He writes,

This indebtedness is affecting my bodily health, my mind and my intellect. I cannot think what to do, I am as if crazed. All kinds of thoughts come to my mind. (SRM, p 224)

This affective experience of tetanisation and muscular spasms resemble, for Fanon, Al-Saji (2021: 189) says,

movement in place, that remembers, refuses, and waits ... Waiting can be a search for an opening towards another, as yet unrealized, reconfigured past and reimagined time.

And in fact, much of RBM's life is described as spent lingering; his account remains replete with image repertoires of homelessness; on one of his arrivals in Bombay, he went to see a play which

ended after midnight but because he did not want to go to his relatives' place at that time, he walked to Bori Bunder and slept on the grass in Bhatia Gardens. When he woke up, he realised he had been robbed of everything but the shirt and *dhoti* he was wearing. The next morning, he went to the docks and agreed to write down the names of the dockhands for any wages the illiterate supervisor was willing to pay him. Folding his *dhoti* into a *lungi*, his *lungi* and shirt were his daily outfit, and the place where he was robbed, his nightly sleeping place so his life was one of day-time in the docks and night-time in the garden, becoming acquainted with those who eked a living by stealing and becoming known as one of them. Then, when he was caught stealing at a restaurant, and the owner made him remove his clothes except his loincloth, he

spent the night shivering with cold and in the morning I went to one of the ships and took the work of unloading coal from the ship's hold. I spent five days in that condition on the ship and on the sixth day I took my wages and alighted. I went to the restaurant that night and paid my dues, then put on the clothes I had left there and came out. I had eked out six days in Bombay somehow, wearing only a loincloth and sleeping on a ship. (RBM, p 90)

In waiting, RBM refuses the teleology that makes him always in need of “catching up.” It is his very lateness then that permits him to embrace and withdraw from the very figures cast as scapegoats by the communists and Ambedkar himself, resulting in a fragmentary consciousness. Thus, after sleeping on a ship for five days, More started a new routine of spending the day working on the ships or docks and sleeping on a nearby pavement by night. Once he had saved enough money to buy new clothes, he went to visit his relative in Cement Chawl in Parel, also the residence of Ambedkar. The next morning after having his first hot-water bath in days, he went up to meet “Ambedkar Saheb” but by that time he had already left for London. When RBM spoke with Ambedkar's elder brother Balaramdada about guidance for his further studies, he was told after a few

days that nothing could be arranged immediately and he would think about it later. The next day, RBM says,

I went back to the place in Bombay from where I had earlier left the city, the Family Lines near Crawford Market. Then I caught a ship that stopped overnight in Dasgaon ... My mother felt as though I had been reborn ... My homecoming this time became the subject of talk in every house, because it was well known that persons from that village community for several generations, who had vanished like me, never came back again. How was it that I had returned? From this it appears that many persons of our community, not just from our villages but from other villages, often left their village and vanished. Could it be that this migration was an attempt at an individual's escape from an touchability? (RBM, p 92)

### Concluding Remarks

If spasms are a way of dwelling with the wounds of colonisation and slavery, and waiting is a modality of affective dwelling, I want to ask, does RBM, precisely through waiting, offer the possibility of inventing a new time, that is not always already foreclosed? That RBM continues to be a figure of contestation<sup>15</sup> makes him, I suggest, a figure of radical alterity on which we post-colonials can build new presents and embody new imaginaries proper to our current predicament of a horizonless future. In the constitution of this new present, is it the very belatedness of the lumpen, its disappearance from and seeming incommensurability with proletarian subjecthood, its inability to present itself “on time,” that renders it as the negation of the linear temporality of the totalising form of both, a reified revolutionary politics and Ambedkar's “national” imaginary, and provides both a critique and possibility in the contemporary?

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The author would like to express her gratitude to Subodh More, who first introduced her to this text in Marathi, and to much-forgotten lineages of our radical pasts and potential presents.

Radhika Saraf ([radhikasaraf@gmail.com](mailto:radhikasaraf@gmail.com)) is a historian based in Mumbai, with a PhD from King's College London and National University of Singapore in 2022 on the translation of Marxism in colonial Bombay.

## NOTES

- 1 For more on the caste and class debate, see Omvedt (1973); Kaviraj (2009); Shaikh (2011); Teltumbde (2018).
- 2 Notable exceptions include Menon (2007); Shaikh (2021); Pandit (2015); Alkazi (2020); Kambale (2022).
- 3 For the engagement of anti-caste movement with “class struggle,” see Omvedt (1973); Teltumbde (2016); Ambedkar (2017); Suradkar (2017); among others.
- 4 See Raza (2020) for an account of the utopian impulse of anti-colonial communists.
- 5 See Shaikh (2021) and Viswanath (2014).
- 6 See Alice Walker’s (1975) seminal essay which is largely credited with reviving interest in Hurston’s writings.
- 7 For affect of the proletarian imaginary, see Hake (2017).
- 8 See Du Bois (2007); Fanon (1961); James (1963); Rodney (1972); Robinson (1983); Davis (1983). It should be noted that this list is not exhaustive.
- 9 Dipesh Chakrabarty uses this term to describe the predicament of the colonised world from the point of view of a universal Hegelian History with a linear teleological conception of time. See Chakrabarty (2000: 9).
- 10 Personal communication with Subodh More.
- 11 Same as note 10.
- 12 See Chakrabarty (1989); Chandavarkar (1994); Fernandes (1997); Gooptu (2000); and Joshi (2005).
- 13 The khoti system was an exploitative system of land revenue collection in Konkan by which khots or landlord exploited tenants through begar or unpaid labour. In 1937, Ambedkar introduced a bill against the khoti system in the legislative assembly, sparking a series of protests in Ratnagiri. For analyses of anti-khоти agitations, see Suradkar (2017) and Pol (2022).
- 14 For an evocative analysis of Ambedkar’s position, see Paik (2022).
- 15 See Mhaskar and Pol (2021) and Rao (2021).

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# Some Aspects of Mental Healthcare in India

BRIJESH C PUROHIT

The broad subclassifications of different socio-economic variables, including gender, age, education, and financial dependence, matter a lot in determining the mental well-being of individuals in different states as well as in different socio-economic strata. It cannot be dealt with by a common strategy but needs specific situation-oriented programmes.

According to the National Mental Health Policy of India (2014), mental health is not just the absence of a mental disorder. It is defined as a state of well-being in which the individuals realise their best abilities, can cope with the normal stresses of life, can work productively and fruitfully, and are able to make a positive contribution to their community. Mental health refers to a broad array of activities directly or indirectly related to mental well-being. This is in keeping with the World Health Organization's (WHO) definition of health. Mental health is also related to the promotion of mental well-being, prevention of mental disorders, and treatment and rehabilitation of people affected by mental disorders.

Mental health problems refer to conditions ranging from psychosocial distress affecting many people to mental illness and mental disability affecting a relatively small number of people.

Mental illness refers to specific conditions such as schizophrenia, bipolar disorder, depression or obsessive-compulsive disorder.

Mental disability refers to disabilities associated with mental illness. While mental illness is a medical construct, disability is better understood using a medico-social model and the two terms are not used synonymously.

Both the incidence and severity of mental illnesses are on the rise. The WHO estimates that at any given time, 10% of the global population suffers from some form of mental illness and one in four persons will be affected at least once in their lifetime. According to WHO, by 2020, around one-fifth of the debility cases might have been caused by depression trailing only ischaemic heart disease.

Mental illness is a key predictor for an increase in suicide and suicide attempts that affect a cross section of society, particularly the youth and distressed.

Poverty, deprivation, and other vulnerabilities further exacerbate the ground situation. Untreated mental illness results in stigma, marginalisation, and discrimination, often worsening one's quality of life. This leads to a substantial loss of social and human capital.

While the National Mental Health Programme addresses this concern partially, a holistic approach to alleviating distress is necessary. Access to mental healthcare is not universal, and significant treatment gaps are experienced by many, because of which individuals cannot pursue their life to the fullest.

Owing to the enormity of the problem, it is considered prudent to have a strategic, integrated, and holistic policy that will guide future course of action, including a pan-India scaling up of existing mental health programmes. This policy is inclusive in nature and incorporates an integrated, participatory, rights- and evidence-based approach. It considers the need for all stakeholders to work synergistically and achieve common policy goals.

The strategic areas identified for action are, inter alia, effective governance and accountability, promotion and universal access to mental health services, prevention of mental disorders and suicide, enhanced availability of human resources for mental health, community participation, research, monitoring, and evaluation.

The government believes that a holistic approach that recognises strong linkage of body, mind, and soul is necessary. Strengthening of health infrastructure must be affected along with addressing the social determinants of physical and mental health.

This National Mental Health Policy is in consonance with the intent of the WHO Resolution<sup>1</sup> which emphasised the need for a comprehensive, coordinated response from the health and social sectors at the community level.

## Cross-cutting Issues

Mental health is characterised by cross-cutting issues that have a far-reaching impact on the fulfilment of goals and objectives spelt out as policy strategies and need to be addressed through efforts across society. These include (i) stigma; (ii) rights-based approach since violation

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Brijesh C Purohit ([brijeshpurohit@gmail.com](mailto:brijeshpurohit@gmail.com)) teaches at the Madras School of Economics, Kottur, Chennai.

of their rights is a common reality for persons with mental health problems; and (iii) vulnerable populations may include inter alia children (both schoolgoing and out-of-school), women, economically and socially deprived, older persons, and persons with physical disabilities. It should be ensured that there is no discrimination against vulnerable populations in the provision of services. Conditions that increase vulnerability need to be addressed to improve mental health, such as poverty, homelessness, persons inside custodial institutions, orphaned persons with mental illness (OPMI). It is believed that 70% to 80% of the persons with mental disorders in India live with their families, and this is true across all demographic and social variables. Not every vulnerable person fall under the category of poor, yet those with high support needs—irrespective of rich or poor—are highly vulnerable due to their incapacity for self-care. This policy recognises that the needs of persons with mental disorders have been neglected for a long time. Unmet needs have a negative impact on their lives as well as the lives of those for who they provide care. There is a significant demographic shift from rural to urban areas, often across state/regional boundaries. These individuals and families are usually engaged in work in the unorganised sector and have poor access to local health services. There is very little information on the mental health needs of this group. Persons affected by disasters and emergencies, other marginalised populations such as commercial sex workers, victims of human trafficking, victims of riots, sexual minorities, children, and those living in situations of conflict bear a disproportionate burden of mental health problems.

Ongoing activities under the national and district mental health programmes must continue in a strengthened and more responsive manner. New activities, especially in the area of community-based rehabilitation and continuing care, must be supported with adequate funding. The work of non-governmental organisations must be encouraged and supported to achieve a collaborative and sustainable response system.

It is imperative to ensure that persons with mental illness are also integrated as beneficiaries of the existing programmes. Currently, families are the mainstay of long-term care for persons with mental health problems. Such families bear direct financial costs of treatment as well as associated indirect costs such as loss of wages consequent to having to give up employment to look after the sick family member. The emotional and social costs of providing care for a family member with mental illness cannot be quantified but exacts a huge toll on families.

**Inter-sectoral collaboration:** Collaboration is also needed within the health sector, for example, between specialist mental health and general health services as well as outside the health sector with education, employment, housing, and social care sectors. Similarly, there is a need for collaboration between the government (public) sector and the non-governmental sectors (non-profit as well as private).

**Institutional care:** Mental hospitals have traditionally been a major source of treatment for persons with mental illness. Over the last few decades, the government has undertaken their reform. Even then, the access is limited with inadequate staff and low funds.

**Promotion of mental health:** Key research questions include implementation-research issues: How to provide effective treatments in routine healthcare (for example, identification of barriers to integration of mental health into primary healthcare), causes of mental disorders in the Indian context, identification of effective treatments, including those from indigenous systems of medicine which can increase the therapeutic choices for persons with mental health problems, developing a deeper understanding of the bio-psycho-social determinants of mental health and mental illness as well as the pathways for action on the same, among others.

The strategic areas for action are linked to the situation analysis, cross-cutting issues, and goals as well as objectives of

the Mental Health Policy (2014). Each strategic area lists the actions to achieve the vision of this policy. Some intervention areas that are relevant and need to be pursued in parallel include effective governance and delivery mechanisms for mental health, promotion of mental health, prevention of mental illness, reduction of suicide and attempted suicide, universal access to mental health services, improved availability of adequately trained mental health human resources to address the (mental health) needs of the community, community participation for mental health, and development research.

The National Mental Health Survey shows urban areas to be the most affected (Yasmeen 2016). At least 13.7% of India's general population suffers from various mental disorders; 10.6% of them require immediate interventions. While nearly 10% of the population has common mental disorders, 1.9% of them suffer from severe mental disorders. These are some of the broad findings of a National Mental Health Survey conducted by the National Institute of Mental Health and Neurosciences (NIMHANS 2016). Moreover, the prevalence of mental morbidity is found to be very high in urban centres, where there is a higher prevalence of schizophrenia, mood disorders, and neurotic or stress-related disorders. This disturbing scenario could be due to fast-paced lifestyles, stress, complexities of living, breakdown of support systems, and challenges of economic instability.

In 2014, NIMHANS carried out a study on mental health status in the country (the results were published in NIMHANS 2016).<sup>2</sup> The study covered all important aspects of mental illness, including substance abuse, alcohol-use disorder, tobacco-use disorder, severe mental illness, depression, anxiety, phobia, and post-traumatic stress disorder, among others. It had a sample size of 34,802 individuals. Primary data collection was done through computer-generated random selection by a team of researchers, and local teams of co-investigators and field workers in 12 states.

A major concern in the findings, which were recently submitted to the union health ministry, is that despite three out

of four persons experiencing severe mental disorders, there are huge gaps in treatment. Apart from epilepsy, the treatment gap for all mental health disorders is more than 60%. In fact, the economic burden of mental disorders is so huge that the affected families must spend nearly ₹1,000–₹1,500 a month, mainly for treatment and to access care.

According to this study, due to the stigma associated with mental disorders, nearly 80% of those with mental disorders had not received any treatment despite being ill for over 12 months. Poor implementation of schemes under the National Mental Health Programme is largely responsible for this.

There is also a paucity of mental health specialists, pointing out that mental disorders receive a low priority in the public health agenda. It recommended that mental health financing needs to be streamlined, and there is a need to constitute a national commission on mental health comprising professionals from different fields.

While the prevalence of mental illness is higher among males (13.9%) as compared to females (7.5%), certain specific mental illnesses like mood disorders (depression, neurotic disorders, phobic, anxiety disorders, etc) are more prevalent in females. Neurosis and stress-related illness is also seen to be more common in women. Prevalence in teenagers aged between 13 and 17 years is 7.3%.

### Current Situation

An overview of mental illness is presented in Table 1. This is based on a survey conducted by NIMHANS (2016). The total number of respondents in the survey is given in column 1. Thus, it is based on nearly 35,000 respondents across the country. However, it suggests that nearly 14% people in India suffered from at least one of the mental morbidities during their lifetime. Moreover, at a point in time, the current level of mental morbidity is around 10% (Table 1).

A further breakdown of mental disorders in terms of moderate and high, in addition to substance use, including drug (or any similar kind of substance), alcohol, and tobacco, is given in Table 2. It is notable that nearly one-fifth of the

NIMHANS respondents across the country were using either tobacco or any other addictive substance. However, in states like Rajasthan and Madhya Pradesh, it was as high as 38.9% and 36.6%, respectively (Table 2; rows 9 and 7, and column 6). This is followed by Chhattisgarh at 32.4%.

To explore the different determinants of compromised mental health provided by the survey, we used the socio-economic variables. The information on these variables is also collected by the survey. Mainly, they relate to education, occupation, marital status, and age groups of the respondents. There are, in total, 64 variables. The latter includes eight levels of education (including primary, secondary, high school, pre-university, vocational, graduate, and postgraduate separately for males, females, and across genders). Likewise, the occupation is also classified into eight types (including cultivator, agricultural labour, employer, employee, students, dependents, pensioners,

and others across males, females, and all genders, separately). The marital status is classified into married, never married, divorcee, widowed, separately across males and females. Age groups are also given in a fivefold category (from one to five). Thus, in order to shorten the 64 variables, we conducted a principal component analysis. This yielded 11 components. Of the latter, we used seven components which explained more than 76% of the variation in mental health.

Looking at the major correlations within each factor derived from the principal component analysis, we find that factors 1 to 6, designated as  $f_1$  to  $f_6$ , respectively, largely represent total illiteracy, pre-university education, secondary education, dependent status, female employer, and pensioner female.

Using these factors to explain different mental disorders, we find that for moderate mental disorders, being dependent on others financially acts as a

**Table 1: An Overview of Crude Prevalence of Mental Illness and Substance Abuse in India, 2015–16**

Percent of Total Respondents	Total Respondents (Numbers)	Mental Morbidity (%) (Lifetime)	Mental Morbidity (%) (Current)	Intellectual Disability (%) (ID)	Tobacco (%)	Epilepsy (%)	Suicidal Risk (%)
Assam	2,603	8.14	5.95	0.58	27.78	0.27	5.46
Chhattisgarh	2,841	13.48	11.55	0.60	27.81	0.14	2.18
Gujarat	3,168	9.31	7.80	0.38	17.96	0.19	4.07
Jharkhand	3,022	11.09	8.57	1.03	10.16	0.43	3.41
Kerala	2,479	14.00	11.21	0.40	7.46	0.36	12.46
Manipur	2,852	19.88	13.85	1.05	20.62	0.35	10.31
Madhya Pradesh	2,621	15.64	12.71	0.84	31.93	0.19	7.25
Punjab	2,895	18.13	13.37	0.48	5.35	0.62	5.18
Rajasthan	3,108	15.41	11.55	0.45	39.58	0.10	7.95
Tamil Nadu	3,059	19.29	11.80	0.42	8.34	0.26	6.67
Uttar Pradesh	3,508	8.67	6.56	0.46	17.56	0.48	7.10
West Bengal	2,646	15.08	11.83	0.57	13.95	0.04	5.25
Total	34,802	13.92	10.47	0.60	19.03	0.29	6.37

Source: NIMHANS (2016).

**Table 2: Prevalence of Different Mental Disorders**

States	Total Respondents (Numbers)	Moderate (%)	High (%)	Screener Positive (%)	Any Substance Use (%)	Alcohol Use (%)	Other Substance Use (%)	Tobacco Use (%)
Assam	2,603	0.6	0.7	0.3	27.3	3	0.7	25.8
Chhattisgarh	2,841	0.4	0.3	0.2	32.4	7.1	1.3	29.9
Gujarat	3,168	0.4	0.4	0.2	18.8	4.5	0.1	17.4
Jharkhand	3,022	0.6	0.8	0.5	12.8	2.4	0.3	11.9
Kerala	2,479	1	2.2	0.4	10.2	4.8	0.1	7.3
Manipur	2,852	0.9	1.4	0.4	23.8	5.1	0.8	20.7
Madhya Pradesh	2,621	1	0.8	0.2	36.6	10.3	0.6	34.9
Punjab	2,895	0.3	0.5	0.7	11.3	7.9	2.5	5.5
Rajasthan	3,108	0.7	1	0.1	38.9	2.6	0.5	38.3
Tamil Nadu	3,059	0.3	0.6	0.3	11.3	5.9	0.3	8.2
Uttar Pradesh	3,508	0.9	0.9	0.5	16.4	1.5	0.5	16.1
West Bengal	2,646	1	1.7	0.03	15.7	3	0.8	14.3
Total	34,802	0.7	0.9	0.3	22.4	4.6	0.6	20.9

Source: NIMHANS (2016).

**Table 3: Regression Results for Different Mental Disorders**

S No	Disease	Significant Coefficient (Other Than Constant)	p>t	R <sup>2</sup>	p>F
1	Moderate mental disorder	$f4 = -.055$	0.091	0.185	>.0907
2	High mental disorder	$f1 = -.077$	0.099		
		$f6 = .0997$	0.131	0.0445	>.028
3	Screeners positive	$f2 = .0397$	0.0849	0.268	>.048
4	Any substance abuse	$f6 = -2.047$	0.102	0.33	>0.0664
5	Other substance abuse	$f3 = -.191$	0.004	0.538	>.004
6	Tobacco use	$f5 = -70.846$	0.063	0.235	>.062
7	Epilepsy	$f2 = .961$	0.098	0.174	>.098
8	Suicidal risk	$f3 = 12.267$	0.035		
		$f6 = 21.620$	0.004	0.6959	>.0019

Source: Estimated by the author.

deterrent (Table 3; row 1). However, for high mental disorders, literacy acts as a deterrent (Table 3; row 2). But female pensioners seem more vulnerable to this kind (high mental disorder) of disorder (Table 3; row 2). This is noted by negative and positive coefficients of these variables respectively (Table 3; row 2).

In the case of screener-positive mental disorder, pre-university level of education seems to be conducive to its positive impact (Table 3; row 3), whereas for any substance use disorders, higher education, females in a financially dominating position as pensioner or/and employer seem to be a deterrent. It is evident from the negative coefficients of both factors (Table 3; row 4). In the case of other substance-use mental disorders, secondary-level education seems to be acting as a deterrent and its coefficient, represented largely through factor  $f3$ , is negative (Table 4; row 5). Pertaining to tobacco-use, status of a female as employer acts as deterrent and its coefficient seen through negative impact of factor  $f5$  (Table 3; row 6).

Further, an illness like epilepsy also has a positive impact for those with pre-university education and its impact coefficient, as presented largely through  $f2$ , is positive (Table 3; row 7). Lastly, suicidal risk seems to have some positive link and causation. This is seen through a positive coefficient of  $f3$  (secondary-level education). Likewise, we interpret that pensioner status also has, possibly, a positive link since  $f6$  has a positive coefficient (Table 3; row 8).

**Conclusions and Policy Implications**

Both the incidence and severity of mental illnesses are on the rise, globally and in India. Access to mental healthcare is not universal and significant gaps are

experienced. A holistic approach that recognises strong links between body, mind, and soul is necessary. Towards this end, priorities remain strengthening of health infrastructure and exploration of social determinants of physical and mental health. Keeping this in mind, our analysis explored various factors. Using the information from NIMHANS survey across the country, we attempted an exploratory analysis of various factors that affect mental disorders and their treatments. The survey provided information regarding 64 variables which mainly relate to education, occupation, marital status, and age groups of the respondents. We conducted PCA and identified 11 factors. Our regression results using these factors indicated that among different mental disorders, broadly, the subclassifications of different socio-economic variables, including gender, age, education, and financial dependence, matter a lot in determining the mental well-being of individuals in different states as well as in different socio-economic strata and it cannot be dealt with by a common strategy but needs specific situation-oriented programmes. Education acts as a deterrent for high and moderate mental disorders. This, in turn, indicates that a highly educated person may be more responsive to mental treatment relative to one with only pre-college level

education. Thus, they may require different treatment regimes. Likewise, the independence of females leads to better mental health. Thus, mental illness for dependent females may be addressed by a combination of income-generating schemes and mental treatment. Similarly, ageing may lead to vulnerability and dependence and mental treatment may require groups (that can keep them engaged) for retired people and mental-therapy support.

Thus, more budget outlay and better programme coordination may be helpful while keeping in mind these socio-economic determinants of mental health and related disorders. Further research may be necessary to confirm or refute these findings pertaining to mental disorders.

**NOTES**

- 1 Resolution WHA 65.4, WHO, May 2012.
- 2 Concerned over the growing problem of mental health in India, the Union Ministry of Health and Family Welfare had appointed NIMHANS to study mental health status in the country. After a pilot feasibility study in Kolar district, Karnataka, using a sample size of 3,190 individuals, the team began the survey in Punjab, Uttar Pradesh, Tamil Nadu, Kerala, Jharkhand, West Bengal, Rajasthan, Gujarat, Madhya Pradesh, Chhattisgarh, Assam, and Manipur.

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**EPW Index**

An author-title index for *EPW* has been prepared for the years from 1968 to 2012. The PDFs of the Index have been uploaded, year-wise, on the *EPW* website. Visitors can download the Index for all the years from the site. (The Index for a few years is yet to be prepared and will be uploaded when ready.)

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# Karnataka Police Order on Protests Needs Scrutiny after Bengaluru Workers' Detention

KHALIL UR REHAMAN

The Licensing and Regulation of Protests, Demonstrations and Protest Marches (Bengaluru City) Order, 2021, popularly known as the Licensing Order, curtailing the right of protestors to demonstrate only in Freedom Park, has again come into the limelight after the arbitrary detention of 51 contract workers from Victoria Hospital. The workers were staging a sit-in against the illegality of their removal in the hospital premises.

Fifty-one contractual workers, all ward attendants from Bengaluru's Victoria Hospital, working for a span of 25–30 years were terminated from their services on 8 May 2024. These workers were removed after a change in contract from an external agency. The salaries were not paid to the workers for the past two months. The workers waited in anticipation with good hope, believing their due salaries would be promptly paid.

But what came as a rude shock was that they had been terminated from the contract. This news came to light only when the workers demanded their salary in the third month, highlighting a complete lack of transparency from the principal employer and the contractor. The workers were completely kept in the dock.

The workers staged a peaceful sit-in for two days at the hospital premises demanding reinstatement and payment of their due salary. These workers, mainly women who belong to the deprived sections of the society, had played a major role during the pandemic, lifting bodies from one place to another, preparing them for final rites when the doctors, nurses, and police refused to touch the bodies. Now, these workers have been terminated without prior notice, which amounts to wrongful termination.

The contract agency has flouted the Contract Labour (Regulation and Abolition) Act, 1970 which inter alia states that the contractor shall be responsible for the payment of wages before the expiry period.<sup>1</sup> In case the contractor fails to make the payment, the onus falls on the principal employer. Moreover, in this instance, the workers were not being paid minimum wages and also wages for overtime work. It has been held by the Hubballi Supreme Court that payment of wages, including overtime wages, etc,

must be made directly to the workers in full except with authorised statutory deductions.<sup>2</sup> The wages being not paid for the work done also amounts to bonded labour.

## Unreasonable Order Curtailing Dissent?

What also lies at the heart of the story is the controversial "Licensing and Regulation of Protests, Demonstrations and Protest Marches (Bengaluru City) Order, 2021," promulgated by the commissioner of police, Bengaluru as per the powers conferred to him under the Karnataka Police Act, 1963.<sup>3</sup> The order makes it unlawful for any protest, demonstration, or march to be conducted outside Freedom Park. In other words, Freedom Park was the venue designated for protests, etc. This order was notified in the state official gazette on 10 January 2022. The origins and background of the order can be traced back to the 2 March 2021 protest by the anganwadi and Road Transport Corporation workers demanding a hike in wages. Justice Arvind Kumar sent a letter<sup>4</sup> to the Chief Justice of Karnataka on the traffic being affected in Bengaluru because of huge protests as of 2 March. The court took suo motu cognisance of the petition and passed an interim order on 3 March 2022, prohibiting all rallies held outside Freedom Park. Interestingly, the order was notified by the commissionerate even while the hearing was underway.

When the sit-in demonstrations of the workers entered the third day, the police forcefully detained them for flouting the Licensing Order (2021). Many workers were whisked on to the bus by applying force, manhandled, and abused. It is to be noted that the manner of their removal was in total violation of law, which was also observed by the deputy labour commissioner during the conciliation. The workers were asking for their rights through the mode of sit-in.

**Workers' arguments:** The workers argued that injustice has been meted out to them by the hospital by "throwing" them from jobs where they have been working for many years and hence the dissent against this injustice would also

Khalil ur Rehaman (*khalil.savanur@gmail.com*) is a student of law at KSLU's Law School Hubballi. He is currently interning at Manthan and is following and documenting the workers' protest.

be exhibited in the hospital premises. The workers told the police that they were not creating any nuisance to the general public but only demanding their rights by sitting in the corner. But the police were in no mood to listen to them and kept contending that they were following the orders of the high court vis-à-vis the 2021 order. One agitated worker noted,

We have swept floors here, gave medicines to patients here and they are asking us to go to Freedom Park now, where our voices would be unheard.

The transpiring of events also shows the lack of empathy by the hospital management. The dean was said to be on leave and hence no decision could be taken till Monday as to the reinstatement of the workers, the hospital contended. The in-charge dean having the capacity to take back the workers till the next conciliation refused to take any responsibility despite the interim suggestion by the conciliation officer to recruit the workers. The workers at the end demanded an assurance—for ending the sit-in—from the dean on call that he would speak to them on Monday. Even then the dean refused to do so. This shows the egoistic attitude of the management who have taken the workers for a ride. A sense of indifference towards the problems of the contractual workers was displayed by the Victoria Hospital.

**Management's contentions:** The hospital management contends that the terminated workers are contract workers and as the contractor has changed two months back, the hospital would in no way be responsible for the termination of their services. Also, they contend that they have reached a maximum working strength and continuing with these employees in the absence of a legal order would lead to unnecessary financial burden.

It is to be noted that despite working for a span of 10 to 30 years, these workers were not considered permanent employees and now have been replaced by another set of workers. The apex court has held that an ad hoc or temporary employee must only be replaced by a regularly selected employee, to avoid arbitrary action on the part of the appointing

authority.<sup>5</sup> That has been the established law and settled principle.<sup>6</sup> But in this case, the existing contract workers have been replaced by another new set of workers. It has also been held that if, for any reason, an ad hoc or temporary employee is continued for a fairly long spell, the authorities must consider his case for regularisation provided they are eligible and qualified according to the rules and their service record is satisfactory and their appointment does not run counter to the reservation policy of the state.<sup>7</sup> This case would be a classic case for the regularisation of the contract workers as many of them have been working since the 1990s with the hospital.

Further, the management washing off its hands from its responsibility is violative of principal employer liability and Contract Labour Act. The act states that the principal employer would be vicariously liable for payment of wages for default by the contractor.<sup>8</sup> In *Hussain Bhai v Alath Factory Tozhilali Union and Ors*,<sup>9</sup> the Supreme Court has categorically held that the presence of the intermediate contractors with whom alone the workers have immediate or direct relationship *ex contractu* is of no consequence when, on lifting the veil or looking at the conspectus of factors governing employment, it is found, though draped in a different perfect paper arrangement,

that the real employer is the management, not the immediate contractor. In another case, the apex court has held that the principal employer is the real master of the business and has real control of the business. They are held liable because they exercise supervision and control over the labour employed for and on their behalf by the contractor.<sup>10</sup> Given this well-settled principle, the hospital, being a principal employer and managing all the activities as a decision-making authority, cannot shrug off its responsibility.

**Analysis of the Licensing Order, 2021:** Now focusing the analysis back to the Licensing Order, 2021, it is to be understood that the objective of the order and the high court decision was to restrict protest to one place in the city to ensure that the traffic was not impacted and non-protestors' rights were not affected. But what if the show of dissent happens in a confined place without affecting the traffic as in this case? But the order in particular has been used to scuttle voices and make them unheard. "One-size-fits-all" seems to be an apt reference to the usage of the Licensing Order, 2021 to curtail dissent and freedom of speech and expression by the police. The order has been sweepingly used and applied against industrial disputes also. Again, in this case, the employees were expressing



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their dissent against the “illegal act” of the employer. Moreover, always gathering at Freedom Park is not feasible, and also protests held there have no visibility.

Article 19(1) of the Constitution inter alia states that the citizens have the right to assemble peaceably and without arms. Clause 3 of the article provides for limitations on the right to assemble. It states that the right to assemble could be curtailed subject to public order, sovereignty and integrity of India, and other reasonable restrictions. The court time and again has stated that the reasonable restrictions must be procedural and substantive and cannot be arbitrary. In one such case, the apex court held,

In order to be reasonable, “restrictions must have a reasonable relation to the object which the legislation seeks to achieve and must not go in excess of that object.” The restriction made “in the interests of public order” must also have a reasonable relation to the object to be achieved, that is, the public order. If the restriction has no proximate relationship to the achievement of public order, it cannot be said that the restriction is reasonable.<sup>11</sup>

Section 4(i) of the 2021 order reads:

The venue for protests in Bengaluru City is identified as Freedom Park. However, depending on the situation, the Commissioner of Police may also designate any other suitable place in the city.

A simple reading of the section indicates that all protests would happen in Freedom Park and nowhere else. When tested on the anvil reasonable restrictions, the order fails the test of proportionality as it generalises all protests, demonstrations, and also those that may not impact traffic movement (public order) even applying to industrial disputes. In *Fenner (India) Limited v the Superintendent of Police*,<sup>12</sup> the Madras High Court held,

It may be the right on the part of the union to hold peaceful demonstrations, however, such demonstrations cannot be allowed to become violent or intimidating in nature. The safety of those visitors who are visiting the employers’ premises as well as those willing workers including their smooth ingress and egress is also to be ensured. This balance is to strike between the two competing and conflicting interests.

The workers staging a peaceful sit-in at the premises did not obstruct the day-to-day happenings of the hospital. For

two days, they continued their sit-in without causing any inconvenience to the general public. The curious onlookers saw them and the hospital management was also forced to come and talk to them which would not have been possible if the workers protested at Freedom Park. The state administration and the judiciary should understand that this is exactly the purpose of protest, demonstration, and sit-in. In *Re: Ramlila Maidan Incident*,<sup>13</sup> the Delhi Police came up with a prohibitory order stating that unrestricted holding of a public meeting in the area is likely to obstruct traffic, cause danger to human safety, and disturb public tranquillity. The court criticising the order held that no doubt liberty is restricted under the Constitution but “unwarranted governmental invasion and intrusive action is also protected under the laws of the country” and hence declared “law cannot be enforced for crippling the freedom merely under the garb of such regulation.” The court therefore noted in this case that citizens have a fundamental right to assembly and peaceful protest, which cannot be taken away by an arbitrary executive or legislative action.

Designating a place for protest does not serve any meaning for the protest since the purpose of protests and other demonstrations is to bring apathy to the

notice of the general public at large and the state. When the illegality has happened at a particular place, it is to be opposed and protested at that place. The Karnataka government needs to rethink and reconsider this arbitrary order and ensure that proper balance is struck between two competing interests, that is, right to protest, legitimate use of public places and ensuring no inconvenience is caused to others. Designating a place for protest would not help.

NOTES

- 1 Sec 21 of the Act.
- 2 *Labourers Working on Salal Hydro Project v State of J & K*, (1983) 2 SCC 181; 1981 SCC (L & S) 289.
- 3 Sec 31 (1) (O) of the Act.
- 4 *New Indian Express*, “Karnataka HC Initiates PIL over Traffic Woes in Bengaluru Due to Frequent Protests,” 5 March 2021, <https://www.newindianexpress.com/cities/bengaluru/2021/Mar/05/karnataka-hc-initiates-pil-over-traffic-woes-in-bengaluru-due-to-frequent-protests-2272693.html>.
- 5 *State of Haryana and Others v Piara Singh* (1992) 4 SCC 118.
- 6 *Rattan Lal and Others v State of Haryana and Other* (1985) 4 SCC 43, *Manish Gupta and Anr v President, Jan Bhagidari Samiti and Ors* (2022 LiveLaw (SC) 406).
- 7 *State of Haryana and Others v Piara Singh* (1992) 4 SCC 118.
- 8 Section 21 (4) of the Act.
- 9 1978 (4) SCC 257.
- 10 *Mangalore Ganesh Beedi Works and Ors v Union of India and Ors*, 1974 SCR (3) 221.
- 11 *Supt Central Prison v Ram Manohar Lohia*, 1960 SCR (2) 821.
- 12 CDJ 2012 MHC 3269.
- 13 *In Re: Ramlila Maidan Incident v Home Secy. Union of India*, [2012] 4 SCR 971.



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# Muchkund Dubey

## Warrior of the Global South

SACHIN CHATURVEDI

With the sad demise of Muchkund Dubey on 26 June 2024, the world has lost a great warrior for the global South and India has lost a true practitioner of economic diplomacy. Apart from being in the Indian Foreign Service (IFS) and associated with the shaping of various policy initiatives, Dubey also emerged as an erudite scholar, academician, and connoisseur of art and culture at the grassroots level. At one end, he produced an extremely insightful book, *India's Foreign Policy: Coping with the Changing World* (updated in 2016). At another, he came out with a book on Lalan Shah Fakir, a Sufi saint of Bangladesh, in 2017. This bandwidth was possible owing to the milieu within which his intellectual inquisitiveness was shaped, and also due to the multiple facets of the world that he had been exposed to with his modest beginning in the IFS. His ideas of India's foreign relations were couched in his commitment to an inclusive development strategy based on the need for a developmental space for the global South. His passionate speeches across the United Nations and other international platforms showed his uncompromising positions that could help the global South to prevail on multiple occasions.

### Economic Diplomacy

Dubey advanced the idea of economic diplomacy not only through institutional arrangements but also got closely engaged in shaping the philosophy, work programme, and regional and national linkages of those institutions. He worked closely with eminent world economists for the promotion of the new international economic order.

Dubey emphatically argued for ensuring the autonomy of decision-making for the global South. With the launch of the United Nations Trade and Development and regional platforms like the South Asian Association for Regional Cooperation

(SAARC), the Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation and others, Dubey believed in the global South having its own space for decision-making, selection of instrumentalities and possible choices for advancement of the national interests of its members. He resented the global inequalities in access to resources and the perpetual dependence of the global South on the extractive designs of the developed countries.

Even after his superannuation, he further evolved his commitment, particularly to provide inputs and leadership on the process of the General Agreement on Tariffs and Trade transition to the World Trade Organization along with B L Das, S P Shukla, B K Keayla, Deepak Nayyar, Biswajit Dhar, and many others. Dubey will always be remembered for his ideas of economic development and the role that diplomacy may play in this regard. He always saw a possibility of convergence, complementarity, and scope for leveraging the plurality of the global South for collective advancement.

Regional and subregional cooperation for advancing India's economic development was a major instrument that Dubey always emphasised upon. With link-minded economists from South Asia, he consolidated the idea of a South Asian identity; to that end, he contributed vigorously not only at the official level as a diplomat but also engaged himself with intellectual and theoretical underpinnings required for the articulation and explanation of regional complementarities in trade, investment, technology, and finance.

Dubey articulated his views on the important role played by foreign policy in his book, *India's Foreign Policy*, writing that foreign policy serves a country's interest by contributing to its economic and social progress. This has made foreign policy increasingly development-oriented. He underscored that until the mid-1980s,

before the onset of the current phase of globalisation, India's foreign policy mainly involved facilitating the flow of foreign development assistance, enhanced access to foreign markets, and securing the transfer of appropriate technologies. It also involved working together with other nations to bring about a change in the international economic environment in order to make it supportive of development. This called for taking initiatives for changing regimes, rules and regulations of the international economic system and putting in place new ones to provide adequate elbow room to developing countries to pursue their development policies. Thus, it is an obvious inference that there is a continuous need on the part of developing countries to hold regular consultations and coordinate their positions at the highest level on global issues for promoting economic and technical cooperation among developing countries.

As already mentioned, Dubey tirelessly worked in a mission mode for a distinct South Asian identity by strengthening socio-economic cooperation among all countries in the region, particularly since the emergence of SAARC. In order to work for the continuous well-being of South Asia, the South Asia Centre for Policy Studies was established. Dubey was its co-founder.

### Faith in the Global South

Dubey used to underline that the beginning of the South-South cooperation traces back to the Asian Relations Conference of March 1947, the Bandung Conference of 1955, and the Non-alignment Movement. The main theoretical underpinning of South-South cooperation reflected in the declarations of these conferences focused on the course of development per se and how they would contribute to the development of the countries concerned. Collective self-reliance was designed to enable the global South to emerge as a force in the world. The aim was to acquire and enhance the bargaining position of the global South in its negotiations with the global North on developmental issues.

Dubey, while speaking at different sessions of the Delhi Process on South-South Cooperation organised by Research

and Information System for Developing Countries, said that the world economic order after World War II has been characterised by a dichotomy between North–South and South–South approaches to cooperation. The North–South component dominated the global economic cooperation agenda often to the detriment of the global South. The South–South cooperation came into being in the early 1960s; and the most important role for its establishment was played by the Non-aligned Movement. The South–South cooperation has gained a fresh momentum. In the current dispensation, the southern countries are playing encouraging roles in the global economic order.

The countries of global South have acquired great economic strength since the 1990s, mainly from the beginning of the century as they have much larger and vast resources. This is a clear indication of what these countries can do for cooperation among themselves and this is reflected on the ground in the outward flow of capital from these countries and engagements in a variety of areas. Globalisation has played a vital and positive role in this regard. It has brought developing countries together by breaking their physical barriers. It has also facilitated cooperation in the field of services on a large scale. There is an economic shift of power balance from the West to the East, particularly in the Asia-Pacific region. The data indicates a shift in power balance, creating tremendous opportunities of cooperation among the developing countries, particularly their cooperation with countries of other continents, Latin America and Africa.

### Fighting for a Developmental Space

The idea of the centre and the periphery provided the necessary basis for explaining the causes of underdevelopment in the global South. Contributions of the Argentinean economist Raúl Prebisch facilitated conceptualising the theory of dependency and the resulting policy options for the southern countries to opt for import substitution strategies for industrialisation and achieving a higher degree of self-reliance. The theoretical framework elaborated the idea of peripheral

capitalism, which also shaped the agenda for the Bandung Conference (1955). The argument was basically focusing on terms of trade that were against the exporters of primary commodities vis-à-vis the importers who were then exporting back finished products using the technological advantage. The final draft outcome document of BAPA+40 (40th anniversary of the Buenos Aires Plan of Action for Promoting and Implementing Technical Cooperation among Developing Countries) released on 6 March 2019 and its emphasis on linking South–South cooperation with the 2030 Agenda that would leave no one behind also carries the spirit of Prebisch's call to establish an inclusive global order, which does away with the distinction between the centre and the periphery.

It is in this way that international cooperation within the global South re-motivated several national governments and other actors for country-specific strategies. Several countries initiated their own programmes to move towards self-reliance. In Tanzania, the Arusha Declaration (Swahili: *Azimio la Arusha*) brought forward the Tanganyika African National Union's Policy on Socialism and Self-Reliance (1967) as one of the most prominent documents from Tanzania. However, in the recent past, other strategies have

evolved and the proposal of the African Continental Free Trade Area discusses self-reliance more in the context of trade cooperation and local linkages, through value chains, as the inflow of additional resources has not improved. In the last 10 years, development assistance on average has remained at 2.3% to 2.8% of the gross national income.

In the context of what has been stated, it is obvious that Dubey did not want diplomacy to be confined to dealing with geopolitical and geostrategic issues only; rather, its aims went beyond these notions. In the present era of globalisation and economic interdependence for mutual benefit, economic diplomacy rather than political diplomacy is the order of the day. Diplomacy today has to play a major role in contributing to promoting economic relations at the bilateral, regional, and global levels. Dubey supported the primary aims of economic diplomacy in India's integration into the global economy. There is a need for embracing new approaches at the global level under the rubric of solidarity, which requires greater emphasis on the role of the global South as championed by Dubey.

Sachin Chaturvedi ([sachin@ris.org.in](mailto:sachin@ris.org.in)) is with the Research and Information System for Developing Countries (RIS), New Delhi.

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# A Brief Discussion on Street Vendors in India

SATYAKI DASGUPTA, BASIT ABDULLAH

Discussing their composition in the labour market, working hours, and gendered difference in wages, the article aims to underline the multifaceted challenges that street vendors encounter. Their vulnerability in the larger labour market is clear from our findings where we note that they earn even lower than casual waged employees.

In the rapidly urbanising landscape of the country, street vendors are often considered eyesores who could not catch up with modernisation. This makes them vulnerable to harassment by authorities. They are often treated as criminals, subjected to eviction and confiscation, and compelled to bribe local authorities and police to continue with their vending (Chen 2012). When public space is regulated to catch up with modern urban standards, street vendors often fall prey to the “clean-up” projects of city authorities.

Street vendors in India are informal self-employed workers who sell goods to people on the streets and do not have any permanently built structure for the process (Bhowmik 2005). This type of employment is relevant for workers who have been retrenched from their formal sector positions and have joined the ranks of informal labour, especially in the wake of the liberalisation policies of 1991 (Sanyal and Bhattacharya 2009). This is also an important source of income for marginalised people, including rural migrants and less educated workers (Recchi 2020). Additionally, street vendors suffer from high indebtedness, have no access to formal credit, and live in poor areas, which lack access to health and welfare (Saha 2011).

This motivates the article to adopt a macro perspective to identify the various aspects of the employment of street vendors. We look at details regarding the composition of street vendors among gender, caste, and religion, and their labour market outcomes. The article especially focuses on the aspect of location of work because location is crucial in determining labour market outcomes of informal workers since this affects the type of work, risks, constraints, and the legality associated with the work (Carre 2013).

We compare mobile or itinerant street vendors with stationary street vendors. Stationary vendors generally occupy a space on the pavement from where they sell their products, while mobile vendors sell their goods on carts or baskets. Finally, we also situate street vendors in the larger context of the labour market in India to analyse how they fare when they are compared to those who are generally the lowest in the hierarchy of wage labour.

## Data

Following the National Policy on Urban Street Vendors (NPUSV) 2006 definition, we define street vendors as those who are identified as self-employed workers and sell goods and services on the street without having any permanent built-up structure. We have defined them according to the current weekly status (cws). We use the nationally representative Periodic Labour Force Survey (PLFS) 2018–19 to analyse individual and social characteristics, and the labour market outcomes of street vendors. This is the latest PLFS data available before the COVID-19 lockdown was implemented. It allows us to understand the baseline situation of street vendors before the significant disruptions caused by the lockdown. Using the National Classification of Occupations (NCO) 2004, street vendors are categorised under the broad division of elementary occupations, identified by the codes 911 and 912. These include occupations such as street vendors with food and non-food products, door-to-door and telephone salespersons, and shoe-cleaning and other street services.

Street vendors can either be stationary where they occupy space on the streets or a public or private area, or they can be mobile where they carry around their goods in order to sell them to consumers and have no fixed location of work (Bhowmik 2005). Following this, we identify mobile street vendors by code 99 in the description of the location of the workplace. The rest are categorised as stationary workers. Their location of work includes streets with fixed locations, own-dwelling units, open areas

Satyaki Dasgupta (*Satyaki.Dasgupta@colostate.edu*) is a PhD student at Colorado State University. Basit Abdullah (*basitabdullah19@gmail.com*) is a PhD scholar at the Centre for Development Studies (JNU), Kerala.

or structures adjacent to their own dwelling units, and other fixed locations. For the purpose of the following discussion, the daily earnings are computed by dividing the estimated weekly earnings of the self-employed by the number of days worked in the reference week.

**Discussion**

Tables 1, 2 and 3 delve into the heterogeneity within street vending by analysing two distinct groups of street vendors.

To begin with, Table 1 gives us the percentage of street vendors in the workforce based on social and religious groups. While about 0.6% of the entire workforce is engaged as street vendors, the proportion is higher among the urban workforce. Among religious groups, 1.1% of the Muslim workforce are street vendors. There is a higher share of street vendors among Muslims than Hindus. This pattern has also been discussed by Basant (2012) and Mansoor and Abraham (2021), who find that a larger percentage of Muslim workers are engaged in vending and various sales-related activities in urban areas. The low percentage of street vendors among STs is primarily due to the predominance of STs in agricultural activities.

Following the literature on street vendors, it is not a surprise that most of them are concentrated in urban areas. Urbanisation and rapid informalisation increases the number of workers who take up street vending as an occupation. The shrinking opportunities of employment in the formal sector have caused

**Table 2: Distribution of Street Vendors by Gender, Sector of Residence and Educational Attainment (%)**

Male	Female	Total	
91.1	8.9	100.0	
Rural	Urban	Total	
46.0	54.0	100.0	
Illiterate to primary	Up to higher secondary	Above higher secondary	Total
57.5	40.7	1.9	100.0

Source: Authors' compilation based on PLFS 2018–19.

people with low skills and low education levels to take up street vending as this does not require skill or large amounts of capital and has low barriers to entry (Bhowmik and Saha 2012). The unskilled nature of the job becomes evident as less than 2% of street vendors are educated beyond the higher secondary level. This job is taken up by migrants who move from rural to urban areas in search of employment.

Next, we move our focus to the location of the work of the street vendors. The location of work, especially for informal workers, can be a crucial characteristic of their status as workers. Space plays a crucial role in determining labour market outcomes, insofar as being a constraining factor for workers. Location of work is especially relevant for female workers, whose household responsibilities and social norms often restrict their movement outside their homes. The localised nature of women's work can be seen in this case as well. About 77% of the female street vendors are stationary, whereas the same for male street vendors is about 58%. A study in Hyderabad finds that female street vendors prefer being stationary near their homes to being involved in mobile vending which can be perceived as unsafe for women (Bhowmik and Saha 2012).

Table 4 gives us a broad idea about the earnings of street vendors across different groups divided between two different locations. Overall, the trends in

**Table 3: Distribution of Street Vendors by Location of Workplace**

	Mobile	Stationary	Total
All	40.2	59.9	100.0
Rural	29.9	70.1	100.0
Urban	48.8	51.2	100.0
Male	41.9	58.2	100.0
Female	22.7	77.3	100.0

Source: Authors' compilation based on PLFS 2018–19.

**Table 4: Average Daily Wage of Street Vendors across Groups (₹)**

	All	Mobile	Stationary
All	275	265	282
Male	284	271	294
Female	185	159	194
Rural	254	263	253
Urban	292	267	316
Age 15–30	229	215	238
Age 31–45	290	285	297
Age >45	308	268	339

Source: Authors' compilation based on PLFS 2018–19.

earnings follow the national pattern where workers in urban areas earn more than those in rural areas, and male workers earn more than females. The difference between male and female vendors has been noted in the literature. Females generally form the lowest in the hierarchy of street vendors, because they are distress-driven to this job, and in situations where the males do not have jobs (Bhowmik 2005). Female street vendors are often “invisible” in many cities, whereas male street vendors are more unionised and less prone to facing legal problems (Bhowmik 2005). Moreover, female vendors are more likely to face harassment from the legal authorities and the police.

The interesting finding that comes out is that stationary vendors on an average earn more than mobile ones.<sup>1</sup> Street vendors with higher incomes may afford to have fixed locations of work. Further, operating from a fixed location can be helpful in making more stable connections in the market, higher and regular access to the customer base, and fewer issues with legalities. These give a more stable income to stationary vendors compared to mobile vendors. Mobile street vendors like fish and vegetable sellers can be worse off than stationary street vendors because of the limited size of baskets or carts which restricts the quantity of goods that can be carried around (Bhowmik and Saha 2012).

**Table 5: Weekly Number of Working Hours by Location of Workplace**

	All	Mobile	Stationary
Male	55.6	56.6	55.0
Female	46.1	53.5	44.1

Source: Authors' compilation based on PLFS 2018–19.

Street vendors have to put in long working hours to make ends meet. Table 5 shows that male vendors put in more hours of work than their female counterparts. This difference can be attributed

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to the gendered division of labour which makes it the man's responsibility to earn money and the woman's responsibility to take care of the family. Safety concerns for mobile female street vendors also contribute to this difference (Bhowmik 2005). Stationary female street vendors generally work near their homes which make them responsible for attending household duties. Stationary male street vendors work longer because they do not have the same responsibilities within their households.

The finding that mobile female street vendors work longer hours than stationary females could be explained by different factors. We previously found that mobile vendors earn less, on average, than their stationary counterparts. They might be pushed to work more to maximise their income. Mobile vendors are also likely to face more intense competition for customers, which can lead to longer working hours to secure customers and sales. Moreover, operating from a fixed location provides a higher level of stability, enabling vendors to maintain shorter and more predictable working hours.

Table 6 contextualises street vendors in the larger scenario of labour market in India. For all groups of workers, the average wage for casual workers is higher than that of street vendors. While casual employment is generally considered the lowest in the hierarchy of labour, the table reveals that street vendors in India fare even worse. This implies that workers are involved in street vending when there is absolutely no other work available. This is also noted by Anjaria (2006) who states that street vendors are employed as such because of the unavailability of any other jobs. This sits neatly with the claim that an increase in street vending is an offshoot of an increase in the informalisation and lack of employment opportunities. The

**Table 6: Comparison of Average Daily Earnings between Street Vendors and Average Casual Wages** (₹)

	Average Wage of Casual Employed	Average Earnings as Street Vendors
Rural male	288	261
Rural female	185	180
Urban male	367	303
Urban female	232	190

Source: Authors' compilation based on PLFS 2018–19.

gradual increase in the privatisation has seen a cut-down in secure formal employment and has pushed people on the margins to take up employment as street vendors. The economic vulnerability of street vendors often causes them to fall into a debt trap (Saha 2011). Street vending, thus, may be a last resort for earning a living for workers. Even casual work is a more lucrative alternative for them.

### Summary

Our study highlights the multifaceted challenges and vulnerabilities faced by street vendors in India. By categorising them into mobile and stationary vendors, we find that a significant proportion of female street vendors fall into the stationary category, which could be due to concerns related to safety and the greater domestic responsibilities. Moreover, we find that mobile street vendors tend to earn less than their stationary counterparts, largely attributable to the constraints imposed by the nature of their merchandise and the limited space available in their carts or baskets. In the larger context of the Indian labour market, we find that street vendors earn even less than those engaged in casual employment. This underscores the fact that street vending is often not a choice but a result of various constraints, compelling individuals to enter this occupation as a means of survival rather than a preferred livelihood option. This highlights the point that street vending is typically not a voluntary choice but rather a consequence of a range of limitations, leading individuals to enter this occupation as a means of survival rather than a preferred livelihood option.

We have highlighted the unique hardships faced by mobile vendors, particularly the economic vulnerability due to lower earnings and long working hours. Recognising that street vendors constitute one of the most economically disadvantaged segments of the working class, we emphasise the importance of enforcing the Street Vendors (Protection of Livelihood and Regulation of Street Vending) Act, 2014. This legislation can help in establishing fixed vending zones for mobile street vendors that can improve their economic prospects and working

conditions. There is also a requirement for street vendors to unionise which could bring them more security and higher bargaining power vis-à-vis the state in addition to protecting them from harassment by authorities. Unionisation has paid great dividends among women who have been associated with the Self-Employed Women's Association (SEWA).

We must acknowledge the indispensable role that street vendors play in the urban landscape of our country rather than considering them as transitory islands of "poor development." They are not merely sources of livelihood for themselves but also providers of essential patterns and services to city dwellers. Street vendors should be protected from eviction, harassment, and discrimination by authorities. Special focus should also be made to ensure the safety and security of female street vendors.

### NOTE

- 1 We have performed t-tests to conclude that the difference in incomes between mobile and stationary street vendors is significant.

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# Labour Regulations and Job Creation

## Evidence from India's Organised Manufacturing

BISHWANATH GOLDAR

Using plant-level panel data for India's organised manufacturing, the impact of labour reforms undertaken by six Indian states during 2014–17 on industrial employment is investigated. A labour demand function in organised sector manufacturing plants is estimated to show that easing labour regulations contributed positively to job creation in Indian manufacturing plants.

Since 2014, several states in India have raised the threshold of applicability of Chapter VB of the Industrial Disputes Act (IDA), 1947 from 100 to 300 workers, thereby lifting the requirement of government approval for the retrenchment of regular workers in medium-sized industrial firms or for closing the establishment.<sup>1</sup> This amendment in the IDA was done by Rajasthan in 2014 along with several other parallel labour reforms, including an amendment made to the Contract Labour (Regulation and Abolition) Act (CLA), 1970, where the applicability limit was raised from 20 to 50 workers.<sup>2</sup> Two recent papers (Goswami and Paul 2021; Chaudhary and Sharma 2022) have analysed econometrically the impact of the easing of labour regulations in Rajasthan in 2014 on industrial employment and found that it did not raise employment in organised manufacturing in the state. Both studies were based on data from the Annual Survey of Industries (ASI).

The findings of Goswami and Paul (2021) and Chaudhary and Sharma (2022) conflict with the findings of an analysis of the effect of labour reforms in Rajasthan presented in the *Economic Survey, 2018–19*. It was reported in the *Economic Survey* (2018–19: 69) that the labour reforms in Rajasthan led to a significant increase in (i) the number of factories employing at least 100 workers, (ii) the total number of workers employed, and (iii) the number of workers per factory. In a study of the impact of labour reforms in Rajasthan and Jharkhand on employment, Chakraborty and Mahajan (2023) have found a positive effect on total employment in factories (5% increase in firm size measured in terms of

employment) and on the proportion of women workers. Their finding about the impact of labour reforms on employment is at variance with the findings of Goswami and Paul (2021) and Chaudhary and Sharma (2022).

There is a large body of literature on how labour regulations in India have affected India's organised manufacturing on various performance parameters, including job creation.<sup>3</sup> One of the earliest research works on the impact of labour regulations on the performance of Indian manufacturing was a study undertaken by Besley and Burgess (2004), who considered the differences in how states in India amended the IDA from 1949 to 1992. They created a labour regulatory index to serve as the primary explanatory variable. The index was used along with other control variables to explain variations in various outcomes related to India's organised manufacturing, including employment and labour intensity. A negative effect on employment in organised manufacturing was found. The Besley and Burgess index has been severely criticised by Bhattacharjea (2006, 2021), bringing out several weaknesses of the index.

Several studies have concluded that labour regulations had an adverse effect on employment in Indian manufacturing. These include Ahsan and Pagés (2009), Kapoor (2014), Goldar and Ghosh (2015), and Sofi et al (2022). On the other hand, some studies did not find any significant adverse impact of labour regulations on manufacturing employment in India (for instance, Roy et al 2020). The studies by Goswami and Paul (2021) and Chaudhary and Sharma (2022) belong to the latter group.

Goswami and Paul (2021) and Chaudhary and Sharma (2022) used the difference-in-differences (DID) estimation methodology for their analysis. These two studies confined their attention to the effect of labour reforms in Rajasthan in 2014. It should be pointed out that while Rajasthan undertook significant labour reforms in 2014, five other states undertook labour reforms during 2015–17, similar to those undertaken in Rajasthan in 2014. The threshold of applicability of

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Bishwanath Goldar ([b\\_goldar77@yahoo.com](mailto:b_goldar77@yahoo.com)) is with the Institute of Economic Growth, Delhi.

the IDA was raised from 100 workers to 300 workers in Andhra Pradesh and Maharashtra in 2015, in Haryana in 2016, and in Jharkhand and Uttar Pradesh in 2017.<sup>4</sup> The threshold applicability limit under the CLA, 1970, was enhanced in these states in the same year as that of the IDA or in an earlier year. Hereafter, this group of six states (Andhra Pradesh, Haryana, Jharkhand, Maharashtra, Rajasthan, and Uttar Pradesh) shall be referred to as the “six labour-market-deregulating states.”

Goldar (2023a) applied the DID estimation methodology to study the impact of labour reforms on industrial employment in these six labour-market-deregulating states and found that labour reforms significantly enhanced employment in organised manufacturing. This finding is at variance with the findings of Goswami and Paul (2021) and Chaudhary and Sharma (2022) and is in line with the findings of Chakraborty and Mahajan (2023).

Goldar (2023a) noted that analysing reforms in only one state without considering several other states that undertook similar reforms in the next few years may limit the findings since the contemporaneous trends driven by factors other than the treatment of interest could confound the treatment effect, which violates the assumption of parallel trends (Baker et al 2021). In other words, if one bases one's analysis of the impact of labour reforms on a single case, there is the risk that the findings may be biased and misleading because of the confounding effect. The confounding effects tend to be neutralised when several cases are taken for the study.

This article deals with the same issue as in Goldar (2023a), namely the effect of easing labour regulations in Indian states on employment in organised manufacturing plants. The difference lies in the estimation methodology. While Goldar (2023a) applied the DID estimation methodology proposed by Callaway and Sant'Anna (2021), which has certain methodological advantages, in this article, an employment function is specified and estimated to ascertain the effect of labour reforms on employment. This approach makes it possible to gain insight

into some key factors (such as wage rate and export orientation) in determining employment generation in organised manufacturing plants in India, including the effect of easing labour regulations.

This article examines how the amendments in the IDA and CLA in Andhra Pradesh, Haryana, Jharkhand, Maharashtra, Rajasthan, and Uttar Pradesh during 2014–17 impacted employment generation in the organised manufacturing sector of the states. The basic data source for the analysis is the ASI.

### Labour Demand Function

A labour demand function is estimated from plant-level data from the ASI (for manufacturing plants) for the years 2008–09 to 2017–18. The labour demand function is specified as it is similar to that used in Basu et al (2005) and Babetsky et al (2012).

$$\ln E_{it} = \alpha_i + \lambda \ln E_{i,t-1} + \phi D_{it} + \theta_1 \ln V_{it} + \theta_2 \ln V_{i,t-1} + \beta_1 \ln W_{it} + \beta_2 \ln W_{i,t-1} + \gamma_1 X_{it} + \gamma_2 X_{i,t-1} + \mu t + \varepsilon_{it} \quad \dots (1)$$

In this equation,  $E$  denotes employment (number of persons employed),  $V$  denotes real gross value added (GVA) (deflated by the wholesale price index),  $W$  denotes real product wage rate (ratio of total emoluments to the total number of persons employed deflated by the price index used for value added), and  $X$  is a set of other controls used. The subscript  $i$  is for the factory and  $t$  is for time (year). It is assumed that the error term,  $\varepsilon_{it}$ , has zero mean and constant standard deviation,  $\sigma$ . It is assumed further that the error term is not serially correlated.

A trend term is included in the demand function with parameter  $\mu$ . This is expected to capture the influence of other variables (that is, other than those listed in equation [1]) moving linearly with time. The trend term may pick up to some extent the impact of non-neutral technical change or other structural changes taking place over time.

Three control variables are used for the analysis presented here ( $X$  in equation [1]). These are: (i) the share of contract workers in the total number of workers employed ( $C$ ); (ii) the export status dummy variable ( $XS$ ), taking the value of one if the plant is exporting, and zero otherwise;

and (iii) the share of information and communication technology (ICT) assets in total fixed assets ( $ICT$ ).

A positive relationship is expected between real value added ( $V$ ) and employment ( $E$ ) and a negative relationship between real product wage rate ( $W$ ) and employment ( $E$ ). The contract worker intensity variable ( $C$ ) is likely to bear a positive influence on employment generation, as borne out also by the findings of Goldar and Ghosh (2016), Goldar (2018) and Bertrand et al (2021).

Some studies have found a positive effect of exports on employment generation in India (Arora 2015), and some other studies did not find such a positive effect (Sasidharan and Raj 2015; Banga 2016). Hence, it is difficult to conjecture whether a positive or a negative coefficient of the export participation variable should arise in the estimated employment function specified in equation (1) based on factory-level panel data. The nature of the relationship between export status and employment among manufacturing plants is not indicated by the past research undertaken for Indian manufacturing. This is to be assessed empirically.

As regards the impact of ICT on employment generation, Kumar and Kumar (2022) find that increased ICT intensity has not enhanced employment generation in India's organised sector manufacturing. Similar findings have been reported by Paul and Lal (2021). Their analysis of the factors influencing employment in consumer goods manufacturing firms does not reveal a significant positive effect of ICT expenditure on employment. Vashisht (2017) has used an industry-level panel dataset for Indian manufacturing to analyse the impact of technology on employment. He has taken ICT capital share as one of the explanatory variables. The econometric results reported in the study show no indication of a strong positive impact of ICT capital share on employment in Indian manufacturing. Going by the findings of the above three studies, it appears that ICT intensity (or ICT capital share) does not significantly impact employment in Indian manufacturing plants. It would be interesting to see if the results of the present article bear this out.

In equation (1),  $D$  is a dummy variable for labour reforms. It takes the value of one for plants belonging to Rajasthan for 2014–15 to 2017–18. It takes the value of zero for plants belonging to Rajasthan for the observations from 2008–09 to 2013–14. The dummy variable  $D$  is assigned the value of one or zero for plants in Andhra Pradesh, Jharkhand, Haryana, Maharashtra and Uttar Pradesh, the other five states that undertook labour reforms during 2015–17 in a similar manner.<sup>5</sup> For plants in the other states included in the study, that is, those that did not undertake labour reforms, the variable  $D$  is assigned the zero value from 2008–09 to 2017–18. The dummy variable  $D$  is expected to capture the impact of labour reform on employment. The coefficient of  $D$  is expected to be positive because there are reasons to believe that labour reforms will create business conditions conducive to job creation.

Equation (1) allows for a lagged impact on employment and partial adjustment. It has been estimated by expressing the equation in the first difference. This operation yields the following equation (after replacing  $X$  with  $C$ ,  $XS$  and  $ICT$ ):

$$\begin{aligned} \Delta \ln E_{it} = & \mu + \lambda \Delta \ln E_{i,t-1} + \phi \Delta D_{it} + \theta_1 \Delta \ln V_{it} \\ & + \theta_2 \Delta \ln V_{i,t-1} + \beta_1 \Delta \ln W_{it} + \beta_2 \Delta \ln W_{i,t-1} \\ & + \gamma_1 \Delta C_{it} + \gamma_2 \Delta C_{i,t-1} + \phi_1 \Delta XS_{it} + \phi_2 \Delta XS_{i,t-1} \\ & + \eta_1 \Delta ICT_{it} + \eta_2 \Delta ICT_{i,t-1} + \xi_{it} \dots (2) \end{aligned}$$

By taking the first difference, the plant-specific unobserved heterogeneity gets eliminated. Since the lagged dependent variable is there on the right-hand side of the equation along with the wage rate which is likely to be endogenous, estimation has been done by using the instrument variable regression method applicable to panel data. Instruments have been used for both  $\Delta \ln E_{i,t-1}$  and  $\Delta \ln W_{i,t-1}$  (the lagged term  $\Delta \ln W_{i,t-1}$  has been dropped for the equation for convenience of estimation). The instruments used are: (i) the dummy variables for state location of plants, (ii) two-period lagged employment, that is,  $\ln E_{i,t-2}$ , and (iii) industry-by-state-by-year average values of the deflated average wage rate of directly employed workers.<sup>6</sup> For the last variable, the current year and one-year lagged values have been included among the instruments.<sup>7</sup>

To estimate the model, 10-year data on manufacturing plants have been taken for 13 states. The choice of states for inclusion is influenced by the control groups of states chosen by Chaudhary and Sharma (2022) for assessing the impact of labour reforms in Rajasthan. They used two criteria to determine the control groups of states: (i) Andhra Pradesh, Chhattisgarh, Jharkhand, Madhya Pradesh, and West Bengal were chosen on the grounds that the level of per capita income in these states is similar to that in Rajasthan; and (ii) Gujarat, Haryana, Madhya Pradesh, Punjab, and Uttar Pradesh were chosen because these are neighbouring states to Rajasthan. These 10 states are included here. This set of 10 states contains five of the six labour-market-deregulating states that undertook labour reforms during 2014–17. The other three states included in the present study are: (i) Maharashtra, which amended the IDA and the CLA in 2015, raising the threshold of applicability limits and (ii) Karnataka and Tamil Nadu, which are leading states in terms of their share in aggregate manufacturing sector gross value added in India. This brings the total number of states covered in the study to 13.

Summary statistics on key variables are presented in Table 1. The regression analysis is confined to only those plants that were accorded the operating status code of “1” (currently operating) in the unit-level datasets of the ASI. There are over 3,00,000 observations for currently operating plants belonging to manufacturing in the 13 states covered in the study. It is a highly unbalanced panel. When some variables are taken in the

difference form (which is required for implementing equation [2]), about three-fourths of the observations get dropped as the previous year’s value of those variables is not available.

## Regression Results

The estimate of equation (2) is reported in Table 2 (p 36). A positive relationship is found between employment and real gva, and a negative relationship is found between employment and real product wage rate, as expected. The estimated long-term elasticity of employment concerning real gva is about 0.24  $[(\theta_1 + \theta_2)/(1 - \lambda)]$ , and the estimated long-term elasticity of employment concerning the real product wage rate is about  $(-)\text{0.28} [ = \beta_1 / (1 - \lambda) ]$ . Thus, it may be inferred that, other things remaining the same, an increase in the real gva growth rate in manufacturing plants by 1 percentage point per annum will raise the growth rate in employment by about 0.24 percentage point per annum, and a 1 percentage point increase in the annual growth rate in the real (product) wages will lower the annual growth rate in employment by about 0.3 percentage point.

The results suggest that an increase in the employment share of contract workers (contract worker intensity) will positively impact employment growth. This inference may be drawn because the coefficient of  $\Delta C_t$  is positive and statistically significant and is much more prominent in numerical value than the negative coefficient of  $\Delta C_{t-1}$ . This finding of a positive effect of contract labour use on employment growth, as indicated in the results presented in

**Table 1: Summary Statistics**

Variables	Number of Observations	Mean	Standard Deviation	Minimum	Maximum
Employment (number)	3,05,729	212	872	1	1,21,007
Value added (₹ billion, deflated) excluding negative case	2,92,743	0.178	3.080	≈0	620
Deflated wage rate (₹ '000 per person per year)	3,05,672	122.3	102.2	8.1	1,393.4
Deflated wage rate of directly employed workers (cell averages)	3,06,824	954.4	325.3	232.2	4,051.3
Contract workers' share out of total workers	3,04,215	0.21	0.34	0	1
Export status (dummy variable; exporting=1, not exporting=0)	3,06,882	0.11	0.31	0	1
Share of ICT capital stock in total fixed assets	3,04,334	0.008	0.019	0	0.13

(1) Analysis is confined to organised manufacturing. States included in the table and the regressions presented later are Andhra Pradesh, Chhattisgarh, Gujarat, Haryana, Jharkhand, Karnataka, Madhya Pradesh, Maharashtra, Punjab, Rajasthan, Tamil Nadu, Uttar Pradesh and West Bengal. (2) Real value added and real wage rates are at 2011–12 prices. The real product wage rate is used for the estimation of the labour demand function, not the real income wage rate. Source: Author's computations based on ASI unit-level data for 13 states from 2008–09 to 2017–18.

Table 2, is consistent with the findings of Goldar and Ghosh (2016), Goldar (2018), and Bertrand et al (2021).

The results in Table 2 indicate that a change in the export status of a plant from non-exporting to exporting raises the growth rate in employment. Increased investment in ICT assets contributes to employment growth. The finding of a positive association between export market participation and employment among Indian manufacturing plants is at variance with the findings of Sasidharan and Raj (2015) and Banga (2016). Similarly, the finding of a significant positive effect of ICT capital share on employment is at variance with the findings of Vashisht (2017) and Paul and Lal (2021). It is difficult to explain why the results

differ. This dissimilarity in findings has, perhaps, something to do with the model specification adopted in the present article and the fact that the equation is estimated in the first difference form. No attempt is made here to reconcile the findings. This is beyond the scope of the article.

The coefficient of the dummy variable for labour reforms is positive and statistically significant. It may thus be inferred that labour reforms in the six labour-market-deregulating states during 2014–17 contributed to employment growth in manufacturing. This finding is at variance with the findings of Goswami and Paul (2021) and Chaudhary and Sharma (2022) and aligns with the findings of Goldar (2023a) and Chakraborty and Mahajan (2023).

In Regression 2, the analysis is confined to 11 states and observations for plants located in Karnataka and Tamil Nadu have been dropped, which make the control group of states the same as in Chaudhary and Sharma (2022). The results hardly change. The coefficient of the dummy variable for labour reforms is positive and statistically significant. The numerical value of the coefficient is almost the same as in Regression 1.

Regression 3 is confined to those plants for which the share of female workers in total employment does not exceed 1% in any of the observations available in the ASI panel data for 2008–09 to 2017–18. In such factories, there is very little gain from the amendment to the Factories Act by states to allow women workers to work in the night shift, and hence this confounding effect is controlled for. The results are almost the same as in Regressions 1 and 2. The coefficient of the reforms dummy is statistically significant and bigger in numerical value.

To check the robustness of the regression results reported in Table 2, the model specified in equation (2) has been re-estimated by applying the random effects model with an AR1 error structure. The need for incorporating an AR1 error structure arises from the findings of the analysis in Annexure 1 (p 39). To address the issue of endogeneity (which necessitated the use of the instrumental variable method in the results reported in Table 2),  $\Delta \ln E_{i,t-1}$  and  $\Delta \ln W_t$  have first been regressed on the dummy variables for state location of plants, two-period lagged values of employment, that is,  $\ln E_{i,t-2}$ , and industry-by-state-by-year average values of the deflated average wage rate of directly employed workers (the current year values and one-year lagged values), and then the predicted values of  $\Delta \ln E_{i,t-1}$  and  $\Delta \ln W_t$ , based on the estimated regression equation, have been used in the next stage for the estimation of the labour demand model in place of the original values of these two variables. The results obtained after making these changes in estimation methodology are reported in Table 3 (p 37).

The results presented in Table 3 (Regression 1) are similar to those in Table 2 (Regression 1) and, thus, do not require

**Table 2: Estimates of the Employment Function, First-differenced Instrument Variable (FD\_IV) Regression**

Dependent variable: logarithm of employment (first-differenced)

Explanatory Variables	Regression 1	Regression 2	Regression 3
$\Delta \ln E_{t-1}$	0.182 (0.021) ***	0.178 (0.025) ***	0.182 (0.029) ***
$\Delta \ln V_t$	0.168 (0.004) ***	0.156 (0.005) ***	0.145 (0.006) ***
$\Delta \ln V_{t-1}$	0.031 (0.004) ***	0.031 (0.004) ***	0.027 (0.005) ***
$\Delta D_t$ (labour reforms dummy)	0.014 ** (0.005)	0.013 ** (0.005)	0.018 (0.007) ***
$\Delta \ln W_t$	-0.229 (0.047) ***	-0.201 (0.052) ***	-0.192 (0.061) ***
$\Delta C_t$	0.478 (0.014) ***	0.481 (0.016) ***	0.515 (0.019) ***
$\Delta C_{t-1}$	-0.078 (0.012) ***	-0.081 (0.014) ***	-0.087 (0.017) ***
$\Delta X_t$	0.013 (0.004) ***	0.012 (0.004) ***	0.012 (0.005) **
$\Delta X_{t-1}$	0.007 (0.003) **	0.010 (0.004) **	0.006 (0.005)
$\Delta CT_t$	0.139 (0.085) #	0.192 (0.104) *	0.237 (0.124) *
$\Delta CT_{t-1}$	0.190 (0.082) **	0.313 (0.103) ***	0.186 (0.120)
Constant	-0.001 (0.003)	-0.002 (0.004)	-0.004 (0.004)
No of observations	75,844	53,590	40,949
No of plants	20,818	14,686	11,625
Centred R-squared	0.17	0.16	0.16
F-value and prob	1,310.1 (0.000)	914.5 (0.000)	720.3 (0.000)
Under-identification test (Anderson canon corr LM statistic) Chi-sqr, and prob	558.0 (0.000)	440.2 (0.000)	319.9 (0.000)
Weak identification test (Cragg-Donald Wald F statistic), Stock-Yogo weak ID test critical value at 10%	187.3 (critical value = 13.43)	147.9 (critical value = 13.43)	107.4 (critical value = 13.43)
Sargan statistic (over-identification test) and prob	1.48 (0.223)	2.64 (0.104)	5.24 (0.022)

States included in Regression 1 and Regression 3 are the same as listed in Table 1. In Regression 2, observations for plants located in Karnataka and Tamil Nadu are excluded. For Regression 3, the plants in which the share of women workers in total employment is very low (<1%) have been chosen for reasons explained in the text.

Standard errors are in parentheses. \*, \*\*, \*\*\* statistically significant at the 10%, 5%, and 1% levels, respectively, and # prob.<0.11. The change in lagged employment and the real product wage rate have been instrumented.

Source: Author's computations based on the ASI unit-level panel data.

much discussion. The autocorrelation coefficient is about (-)0.08. The coefficient of real gva is positive, and the coefficient of the real product wage rate is negative, which tallies with the results reported in Table 2.

**Table 3: Estimates of the Employment Function, Random-effects Model with AR1 Error**

Dependent variable: logarithm of employment (first-differenced)

Explanatory Variables	Regression 1	Regression 2
$\Delta \ln E_{t-1}$	-0.007 (0.005)	-0.011 (0.005) **
$\Delta \ln V_t$	0.154 (0.002) ***	0.166 (0.002) ***
$\Delta \ln V_{t-1}$	0.050 (0.002) ***	0.050 (0.002) ***
$\Delta D$ (labour reforms dummy)	0.013 (0.005) **	0.013 (0.006) **
$\Delta \ln W_t$	-0.091 (0.020) ***	-0.083 (0.021) ***
$\Delta C_t$	0.534 (0.007) ***	
$\Delta C_{t-1}$	0.009 (0.007)	
$\Delta X_t$	0.012 (0.004) ***	
$\Delta X_{t-1}$	0.009 (0.003) **	
$\Delta ICT_t$	0.111 (0.085)	0.125 (0.090)
$\Delta ICT_{t-1}$	0.182 (0.083) **	0.216 (0.089) **
Constant	-0.010 (0.002) ***	-0.011 (0.002) ***
Number of observations	75,844	76,055
R-squared (overall)	0.159	0.086
Estimated autocorrelation coefficient	-0.085	-0.085
Baltagi-Wu LBI	2.64	2.64
Wald Chi-square, and prob	13,891 (0.000)	6,688 (0.000)

States included in regressions are the same as in Table 1. Standard errors in parentheses.

\*, \*\*, \*\*\* statistically significant at the 10%, 5%, and 1% levels, respectively. The change in lagged employment and that in the real product wage rate have been replaced by their predicted value based on a regression on a set of instrument variables.

Source: Author's computations based on the ASI unit-level panel data.

It is important to note that the coefficient of the labour reforms dummy variable is positive and statistically significant in the results reported in Table 3, indicating a positive effect of labour reforms on employment growth. This confirms and reinforces the finding about the impact of labour reforms from the results reported in Table 2.<sup>8</sup>

The coefficient of export status and ICT intensity are positive and statistically significant, consistent with the results

reported in Table 2. Thus, the finding from the result in Table 2 that exports and ICT intensity bear a positive relationship with employment in manufacturing plants is borne out by the results in Table 3, obtained by a different estimation method. Similarly, a positive effect of contract labour use on employment growth is found in the results reported in Table 3, confirming the results in Table 2.

An alternate set of estimates of the parameters have been made after dropping the contract worker intensity variable and export status variables (Regression 2) to examine the sensitivity of the regression results to model specification. The results do not change much. The coefficient of the labour reforms dummy variable is positive and statistically significant in Regression 2, indicating a positive effect of labour reforms on employment in industrial plants.

The results in Tables 2, 3 and and Table A1 (Annexure 2, p 39) indicate that labour reforms raise industrial employment by about 1.5% to 2% for a given level of output. However, labour reforms are also likely to raise the level of output (by say 2%, as per the estimates of Chakraborty and Mahajan 2021, Annexure Figure A1, p 39). Thus, the impact on the employment of the existing firms will be about 4%. In addition, labour reforms will encourage the setting up of new plants (Goldar and Parida 2023); the results (Table 3) indicate a 50% increase in the rate of entry of new small and medium scale plants following labour reforms, and thus the total impact on industrial employment could even go up to 10%.

## Conclusions

In 2014, important changes in labour laws were made in Rajasthan towards labour reforms. The threshold of the applicability of Chapter VB of the IDA was raised from 100 to 300 workers, and several other analogous labour reforms were carried out (including the amendment made in the CLA, 1970 where the applicability limit was raised from 20 to 50 workers). Five other states undertook similar labour reforms in the next three years, 2015–17. These states are Andhra Pradesh, Jharkhand, Haryana, Maharashtra and Uttar Pradesh. The analysis presented

in the article indicated that the labour reforms in these six states during 2014–17 positively affected employment generation in organised manufacturing.

Recently, 29 labour laws in India have been codified into four labour codes. These were passed by Parliament in 2019 and 2020 and have received the assent of the President of India. These codes are: (i) Code on Wages, 2019, (ii) Occupational Safety, Health and Working Conditions Code, 2020, (iii) Code on Social Security, 2020, and (iv) Industrial Relations Code, 2020. Although the central government notified these codes in September 2020, no state has yet notified the requisite rules under these codes. Some states have published the draft rules so far.

The new labour codes are expected to be beneficial for Indian industries. In particular, the new labour codes are expected to increase employment in industries. The empirical findings of the present study, along with the findings of Goldar (2023a) and Chakraborty and Mahajan (2023) based on a more sophisticated estimation methodology, provide ample evidence to believe that significant gains in job creation in organised manufacturing are likely to occur from the implementation of the new labour codes.

## NOTES

- For a discussion on Chapter VB of the Industrial Disputes Act, 1947 and how it impacts industrial firms, see Bhattacharjya (2021), among others. Chapter VB of the IDA is often considered to be a major obstacle to labour market flexibility in India. By raising the applicability limit, a large section of industrial enterprises were freed from these restrictions.
- This change in the applicability limit of the CLA would encourage small industrial firms to hire contract workers.
- See Goswami and Paul (2021) for a review, among others.
- In one state, the amendment to the CLA preceded the amendment to the IDA by two years. As regards the amendment to the Factories Act, 1948, for raising the threshold of applicability, the year of amendment coincided with the year of the amendment to the IDA in two cases out of six. In other cases, the amendment to the Factories Act was done one to five years after the amendment to the IDA (VVGNI and IIPA 2021). The amendment to the Factories Act is likely to be much more important for unorganised sector than the organised sector as it enables an unorganised sector industrial enterprise to expand employment without attracting the provisions of the Factories Act. It needs to be recognised at the same time that gains may occur to some of the existing registered industrial unit with workers employed below 20, which would, however, be hard to ascertain in an

econometric study based on plant-level panel data, and hence, is not attempted in this article. The focus here is on the amendments to the IDA and the CLA. Since these amendments have been done mostly in the same year, the year of reform is determined by considering the year in which the IDA was amended.

- 5 This statement needs to be qualified. While at the core, the labour reforms in the six states were similar, there were some differences as well. Chakraborty and Mahajan (2023) considered only the labour reforms in Rajasthan and Jharkhand for their study. They excluded Maharashtra and Uttar Pradesh from their analysis because these states had amended the Factories Act to allow women to work at night shifts in manufacturing units. This tends to create a confounding effect. Since Chakraborty and Mahajan (2023) focused on female employment in manufacturing, this confounding effect was an important estimation issue for their analysis. However, in this article, the focus is on total employment in organised sector manufacturing plants and the share of women workers in total employment is small, about 8%–10%, on average. Hence, it appears that this issue can be ignored here without any serious consequences. However, since this issue may potentially impact the econometric results obtained and the conclusions drawn thereon, an alternate set of estimates of the econometric model has been made which addresses the above concern.
- 6 For each year and each two-digit industry in each state (or union territory), the average wage rate of directly employed workers has been computed (taking total emoluments of direct workers and dividing it by the number of direct workers) using the observations belonging to that cell (industry-by-state-by-year), and then the average wage rate has been deflated by the output (value added) price index and applied to all observations in that cell. It should be noted that ASI does not provide the wage rates. The computation of wage rate by dividing total emoluments by total persons employed introduces a division bias in the estimates. The instrument used is, however, the average wage rate at the industry-by-state-by-year level which tends to reduce the bias.
- 7 An alternate approach taken is to estimate equation (1) by the generalised method of moments (GMM) estimator. The results are found to be similar qualitatively. The Sargan statistic detects the problem of over-identification, and the results are presented in Annexure 2.
- 8 The findings of econometric research are in sync with the findings of field studies dealing the effect of labour reforms undertaken by Upadhyay and Kumar (2017) covering Rajasthan, Andhra Pradesh, Haryana, and Uttar Pradesh.

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### Annexure 1: Variation in Yearly Growth Rates in Employment in Organised Manufacturing Plants

A medium-term downward trend in employment widely prevails among organised manufacturing plants in India. If a period of 5–10 years is taken and the average growth rates in employment in different plants for this period are examined, one will find that about half of the plants experienced a decline in employment (Goldar 2023b).

Among the plants in which employment falls in the medium term, there is a section of plants in which there was an increase in real output (in some cases, a substantial increase in production). Among these plants, the downward trend in employment is driven mainly by reasons specific to the plants because job cuts are taking place alongside substantial increases in output.

An analysis of annual rates of growth in employment in manufacturing plants reveals that there is wide dispersion. Also, there is no consistency in the growth rates. This aspect is highlighted by Figure 1, which is based on

growth rates in employment in manufacturing plants in different years from 2010–11 to 2017–18. Only those plants (about 10,000 in number) are considered for the analysis, for which data are available for each of the eight years from 2010–11 to 2017–18. These are relatively bigger plants. The mean employment size is about 500 persons. The growth rates for seven years have been computed. For each plant, the counts of positive growth rates and negative growth rates in different years have been made, and the percentage distribution of the plants according to the counts is shown in the figure.

It is seen in Figure 1 that there is no consistency in the growth rates in employment at the plant level. In most cases, there is a good mixture of positive and negative growth, and the employment growth rate oscillates between positive change and negative change in a portion of the plants. Further examination of this aspect reveals that in about 36% of the plants, the growth rate in employment switched from positive to negative and negative to positive five or six times in seven years. These are clear cases of oscillating employment. Only in about 10% of the plants, there was no change in the sign of the employment growth rate over the years (all positive or all negative) or only one change.

Given the features of the data on employment growth in organised manufacturing plants in India, the assumptions about the probability distribution of the error term underlying the model estimates in Table 2 does not hold. While the time-invariant unobserved heterogeneity gets eliminated by differencing the logarithm of employment, this procedure does not take care of all heterogeneity among plants. Some plants are experiencing a medium-term downward trend in employment for reasons specific to the plants; some are having

regular, or more or less regular, oscillations between positive and negative growth in employment, and some others do not have such oscillations. All these are likely to affect the regression results. This issue of oscillation between positive and negative growth in employment in a sizeable section of manufacturing plants may be addressed partially by allowing an autocorrelated error structure. Accordingly, in the regression results presented in Table 3, an attempt has been made to consider autocorrelation by incorporating an AR(1) error structure because of the observed oscillating behaviour of employment in a portion of organised manufacturing plants.

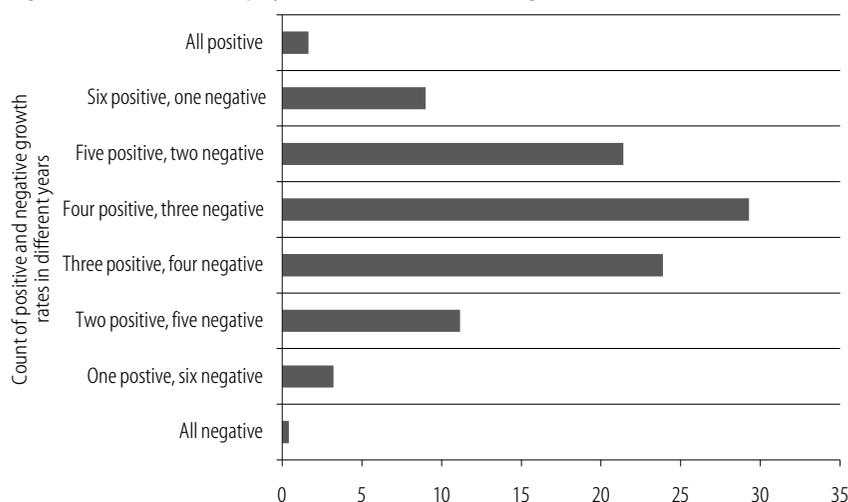
### Annexure 2: Labour Demand Function Estimated by the GMM Estimator

**Table A1: Estimates of the Employment Function, Generalised Method of Moments Estimator, Difference GMM, Two-step**

Dependent Variable: Logarithm of Employment	
Explanatory Variables	Regression 1
$\ln E_{t-1}$	0.123 (0.075)
$\ln E_{t-2}$	0.022 (0.018)
$\ln E_{t-3}$	0.087 (0.023) ***
$\ln V_t$	0.172 (0.005) ***
$\ln V_{t-1}$	0.045 (0.009) ***
$D$ (labour reforms dummy)	0.012 (0.005) **
$\ln W_t$	-0.458 (0.015) ***
$C_t$	0.419 (0.016) ***
$C_{t-1}$	-0.053 (0.037)
$XS_t$	0.013 (0.004) ***
$XS_{t-1}$	0.008 (0.003) **
$ICT_t$	0.227 (0.103) **
$ICT_{t-1}$	0.153 (0.096)
Trend	0.011 (0.002) ***
Number of observations	56,314
AR(1)	0.000
AR(2)	0.038
Sargan test, Chi-square and prob	107.4 (0.000)
Wald Chi-square, and prob	4015.4 (0.000)

Stars included in regressions are the same in Table 1. Robust standard errors in parentheses. \*, \*\*, \*\*\* statistically significant at the 10%, 5%, and 1% levels, respectively. Source: Author's computations based on the ASI unit-level panel data.

**Figure A1: Percent Distribution of Manufacturing Plants according to the Count of Positive and Negative Growth Rates in Employment in Different Years during 2010–17**



Data on about 10,000 manufacturing plants are used. Growth rates in seven years are considered. Source: Author's computations based on the ASI unit-level panel data.

# India's Strategic Choices

## From Non-alignment to Strategic Alignment

HAANS J FREDDY

India's shift from traditional non-alignment towards strategic multi-alignment under Prime Minister Narendra Modi's leadership is examined. The theory of alliances in international relations is analysed, highlighting the relevance of multi-alignment for enhancing India's security architecture, particularly against a rising China. The study addresses whether strategic alignment with a great power could benefit India's foreign policy by evaluating the potential advantages and consequences of this shift. It considers India's dilemma of abandoning non-alignment for stronger international partnerships in the face of evolving security challenges.

Why do nations seek to align? Why do they form such alliances? The simplest answer to this lies in nations' primary concern—national security. Alliances can be understood as formal associations of states with the intention of securing a nation's interests against other specific states. Stephen M Walt (1990: 1), in his book, *The Origins of Alliances*, raises several important questions in terms of choosing countries, aligning with one another, or why states choose to support the foreign policy of another. What options do leaders have while seeking external support for a threat? Why do great powers choose to protect some states over others and what makes weaker states choose a great power in order to provide protection over others? Alliance formations are determined by various factors such as: (i) balancing against an aggressor, (ii) bandwagoning with the state that poses a serious security threat, (iii) ideological solidarity, and (iv) foreign aid (Walt 1985: 5). What Walt seems to be arguing is that these factors play out well in bipolar systems; he draws his arguments upon Kenneth Waltz's assumption that bipolarity is the most feasible condition for a stable world and that superpowers will freely support third parties whose ideologies are similar (Walt 1985: 24). Whereas, with the rise of new powers like China that has brought with it the gradual arrival of a multipolar world, alliance formations have become more flexible where power has been relatively distributed equally among some major powers in the world. This relative equality in terms of power brings with it the flexibility of choice while selecting their partners as each major actor assumes that everyone is eligible to be a potential ally or an opponent (Duncan and Siverson 1982: 512). These multitudes of choices can also be attributed to the diminishing influence of the United States (US) and the ability of other great powers to manage not only the relations among themselves but also with the rest of the world, which seems to be ushering in a new world order (Zala 2017: 368).

In general, alliances have been a central feature of relations between states. References to alliances can be traced to the ancient scripts of Kautilya's *Arthashastra* through Thucydides, Niccolò Machiavelli and modern-day scholars. The significance attached to alliances between states has been unevenly matched to the understanding of how alliances are formed and promoted. This is predominantly because of the fact that alliances, in most cases, happen between unevenly matched states (in terms of power, economic resources, military capabilities, etc). Alliances can be understood as a collaborative agreement between two or more states for a particular period

Haans J Freddy ([haansfreddy@mcc.edu.in](mailto:haansfreddy@mcc.edu.in)) teaches international relations at the Department of Political Science, Madras Christian College, Chennai.

of time to pursue common goals and interests. It is assumed by at least one state in the alliance that it cannot achieve those objectives alone and that the need to cooperate is persuasive (Bercovitch 1988: 8). This could mean that states that are incapable of facing an enemy—who is relatively stronger—will cooperate with other similar states to increase their security by accumulating the combined strength of cooperating states against the common enemy. In other words, this could also mean what is generally called the “aggregation of power”—a classic argument that explains alliances. Seen from the arguments of Hans J Morgenthau and his assertions, there is a strong connection between the theory of balance of power and the alliance theory where states try to forge alliances with others in order to distribute power almost equally (Piccoli 1999). He further argues that nations have three choices that will enable them to maintain or increase their relative power positions: (i) nations can increase their power on their own, (ii) they can add to their power the power of other nations, and (iii) they can withhold from the power of other nations by joining with the adversary. When nations choose the first option, then they are in an arms race (Cold War, a probable example) and when nations opt for the second and third alternatives, they follow a policy of creating alliances (Morgenthau 2000: 201).

One of the primary concerns that states seek to address is the threats that emerge from a larger power by establishing alliances and this is done either by balancing or bandwagoning (Walt 1990: 3). From a realist point of view, alliances have been historically established among one weak state with another stronger state to preserve the balance and to defend themselves against possible aggression. Neo-liberals, on the other hand, suggest that alliances are made to establish economic gains between regimes that will be mutually beneficial (Niou and Ordeshook 1991: 3). Therefore, alliances among nations could mean that it is a formal or an informal agreement between two or more states which cooperate for preserving security (Walt 1985: 12). Snyder has defined alliances as formal associations between states for the use or non-use of military forces that are directed towards the security of members against other aggressor state(s) (Snyder 1990: 104).

### Alignments in International Relations

Alignment, however, is broader vis-à-vis alliances; alignment refers to mutual expectations among two or more states where each agrees to offer their support in times of conflict, dispute, or even war with other specific states. This may happen when states are directed with a common interest—whether they are weak or strong, that they must stand together against a common adversary (Chun 2000: 73). The essential distinction was first put forward by Snyder who argued that expectations among states appear with who supports whom, who defends whom, and who will resist whom and to what extent. This, he argues, is not limited to security concerns alone and goes on to say that alignment is a more fundamental concept than alliance which must be understood as alignment with or alignment against (Snyder 1991: 123–24). This kind of distinction enhances our understanding of the positive aspect of the former (alignment

with) and the negative aspect of the latter (alignment against) where the role of emerging powers is becoming increasingly important in present-day world politics (Colleen 2014: 147).

While it has been argued that alliances are formed in response to threats, there is still a strong disagreement over what kind of response there may be to the threat. Walt argues that alliances may be either for balancing or bandwagoning but Snyder suggests that the balancing and bandwagoning dichotomy offers a wide range of choices for states where there is a threat. States, in addition, have neutrality over aligning with or against a threatening power. Improving relations with another state may be another choice. Yet another choice is either to conciliate or compromise with the threatening state. A conciliation is a viable option for states when the threat is short of it being absolute, as in when the possibility of the threat being reduced is possible through diplomatic means. This could reduce the threat by offering a rational and legitimate alternative to allying with or against the threat. While both conciliation and balancing get a certain level of security, conciliation comes at the cost of some intrinsic value and balancing comes with the cost of autonomy. The point that Snyder tries to stress here is that there are various historical evidences that support a variety of choices that involve a combination of both conciliation and balancing. He emphasises that all such nuances are lost when one places significance upon a single theory of alliance that supports only balancing and bandwagoning (Snyder 1991: 128). Therefore, what is significant is that alliances are predominantly forged against someone with specific intentions that come into existence because of some conflict between rival states. George Liska (1962) demonstrates this dynamic by providing the example of the bipolar world where core power states are generally surrounded by weaker states and weaker states are drawn into alliances with the core power.

Moreover, it is not the ability of the core powers to flex their capabilities that attracts weaker states towards an alliance; rather, it is the result of conflict or the existence of threat that brings forward the possibility of an alignment between a weaker and a stronger power. Whereas, alignment without a conflict situation would mean that the resources of the stronger power in the alignment will not be useful when the weaker state’s individuality is put under stress. This means that alignment with a core power by a weaker state is often a result of a threat that may be on the weaker state by another superior power. Such an alignment will benefit the resources of the weaker state while denying access of the other threatening superior power to those resources (Kireyev 2004: 26).

Conflicts that lead to alignment manifest themselves on different levels—global, regional, and domestic. What is important to note here is, there may be conflicts that are dominant which have the potential to impact the entire system. But there are also non-dominant conflicts that are often regional—such as the conflicts in West Asia—yet will have global significance in terms of alignments. Domestic conflicts on many occasions may also lead to alignments emerging from the conflicting parties who seek to establish credibility for their actions (Kireyev 2004: 27). Liska’s work also suggests that ideological

factors could enable alliances to stay together despite setbacks where ideology stitches states together and translates itself into common interests as well as enabling them to evaluate the character, intentions, common threats, and rationales for uniting against the adversary (Liska 1962: 61). In the context of alliances and alignment in IR, it is important to understand how states choose whom to align with while considering why, when, and to what extent. The following section puts forward a brief examination of strategic choices in IR.

### Strategic Choices in International Relations

In general, the study of IR can be understood as the examination of relations between two or more states. In other words, it can be interpreted as the study of interstate relations. But what is more interesting in the context of this paper is why do states choose to establish relations with another state over other available options. This is a puzzling characteristic of the study of IR. There may be various factors that affect the choice of states to establish relations with another, such as economic, military, cultural, leader's choices, ideology, and more importantly, strategic reasons. This section deals with the aspect of strategic choice of states to establish cooperative relations that can benefit to both states or those seeking to establish a union based on their common interests. In this regard, the strategic choice approach is important to understand such choices that actors make in order to achieve their stated interests.

The strategic choice approach is based on three assumptions:

(i) Strategic problems and interactions are the units of analysis where the focus is on interactions between two or more states rather than on states which are generally predefined; (ii) understanding the environments in which actors interact will bring deeper analytical clarity in terms of the preferences and beliefs that each actor holds; and (iii) methodological rigour, which is to say that the analysis of strategic interactions will aggregate itself into other levels of strategic interactions which results in the prevention of changes in interactions, in terms of preferences, and beliefs that seem to be interpretations to the changes in observed behaviour (Lake and Powell 1999: 4).

The problem of strategic choice arises when there is a rapid rise of power in a particular state which has ambitions to become a hegemon. This kind of a problem arises because the international system functions in a state of anarchy where there is no common authority that is capable of enforcing laws which subsequently means that in order to survive actors must find ways through their own means to counter threats or even prevent them. States when making a strategic decision face the daunting task of balancing between past experiences, knowledge, and history which are limited and thereby are not capable of predicting what the other state in question will do. It is therefore difficult for states to decide upon a foreign policy to be completely rational and in almost all circumstances, they make decisions that will bring satisfactory rather than maximum outcomes (Zhongyou 2006: 199–200). It must be noted here that it is not only the weak states making choices to align with great powers but great powers also have their choices in

aligning with smaller or weaker states. This indicates that there exist asymmetries within the whole discourse of strategic choices (Edstrom and Westberg 2022: 98). In the study of IR, the words preferences and strategy have become significant in the context of this paper (Frieden 1999: 42).

### India's Foreign Policy: A Brief Overview

The foundations of India's foreign policy were laid during its independence movement. The principles of India's foreign policy include: (i) the belief that friendly relations with all nations across the world, (ii) the resolution of all conflicts through peaceful or diplomatic means, and (iii) pursuing the policy of non-alignment are significant in terms of the conduct of its IR (Chattopadhyay 2011: 95). Varun Sahini (2007: 21) points out eight drivers in terms of India's foreign policy. These include: (i) strategic autonomy, (ii) status transformation, (iii) its desire to play a significant role in international politics, (iv) energy security, (v) access to technology, (vi) regional consolidation, (vii) Asian balances, and (viii) overseas Indians. Sumit Ganguly notes that there are three distinct epochs in the history of India's foreign policy where the first was between the initial years soon after independence and lasted until 1962, the second phase began from 1962 to 1991, and the third phase started in 1991 which continues to a certain extent until this day (Ganguly 2012: 1). India pursued an ideational foreign policy that was based on personal, national, and systemic factors that contributed to the principal architect of its foreign policy—Prime Minister Jawaharlal Nehru—who supported multi-lateral institutions, placed significant constraints on defence spending, and advocated the process of decolonisation.

These found its explicit expression in the doctrine of non-alignment which called for an independent diplomatic path free from superpower dominance. These policy decisions also came from its past experiences being under colonialism and India was reluctant to limit its foreign policy choices by aligning with either of the superpowers (Ganguly 2012: 1). This was also due to the fact that India was critical of the US foreign policies vis-à-vis the Soviet Union. There were fundamental changes in the way India made its foreign policy decisions with the collapse of the Soviet Union. It had to cautiously follow a pattern of increasing its diplomatic ties with US, sought to improve its relations with the People's Republic of China (PRC), and made substantial efforts to develop relations with Southeast Asian states. Additionally, both Prime Ministers Rajiv Gandhi and P V Narasimha Rao were increasingly convinced with the fact that Pakistan's growing nuclear capabilities would eventually become a threat to India and they realised that the states with nuclear capabilities had little regard for their professed nuclear disarmament, let alone universal nuclear disarmament (Ganguly 2012: 4).

It is yet noteworthy to acknowledge the fact that non-alignment remained and continues to remain a cornerstone of India's foreign policy. For India, it was neither neutrality nor alignment but it signified freedom of action that was concomitant to its independence from colonial rule. Moreover, these standpoints that India took were seen as being either supportive of

the Soviet Union or in other words as said by John Foster Dulles, “those who are not with us are against us.” Dulles went further to state, “neutrality except under exceptional circumstances is an immoral conception.” India on the other hand interpreted such accusations as can be seen in the comments of Gaganvihari Mehta,

Whereas to the United States the fight against Communism is the supreme issue to which all other issues are subordinate. India holds that the real enemies of mankind are hunger, poverty, disease, racial discrimination, and the exploitation of weaker peoples by the powerful nations of the world. (Malone 2011: 155)

Over the years, the policy of non-alignment has been India's overarching principle in the conduct of its IR. As Sumit Ganguly notes, the principle of non-alignment faced criticisms following India's defeat in the 1962 war against the PRC. Criticisms called for the abandonment of the non-alignment policy both from the political opposition and from some circles of the attentive public. However, India did not abandon its policy of non-alignment formally (Ganguly 2012: 2).

### From Non-alignment to Multi-alignment

The world is witnessing a shift in terms of power with the rise of China in particular, coupled with states like India, Brazil, and Russia which are considered as (re)emerging nations whose power, economic wealth, and aspirations are growing towards influencing world politics. India is in particular seen as an important power that the West seeks to partner with as they have overlapping interests in current-day world politics. India, however, has proven itself to be a difficult partner for the West in terms of the latter's objective of promoting a liberal world order. In addition, India has joined potential counter-hegemonic coalitions such as BRICS (Brazil, Russia, India, China, and South Africa) which is opposed to the Western hegemony in world politics (Wojczewski 2017: 111). The idea of non-alignment in India's foreign policy pointed towards its desire for an independent third force in world politics which combined democracy, socialism, and struggling with other postcolonial states to promote a just and peaceful world. The end of the Cold War signalled that India had not only lost its strategic partner (Russia) which supported it with substantial military aid, it had not integrated itself fully into the world economy and had opposed globalisation.

These factors—after the end of the Cold War—had brought the realisation that countries like China and South Korea, who had opened to the world markets, were progressing in terms of their economic wealth and reducing poverty in their countries. India began to feel marginalised in an increasingly globalised world that was dominated by Western liberal ideals (Wojczewski 2017: 113). Over time, India's foreign policy and its foreign policymakers have sought to redefine its central tenet that appears as the non-alignment. Policymakers have now modified and reframed the non-alignment policy into multi-alignment instead of abandoning the former. Indian foreign policymakers and advisors suggest that India's non-alignment policy had its main objective of maintaining strategic autonomy and that with the changed circumstances in world politics, it can only

be achieved by aligning with all major powers in the world (Wojczewski 2017: 113).

Ever since Narendra Modi became the Prime Minister of India in 2014, India has hosted two Presidents of the US, the Chinese Premier Xi Jinping, and submitted its application to the Shanghai Cooperation Organisation (SCO) and is now heading the SCO (since 2022). India has also agreed to the US–India Joint Strategic Vision for the Asia-Pacific and Indian Ocean Region (IOPR) with the US and become one of the founding members of the Asian Infrastructure Investment Bank (AIIB). India has signed various defence deals with France and Russia and concluded significant loan and investment deals with China and Japan (Hall 2016: 271). Under the Look East Policy, India now has promised to Act East to build political, economic, financial, and relationships with countries in East Asia while also making efforts to link the West into West Asia by developing its relations with countries like Bahrain, Iran, Saudi Arabia, Israel, and the United Arab Emirates (UAE). What this indicates is that India has shown a categorical shift in terms of its foreign policy that is in stark contrast to the Cold War policy which pursued non-alignment towards implementing a strategy of multi-alignment. The evolution of this new approach in India's foreign policy has come over a decade of consolidation of its objective towards achieving its core interests and ideals in a world that is increasingly becoming uncertain in terms of security and survival (Hall 2016: 272). India's shift in terms of its foreign policy arises with one of its major concerns—the China challenge. These have come with the latter's growing influence and assertiveness in the South Asian region and also with the rise of political tensions with the US. Additionally, border disputes between India and China have increased India's concerns in this regard (Ranjan 2022: 382).

One must also note that it was not only during the Modi-led government that India began to look for a shift in terms of its foreign policy approach. During Prime Minister Manmohan Singh's first term in office, he outlined a significant foreign policy doctrine that can be seen in five important parts: (i) India's developmental priorities would determine its relations with the world; (ii) rejecting critics of India's economic globalisation increased efforts for greater integration into the global economy; (iii) economic factors shaped India's engagement with great powers with a specific focus on access to energy; (iv) India needed to establish deeper ties with South Asian countries; and (v) India had the responsibility to support states who were beginning to transition from a closed to an open economy while becoming a democracy (Hall 2016: 277).

It was thus explained by scholars such as C Raja Mohan and Parag Khanna that India's foreign policy looked like a neo-Curzonian approach that placed centrality (geographical) enabling it to engage in a multidirectional engagement that is multi-alignment (Hall 2016; Mohan and Khanna 2006). It would therefore require prudent navigation through the complexities that would arise when seeking to cooperate, coordinate, avoid rivalry, and build or join coalitions with countries that share common goals, which would subsequently

result in mutual benefits for all cooperating countries (Raghavan 2017: 328).

### Strategic Options

While India continues to rise, it however faces difficult challenges that predominantly appear in the form of China that has disturbed the geopolitical balance in the Asian region. As already noted, the China challenge for India seems to be the most significant among all other challenges that are present in terms of its foreign policy. While India has been treading its path on a very cautious note, it is important for it to decide how best it can secure its interests. Rajesh Rajagopalan thus points out important strategic options that India can choose from—staying unaligned, hedging, building indigenous military power, forming regional partnerships, internal balancing, and aligning both with China and the us (Rajagopalan 2017: 1). The question would be to ask, which of these options (or if there are any other) would be the best for India to pursue in preserving its interest given the present strategic environment? These choices must be made on the existing scenario and not based on what the situation may be in the future, as in the future the balance of power context may present a completely different picture to be dealt with.

In the case of India, it has been following a policy of non-alignment and only recently there have been serious efforts towards multi-alignment; there is always an effort to be independent in terms of India engaging in world affairs. This will require balancing from within. States in general will prefer internal balancing vis-à-vis external partnerships since it will require dependence on others. While such an approach may help in building indigenous military capabilities, which are essential for balancing existing external threats and, in the case of India, its suspicion of alliances comes with the fear of entrapment and abandonment, which it may help avoid. Three advantages may be identified in this regard: (i) Internal balancing may help India pursue, to some extent, its legacy of non-alignment; (ii) it steers off from contentious domestic debates that may arise in the context of which state to align with. It is expensive as it requires an increased defence budget for the nation; and (iii) aligning with one country may bring with it an increase in tensions with another country which can be reduced with such initiatives.

Further, in the case of India, it has pitfalls as it will have to balance threats from China and Pakistan. Some of the important challenges that are clearly present in the context of India seeking to follow a policy of internal balancing will have to note that there is China whose military spending is much higher; it has a much larger military that India cannot counter on its own. India's border infrastructure, particularly the roads and railway networks, are developing at a very slow pace vis-à-vis China. Accelerating the pace of border infrastructure will be required, if there is a conflict on the border to move supplies to the front lines, which is significant for India. China's technological developments have outpaced India's and China uses its defence budget either to purchase or build its own military equipment than India (Rajagopalan 2017: 17). India also cannot

afford to be overconfident when it has to deal with Pakistan as it may be supported with military resources by China that it may need during a war with India. The Ukraine example is a classic one in this context as to how even a small state can withstand a much larger state during a war when supported by other greater powers. India's capability to internally balance against China or any other threat may not be altogether absent as its gross domestic product (GDP) has been growing at a reasonably good pace which does not do away with the hopes for such a proposition (Rajagopalan 2017: 18).

For India, external threats appear from two predominant countries—China and Pakistan—in which the latter seems to be the most significant. China's rise has brought to India challenges that appear in terms of its influence in the IOR, and New Delhi has been concerned with China's encirclement, entrapment, and its choking behaviour. Recent events such as the docking of the Chinese research vessel in Hambantota have raised serious concerns within India and how this challenge can be managed. India has joined various multilateral organisations such as BRICS and the SCO, but it has not helped it much in terms of the China challenge. What is more important in the context of India and China is that the border disputes between both countries have reached a point of no return after the Galwan clashes. This has contributed to India's increasing worry about the rise of China and its influence in the region (Kumar 2021: 342). China is considered by almost all states in the Asian region as a threat because of its military capabilities, its claims over the South China sea, and its entrapment through the Belt and Road Initiative (BRI) and the China–Pakistan Economic Corridor (CPEC), and the debt trap. China's BRI has been opposed by India particularly in the context of the CPEC as it violates its sovereignty. China has also been encircling India by building ports in Sri Lanka and Pakistan.

These aggressive behavioural patterns of China have been viewed by India with deep distrust that needs to be seen as standing in contrast to India's cherished values of a democratic and a rules-based international order (Kumar 2021: 345). Internal balancing although promises, to a certain extent, some way of balancing against China, yet it is not feasible at the moment and external balancing seems to be more effective in this regard. For this, India has to either align or partner with the us; with us's military capabilities, its eagerness to align and cooperate with India allows for the desirability of this option. This also comes with the understanding that the us has been supportive of India's membership with the Nuclear Suppliers Group (NSG) and its permanent membership in the United Nations Security Council (UNSC). Cooperation with the us seems to be more feasible as the us does not pose any threat in terms of its territory or influence in the region vis-à-vis China. Mohan (2014) suggests that India's comprehensive national power is likely to increase through cooperation with the us. Ashley J Tellis (2006) who is also a strong advocate of Indo-us cooperation shares a similar view in which he emphasises that preventing any single power to dominate the affairs of Asia constitutes one of its foundations of cooperation with India.

An Indo-us alignment does promise many benefits for India through which it could help in promoting peace, stability, and security in the region while maintaining a favourable balance of power. Rajagopalan suggests that, so far, the Indo-us relationship has been bandwagoning for profit but now it has to bandwagon for balancing against an ever-imminent threat—China. This is because bandwagoning for balancing would emphasise on military cooperation and in the present scenario, it would mean much more where bandwagoning for balancing would involve partnering that is based on a common interest and the need to balance China (Rajagopalan 2017: 26). With the rise of China and the gradual decline of the us, hard balancing seems to be more complex and is discouraged. This can be explained in the context of India by taking into account the trade ties that it has with China which amounts to about \$90 billion. T V Paul (2005: 48) suggests that when two countries' economic fates are interlinked, hard balancing will be a difficult option. Vikash Chandra (2018: 420) puts forward a similar argument where he emphasises that India must be able to strike a balance between a declining America and a rising China and that India must learn to coexist with China rather than turning it from an adversary into an enemy.

If one were to compare the gap between China's and India's economic and military capabilities, the difference will only inform a prudent observer that hard balancing against China will be foolhardy as the benefits will be much lesser than the costs incurred to build it (Kumar 2021: 349). What is more interesting is India's changing position from non-alignment to multi-alignment where it has diversified its relations with the leading powers of the world. Earlier it had relied on strategic partnerships for defence procurements; now it is gradually being avoided as it seeks to engage in strategic dialogues with the us. India has sought to establish strategic partnerships with the leading powers of the world which means it is close to pursuing a common interest with other countries who share the same ideals in the context of the politico-security aspects without a formal alliance (Paranjpe 2013: 4).

India is a regional power and is constrained by various factors; particularly in the geostrategic context, it has China and Pakistan that have nuclear capabilities. In addition, China and Pakistan are allied which is indicative of the fact that India is blocked continentally in the north and the vast expanse of the Indian Ocean in its south, which makes it difficult to project its power that would have global geostrategic significance. India is thus a middle power whose military and economic capabilities have been increasing and which has brought it closer to its ambition of being one of the leading powers in recent times. What is significant in this context is that we are witnessing the emergence of a multipolar world in which there are challenges and opportunities for India's foreign policy. Barry Buzan in this context suggests that with the emergence of rising powers, there is the possibility of a new world order where the probability of diffusion of power is imminent. There will be no superpowers but many great powers and a lot of regional powers in the international system (Kukreja 2020: 11). The multipolar world may offer India with many opportunities to

engage in the process of shaping the world order. India was constrained during both the bipolar and unipolar world order. However, with the decline of Western dominance, it presents opportunities for emerging powers like India to engage more effectively in shaping world affairs (Kukreja 2020: 11).

The Modi-led government has indeed made important developments in terms of its relations with the us. There have been transformations in bilateral agreements in areas where India was one of the prime targets for sanctions by the us. With these changes, India has become one of the most important allies of the us. India under Modi has engaged in rigorous efforts to advance its nuclear, military, and dual-purpose technologies. Towards this end, the Indian government amended its civil nuclear liability law to allow us companies to invest in India for civil power generation which will help it to take the maximum advantage through the Indo-us nuclear deal (Sridharan 2017: 62). It is important to take note that the rising us–China tensions are a matter of concern for India if it were to choose aligning with the us to balance against China. As China is gradually becoming the largest economy and is also enhancing its military capabilities to seek the oust of American primacy, the world is at a very destabilised moment in which power transition may or may not be completed. In addition to these factors, the rise of strong leaders, who find their legitimacy in a heightened sense of nationalism, is an opportunity and a danger too. Strong leaders may be an advantage in terms of making difficult decisions that will be required during challenging situations. However, their over-reliance on nationalism might be a limitation in that they may not be flexible when it is needed. No one has seen how this dynamic will play out in situations like these (Menon 2020: 12).

### Concluding Remarks

What can be India's choices when it comes to its foreign policy? We have seen that there have been changes in terms of its foreign policy orientation and there has been a gradual shift from non-alignment towards multi-alignment. However, India's choices towards aligning with any major power in the world are limited. If India has to align with the us in order to balance itself against China, it will have to face negative consequences as it has a large trade reliance on China. Militarily, China is a larger power and the possibility of India aligning with the us will increase the possibility of a military confrontation with China. While India has been supported in terms of military equipment such as the s-400 systems, it has not been able to really forge a deeper relationship with Russia. These may be attributed to India being a little cautious about the Russian closeness with China. How would Russia respond if there was a military confrontation with China given the recent developments that are present in Ukraine and how has China reacted to Russian aggression? Clearly, these challenges remain for India when it comes to its foreign policy decisions—to align or not align. The question therefore remains that India has choices but there are more negative outcomes if a choice were to be made to align with any one of the major powers. India cannot bandwagon with China as that would only lead to China's

dominance over India for obvious reasons. To sum up, there are options for India in this multipolar world where it can work with all major powers to secure its interests. India has the option of strategic partnerships which means it can cooperate—minus the alignment—with whom it would want to thereby reduce the risk of those negative consequences that may arise while aligning with a great power. In another context, India must also acknowledge that it is China's neighbour and that it cannot avoid the China factor (including the threat) in terms

of its foreign relations. India must coexist with China and strive towards establishing a peaceful relationship with China. Solving the border problem with China remains one of the core issues for India and this can only be achieved through bargains and compromises from both sides in this dispute. India's foreign policy cannot completely ignore the policy of non-alignment, nor can it abandon its recent shift towards multi-alignment. There must be a balance between both these paradigms in terms of foreign policy decisions.

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# Electric Vehicles as a Solution to Energy Transition

## A Case Study of Electric Two-wheelers in Delhi

PROBAL P GHOSH, JYOTI K PARIKH

Transport is the second major carbon dioxide emitter after the power sector in India. Electric vehicles reduce overall pollution and demand for imported fuels. We surveyed electric two-wheeler owners—mainly salaried class, small business persons, and students travelling up to 10–30 km per day. A survey of 24-hour charging patterns during lean and peak months shows that e2W growth on the grid in the near-to-medium term may not add to peak load, but instead may add revenue for utilities during off-peak times.

Urban transport in India is growing on the back of economic growth, especially in cities like Delhi. This has given rise to the problems of greenhouse gas (GHG) emissions and air and noise pollution. Early transition to electric mobility is part of the ongoing efforts for greening the grid everywhere. In that, the two-wheeler segment is of particular significance as the first step to private motorised mobility in India, accounting for 84% of all passenger transport vehicles. India has the largest number of two-wheelers in the world at approximately 168 million. It reflects the mobility of the lower and middle classes, essential for national prosperity and satisfaction. Hence, we focus on the electrification of the transport sector and its benefits and challenges, keeping the two-wheeler segment in mind.

### Two-wheeler Traffic in India

The share of two-wheeler vehicles out of passenger vehicles in 2019–20 was 84% and 67% for India and Delhi, respectively (Government of India 2021). Car ownership was only 23 per 1,000 in India (International Road Federation 2018), and was 146 per 1,000 in Delhi in 2016 (authors' calculation). This highlights the significance of two-wheelers in the vehicle stock for India in general and also for Delhi. With prosperity, there would be a transition to four-wheelers, but that transition is slow in India and even so, two-wheelers may dominate the markets of developing countries, as also India. Table 1 shows the two-wheelers and cars owned per 1,000 of population in various developed and developing countries.

India has a significantly high number of two-wheelers per 1,000 persons compared to other countries. India's two-wheeler vehicle ownership went up from 17 per 1,000 in 1992 to 128 per

**Table 1: Per '000 Capita Ownership of Two-wheelers (2W) in Select Countries, 2015**

Countries	Total 2W Vehicles (in '000s)	2Ws as Share of Total Passenger Vehicles by Road (%)	Ownership per 1,000 People
India* (2018)	1,68,975	84	128
Indonesia	1,05,150	0.86	403
China	68,261	0.30	50
Brazil	25,311	0.32	122
Italy	9,740	0.20	161
United States	8,679	0.07	27
Germany	4,314	0.09	52
South Korea	2,181	0.11	43
United Kingdom	1,248	0.04	19
Kenya**	763	0.52	15
South Africa***	367	0.05	7

Source: International Road Federation (2018), \*ICCT (2012), \*\*GIZ (2019), \*\*\*Government of South Africa (2019).

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Probal P Ghosh ([pghosh@irade.org](mailto:pghosh@irade.org)) and Jyoti K Parikh ([jparikh@irade.org](mailto:jparikh@irade.org)) are with the Integrated Research and Action for Development, New Delhi.

1,000 in 2018. While in India the ratio of two-wheelers to four-wheelers is 3:1, globally there are 600 million two-wheelers against 1.4 billion cars, that is, a ratio of 1:2.3, which is in the opposite direction. This means that more work is needed to understand the problems of mobility in developing countries. In developed countries, two-wheelers may be an additional vehicle for daily errands, sports, or recreational activity, but in developing countries, it is the first step to motorised mobility as one climbs the income ladder, that is, from poverty to middle class. It is an upward transition from walking, cycling or taking public transport to private vehicles needed to improve productivity, time-saving, and comfort levels while making a living, fulfilling family needs such as shopping, ferrying family members, availing health and education, and pursuing family leisure activities. With a growing middle class, the ownership is likely to grow, although the wealthier class may gradually opt out and prefer four-wheelers. However, that trend is still not as large as the purchase of the first two-wheelers. Recently, the private sector has also focused on this and a large number of electric two-wheeler (e2w) models are available in the market at increasingly competitive prices.

Two-wheelers are important for local and global emission reduction strategies for India. Several policies and measures are underway, among which promotion of electric vehicles is critical. We present a case study of Delhi, where e2w has operated since 2016, which presents an alternative for other cities that suffer from the same malaise. Further, how this transition is taking place needs to be observed from its initial stages. As motorised two-wheelers are unique mainly to developing countries, much of the literature focuses on four-wheelers. What are the difficulties of e2w adopters, their preferences, and the electricity charging demand and load imposed on the grid? What are the social, economic, and technological factors driving e2w usage?

In addition to vehicle owners, different bodies such as manufacturers, electricity providers, and urban planners would have to come together to enable seamless and efficient use of their electric vehicles by owners. The data or vehicle information relevant to and needed by each of the above may be obtained through a survey. For auto manufacturers, the income bracket of buyers, professions, range (distance travelled per full battery charge), purpose of travel, daily distance travelled, and charging behaviour; for urban planners, accommodating charging and parking facilities; for the power sector, how and how much electricity to be provided and how to control the load judging from current behaviour by different pricing policies for sharing the load. Currently, India is in the nascent stages with few consumers who are dynamic and trendsetters, and their numbers are expected to explode soon. We have used the responses from a semi-structured survey to conclude the user behaviour of e2w owners and further insights into the e2w market.

### Literature Review

In recent times, there have been several studies on electric vehicles in India. Bansal et al (2021) evaluate the valuation of fuel economy and future fuel costs for Indian consumers while

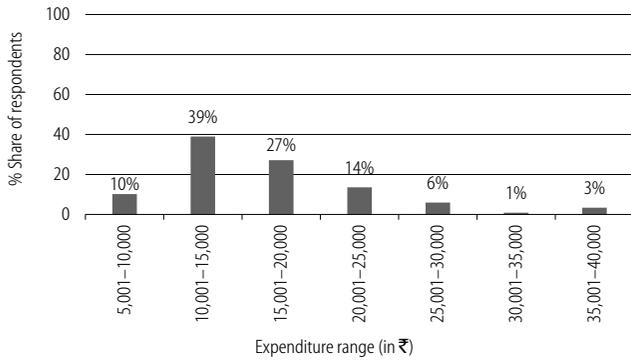
purchasing a two-wheeler, using survey data from more than 8,000 respondents across India. The results show that a high value is attached to future fuel cost savings for respondents. Cherry and Cervero (2007) discuss the reasons behind electric vehicle usage, the users, and the factors that influence travel by electric bikes, based on surveys of two-wheeled vehicle users in Chinese cities, Kunming and Shanghai. The results suggest that electric vehicles can be considered an affordable and higher-quality mobility alternative to public transport. They quantified the safety and environmental impacts of e2ws but found that lead-acid battery pollution has increased in China. On similar lines, Hardt and Bogenberger (2019) evaluate the usage and attitude towards e-scooters in Germany for 38 subjects with six vehicles, using travel diaries and pre- and post-surveys. The results show that e-scooters are majorly used for daily trips and sufficient charging infrastructure is provided for these vehicles. Filippini et al (2021) studied the effects of informational nudges on their stated choice of buying an electric motorcycle, using novel data collected from 2,000 potential motorcycle buyers in Kathmandu, Nepal. The results show that informational nudges positively impact the stated choice of consumers.

Fyhri and Fearnley (2015) discuss the usage of e-bikes in comparison to bicycles in Norway. Using a stated preference survey of households in Hanoi, Vietnam, Jones et al (2013) evaluated the effects of incentives and technology on the adoption of electric motorcycles. The results show that adoption is positively affected by economic incentives and technological improvements. Wei et al (2013) evaluate the travel characteristics of over-standard electric bikes using the revealed preference survey in Shanghai, China. The results suggest that public transport and bicycles are strong competitors of standard electric bicycles. Weiss et al (2015) discuss the environmental, economic, and social performance of e2ws in Europe, suggesting that the latter will substitute conventional two-wheelers in the European automobile market, leading to decreased pollution and impacting electricity generation outside of urban areas. Eccarius and Lu (2020) investigate the factors influencing university students to opt for electric scooters on a shared basis in Taiwan, using data collected from survey responses of 471 participants. The results show that the low preference of university students is because of their lifestyle, mobility needs, and lack of perceived compatibility with personal values. Majumdar et al (2016) discuss the performance of e2ws, based on their running conditions in traffic in urban areas and compare it with their conventional internal combustion engines' counterpart using primary surveys in Kolkata. The results showed that the specific energy consumption of e2ws is significantly lower in comparison to conventional two-wheelers.

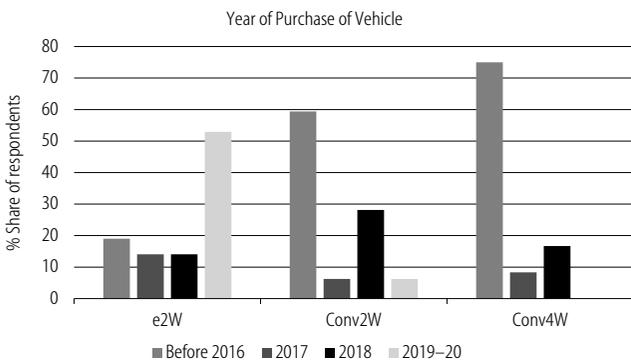
### Research Design

We carried out a survey for a sample of 122 respondents who owned e2ws between August and September 2020, with the recall or reference period being February 2020 (pre-COVID-19). The sample of owners was chosen randomly and contacted for an interview. Those who agreed to be interviewed were

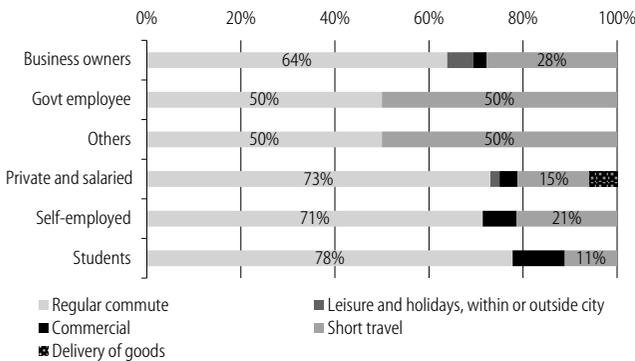
**Figure 1: Monthly Expenditure Profile of Respondents**



**Figure 2: Shift in Purchase Behaviour, 2016–20**



**Figure 3: Purpose of Using e2W, by Profession**



approached for the survey. The survey respondents were spread across Delhi city and composed of individuals of varying ages, genders, professions, educational backgrounds, and monthly expenditures (Table 2). The survey responses are analysed for social and economic profile, ownership pattern (number and type of other vehicles owned), usage and distance travelled, charging pattern (when, how, and where), technological parameters associated with charging, consumer satisfaction, and factors determining consumer decision to purchase e2ws. A detailed explanation of the survey sample choice is discussed in Annexure A (p 137).

In the survey sample, 91% of respondents are male and 9% female. In terms of their occupation, 43.3% of the respondents are in the private sector and salaried, 30% are business owners and the rest 26.7% are government employees, self-employed, students, and others. The share of graduates was 39.2% followed by those with education at senior secondary level at 26.7%, secondary level 12.5%, pre-secondary level 10.8%, and the rest

accounted for postgraduates and undergraduates. The maximum proportion of respondents of around 43% belong to the age group of 25–40 years.

**Respondent Preferences**

Figure 1 shows that the average monthly expenditure range for respondents lies between ₹7,000 and ₹40,000, after which they may go for four-wheelers. Nearly 39% of respondents lie in the ₹10,000–₹15,000 range followed by 27% in the ₹15,000–₹20,000 range.

It can be seen from Table 3 that 66% of respondents own only one e2w whereas 34% own an e2w in addition to a second or third vehicle that may be a conventional two- and/or four-wheeler. Among the respondents who own a second or third vehicle, 47% own a petrol two-wheeler, followed by 29% who own an e2w, while 24% own petrol four-wheelers as the second or third vehicle. This implies that people opting for a second and those already owning a two-wheeler or car have a high chance of possessing e2ws as their second or third vehicle.

As shown in Figure 2, nearly 50% of the surveyed e2ws were purchased in 2019–20 and the majority of the conventional two- and four-wheeler vehicles were purchased before 2016, implying an increase in the preference for e2ws in recent times. The survey shows that 50% of respondents who are first-time buyers (in this case owning only one vehicle—the e2w) are private and salaried professionals with 25% also having an additional conventional two-wheeler. Among the remaining who purchased e2ws as their second or third vehicle and own more than one vehicle, 19% are business owners who own a conventional two- and/or four-wheeler apart from an e2w.

In terms of vehicle usage, according to survey responses, government employees work for five days a week, salaried and self-employed for six days, and business owners work for seven days. Figure 3 shows that the regular commute followed by short travel is the main purpose of using e2ws across professions. Government employees and other category professions

**Table 2: Profile of Respondents**

Respondent Profession	Share (%)	Educational Qualification	Share (%)
Private and salaried	43	Postgraduate	9
Business owners	30	Graduate	39
Self-employed	11	Undergraduate	2
Students	8	Senior secondary	27
Government employee	7	Secondary	13
Others—priests	2	Pre-secondary	11
Environmental Awareness	Share	Age Group	Share
Air pollution	99	18–24	26
Water pollution	29	25–39	43
Noise pollution	15	40–55	28
Climate change	7	56+	4

Source: IRADe survey.

**Table 3: Vehicle Ownership by Family and Fuel Type**

	(%)
No of vehicles owned by family	
1 (only e2W)	66
>1 (e2W + others)	34
Second vehicle ownership by fuel type	
Electric two-wheelers	29
Petrol two-wheelers	47
Petrol four-wheelers	24

Others include conventional two- and/or four-wheelers.

use e2ws for short travel and few respondents among business owners and private and salaried categories use e2ws for leisure and holiday travel too. This shows that users generally prefer e2ws for travelling fixed, known and small distances. As our intention is to use the results for implications of the electricity load on the grid due to electric vehicle charging, we capture the behaviour on working and non-working days. We further investigate this by analysing the distance travelled using e2ws by respondents of various professions.

As shown in Table 4, the majority of e2w owners use their e2ws or conventional two- and four-wheelers for short-distance travel of 10–30 kilometres (km) per day. This distance can be handled by a one-time charge. A majority of them do not use public transport. Only 28% of respondents on working days and 25% on non-working days reported using public transport, that too for travelling short distances of 1–10 km. This reconfirms that e2w adopters in Delhi are people whose travel

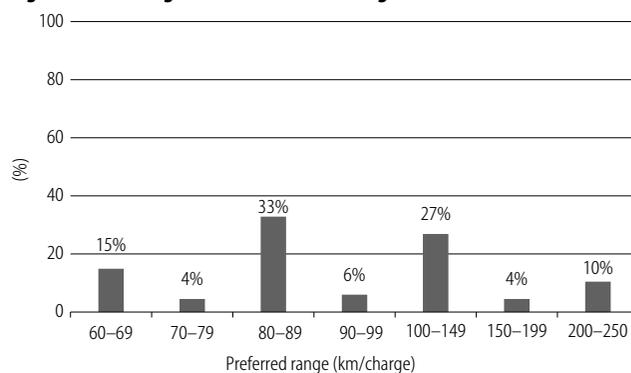
**Table 4: Daily Distance Travelled (km) by Electric, Conventional Two- and Four-wheeler, and Public Transport on Working and Non-working Days (%)**

		0	0–10	11–20	21–30	31–40	41 and Above
e2W	Working day	1	28	31	23	9	8
	Non-working day	43	42	10	3	2	2
Conventional two-wheeler	Working day	82	6	6	3	–	3
	Non-working day	55	6	15	6	9	8
Conventional four-wheeler	Working day	82	–	8	2	4	4
	Non-working day	84	2	2	4	–	8
Public transport	Working day	70	28	2	0	–	–
	Non-working day	66	25	7	2	–	–

**Table 5: Consumer Opinion and Preferences of Early Buyers (%)**

Importance of Factors to Early Buyers While Purchasing e2Ws					
Likert	Neutral	Important	Very Important		
Capital cost	–	10	90		
Range	2	5	93		
Charging time	2	9	88		
Operating and maintenance cost	1	5	94		
Availability of variants	3	24	73		
Availability of public charging	5	20	73		
Performance of electric vehicles versus conventional	4	17	79		
High resale value	6	32	61		
Government policies	–	3	97		
High petrol price	1	9	90		
Emission/environment factors	1	4	95		
Satisfaction of Respondents for Various Factors					
Likert	Not Satisfied	Somewhat Satisfied	Neutral	Satisfied	Very Satisfied
Range	5	9	8	34	44
Charging cost	1	1	3	2	94
Charging time	4	9	6	30	51
Availability of charging infra	56	2	33	3	7
Waiting time at public charging stations	–	89	2	7	3
Quality of aftersales service	1	4	4	13	78
Satisfaction of consumers					
Satisfaction level	1	1	10	40	48

**Figure 4: Percentage Share of Preferred Range Classes**



requirements are mostly for regular and short-distance travel. Table 4 shows that 55% and 82% of e2w owners who also have conventional two-wheelers do not use the latter on working and non-working days. Similarly, 82% and 84% of e2w owners who also have conventional four-wheelers do not use the latter on working and non-working days. This implies that after purchasing and using their e2ws, they do not use their conventional two- or four-wheelers and hence a policy of buyback of the latter in exchange of e2ws may be very effective.

The average distance travelled by public transport, conventional four- and two-wheelers, and e2ws are 9 km, 41 km, 29 km and 22 km respectively on a working day and 10 km, 51 km, 22 km and 11 km respectively on a non-working day.

### Consumer Considerations

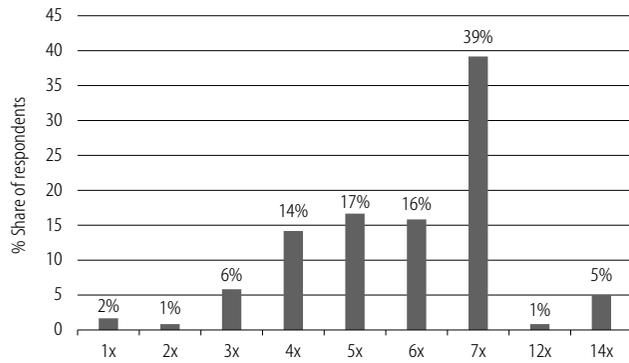
In terms of awareness of environmental issues, almost all the respondents were found to be aware of air pollution as an environmental issue: 29% are aware of water pollution, 15% of noise pollution, but only 7% of climate change. In terms of their knowledge of electric vehicles, the respondents were aware of their environmental benefits.

More than 90% of respondents ranked all the factors identified by the survey (Table 5) as (very) important for purchasing an e2w. Capital cost, range, operating and maintenance cost, government policies, high petrol price, and emission/environment were factors considered very important by at least 90% of respondents while the availability of variants and of public charging, the performance of electric vehicles vis-à-vis conventional, and high resale values were factors considered less important by the respondents.

The satisfaction level for the current status of range is 44%, charging time 51%, and waiting time only 3%. This is a message to manufacturers, whereas availability of charging infrastructure is to be addressed by planners and is a matter of public policy. These are the areas of concern to which future focus should turn. The e2ws are in the categories of moped, scooter, and motorcycle. The average range of scooters from the survey is 54 km per charge and the motorcycle is 104 km per charge. No mopeds are being used by the respondents in the survey. Based on their usage of e2ws, respondents provided the preferred range as shown in Figure 4.

Among the respondents who made suggestions on preferred waiting times at charging stations, 58% preferred a waiting time of one hour followed by 36% preferring two hours. Oth-

Figure 5: Frequency of Charging per Week



er suggestions by respondents include the availability of charging infrastructure every 2–3 km or 10 km, every petrol pump and/or major commercial place, and preference for service centres all around. Given the current scarcity of infrastructure, one can say that the early adopters have factored this into their decision as they have an option of charging it overnight or at the office. However, for the next level of expansion, availability of fast charging will reduce the waiting time and improved charging infrastructure can increase the usage of electric vehicles. Overall, 88% e2w users are satisfied with the performance of the vehicle while only a small and limited share of consumers are dissatisfied.

**Parking and Charging**

The availability of parking and proximity of charging facility is an important aspect of e2w mobility. For early buyers, slow or regular charging is an essential requirement for electric vehicles, especially during the night or idle time. Survey responses show that 43% of early adopters have a garage parking facility, 31% use public or on-street parking, 26% park in society spaces, and 1% park in other available spaces for charging during this time. The survey responses showed a lack of awareness and availability of public- and office-charging facilities. Only 9% of respondents had charging options available at their office and only 6% were aware of the public charging facilities near their homes and offices. This is despite 50% of respondents having public charging facilities within 5 km of their homes and 60%, within 5 km of their offices.

The average monthly charging cost for all respondents with e2ws is estimated to be ₹64. Table 6 also shows that more than 90% of respondents charge at their homes and that office and shop charging are almost negligible. Currently, no respondents were found to be using public charging because the early adopters knew the range limitations at the time of buying and thus mostly use it for short distances.

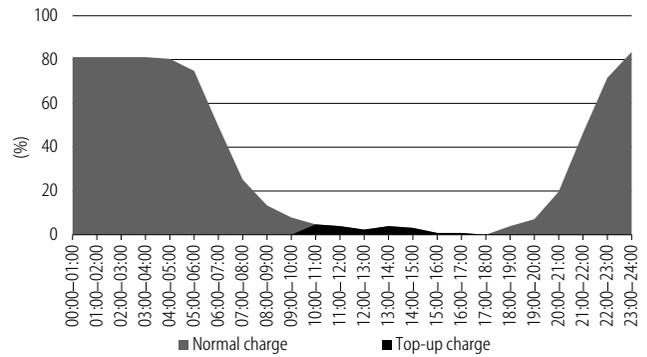
Table 6: Location and Cost Preference for Charging

Location of Charging (% of Respondents)	Average Cost per Charge (₹)
Home	91
Office	5
Shop	4

Figure 5 shows the number of times respondents charged their e2ws per week, with 39% charging their e2ws seven times a week, that is, once a day. It also means that 94% of respondents do not charge their e2ws more than once a day due to short-distance travels.

The regular charging time on weekdays and weekends is from 7 pm to 8 am. Survey respondents did not explicitly

Figure 6: Estimated Proportion of e2W Charging at Each Hour on a Working Day



mention top-up charging. The respondents were asked for the number of instances of charging on their last working and non-working day and on each instance of charging, the type of charging (regular or top-up), the plug-in and plug-out time, the plug-in and plug-out state of charge (soc) because, depending on the already existing charge in the batteries, the time taken to charge may vary.

Table 7 provides the class-wise frequency distribution table for plug-in soc and the corresponding class-wise average soc, average battery charged, and average time taken from sample responses for weekdays and weekends. The average plug-in soc during full charge for e2ws in a working day is 24%, and for non-working days, 34%.

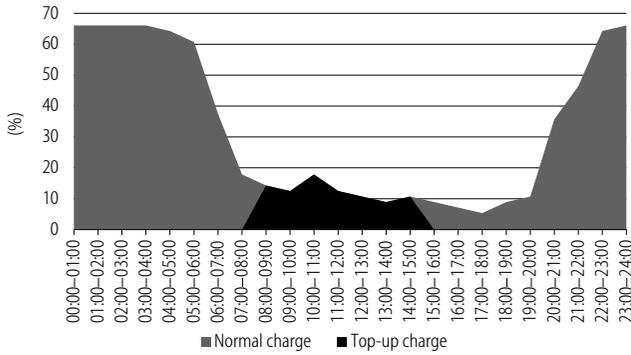
Of the total responses, 32% respondents have soc in the 10%–19% range followed by 31% in the 20%–29% range on a working day. On non-working days, 27% of respondents have soc in the 50%–59% range followed by 25% having soc in the range of 40%–49% range while plugging in for charging their vehicles.

The plug-in and plug-out time for each charging by the respondents on working and non-working days were used to compute the proportion of vehicles charging at each hour of the representative weekday and weekend as shown in Figure 6 for working days and Figure 7 for non-working days. The transport use of e2ws is lower over the weekends as regular commute to office, a major purpose of using e2ws as shown above, is not needed on weekends. Therefore, the e2w on weekends are

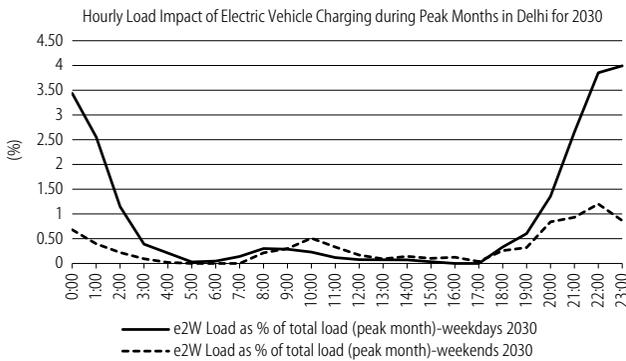
Table 7: Weekend and Weekday Charging-related Battery Parameters

SoC Plug-in Weekday (%)	Average SoC (%)	Remaining Battery Charged (%)	Average Time Taken (hrs)	Share of Respondents (%)
10–19	12	87	9:57	32
20–29	20	79	8:41	31
30–39	30	68	7:46	17
40–49	40	57	8:05	13
50–59	50	44	3:06	4
60–69	60	33	3:40	3
Average	24	74	8:38	100
Weekend				
10–19	11	89	9:17	21
20–29	20	78	10:05	11
30–39	30	70	7:25	13
40–49	40	58	8:51	25
50–59	50	49	6:04	27
60–69	60	40	3:30	4
Average	34	65	7:57	100

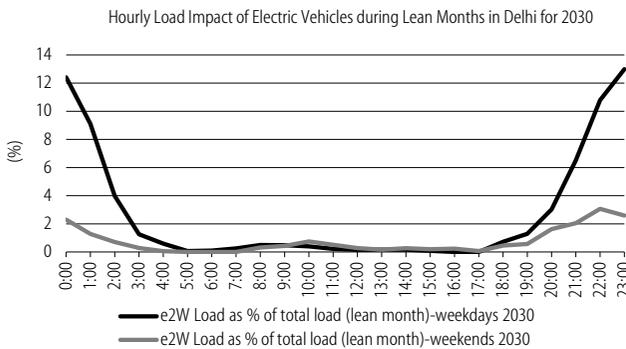
**Figure 7: Estimated Proportion of e2W Charging at Each Hour on Non-working Day**



**Figure 8: Share of Electric Vehicle Load in 2030 in Total Load for Peak Month of June for Weekdays and Weekends**



**Figure 9: Share of Electric Vehicle Load in 2030 in Total Load for Lean Months of June for Weekdays and December for Weekends**



used for other purposes resulting in different charging profiles on weekdays and weekends for e2ws.

**Impact on Grid**

Given the above consumer preferences and charging patterns, what would be the impact on the grid, due to larger-scale adoption? When should more electricity for charging be planned? We address this by estimating the hourly impact on grid due to e2w charging in Delhi for 2030. To calculate the electricity load at each hour of the day, vehicle type-wise (segregated into groups and assigned sample share) technological characteristics like battery capacity in kilowatt-hours, time taken to charge from 0% to 100% (in hours), time of plug-in and plug-out, soc at the time of plug-in (for weekdays and weekends), and total count of vehicles surveyed were collected from the survey sample. No vehicle in the survey was with more than 70% plug-in soc. Common plug-out

time is assumed for identical vehicles with similar soc and plug-in time, and connected with the same rate of charging. If the charging rate is explicitly not available, then using the above data and percentage of individual vehicle type in total vehicle count, the charging rate is calculated as  $\text{Charging rate} = \{(\text{Battery capacity}) / (\text{Time taken to fully charge from } 0\% \text{ to } 100\%)\}$  for various soc values. Using the calculated charging rate, electricity load on the grid is calculated using the following equation:

$$\sum_{n=1}^{24} (\text{Grid})EV \text{ Load} = \sum_{n=1}^{24} [\text{SoC} \times N \text{ charged} \times \beta]$$

where  $EV$  = electric vehicle,  $n$  = hour of the day,  $(\text{SoC})_n$  = state of charge of the vehicle in  $n^{\text{th}}$  hour =  $[(\text{SoC})_{n-1} + \frac{\beta}{\omega}]$ , where,  $\beta$  = charging rate, and  $\omega$  = battery capacity,  $N$  = number of vehicles charged.

Based on the authors' calculations, the estimated count of e2ws in 2019–20 was 3,346, which is 0.1% of the total estimated two-wheeler vehicle stock in Delhi but is projected to climb up to 34% with 1.5 million purchased units. It is assumed that all the e2ws are charged on weekdays and only 45.51% of the vehicle count is charged over weekends for 2019–20 and 2030 based on survey results. Using the above e2w vehicle count and analysing the impact of charging, the hourly load for weekdays and weekends out of the total hourly demand in peak and lean months load is found to be insignificant for 2019–20 as the count of estimated e2ws is only 0.10% of the total vehicle count in Delhi. However, the impact is significant for 2030 due to the high share of 34% of e2ws in the total two-wheeler count. The impact of e2w hourly load on weekdays and weekends out of the total peak and lean month load for 2030 is significant and shown in Figures 8 and 9. As can be observed from Figure 8, in a typical peak month weekday, hourly load can be 4% of the total hourly load for the time slots of 10 am–11 am. The additional demand (7 pm–10 pm) can be problematic as it would impose a burden on the grid. However, hourly load is close to 1% between 6 am and 5 pm, which does not pose much problem during daytime, except at mid-morning for a top-up charge. However, in a typical lean month weekday, the hourly load can be 13% of the total load for the time slot of 11 am–12 pm and as low as 0% for the time slot of 4 pm–5 pm and 5 pm–6 pm. For a typical lean month weekend, the hourly load can be 3% of the total weekend hourly peak month load for 10 pm–11 pm and as low as 0% for 5 am–6 am, 6 am–7 am, and 7 am–8 am. Thus, it can be stated that the impact of e2w load on the grid on weekdays and weekends for peak and lean months would not only be not problematic up to the year 2030 but will add revenues during off-peak times. However, the extra load during 7 pm–10 pm should be avoided, which is critical for lean months, when the demand for power is less.

**Conclusions and Policy Implications**

The electrification of vehicles can reduce air pollution, GHG emissions, and imports of petroleum products. The Government of India aims to have electric vehicles as 35% of all total vehicles by 2030 (*Economic Times* 2024). Two-wheelers are a large part of vehicles in Delhi. The adoption of e2ws is rapid as

they can charge them at home or the workplace and their daily use is limited. What is the customer profile of e2ws and how would their charging patterns impact power supply? In order to encourage electric mobility of two-wheelers, relevant information has to be provided to auto manufacturers, electricity providers, and urban planners. We carried out a survey of e2w owners in Delhi to understand who they are, how far they drive, where they park, and when and where they charge. The sample respondents are among the early buyers of e2ws. Therefore, conclusions would have to be drawn with caution. For example, respondents have already chosen a variant and now no longer care for more variants or they have bought it knowing that a special charging infrastructure does not yet exist. New variants introduced may encourage more new buyers, increasing electric vehicle penetration and their impact on the grid. Keeping these possibilities in mind, the summary findings and policy conclusions for e2ws are as follows.

**Buyer's profile:** Most early adopters of e2ws in Delhi belong to relatively lower-middle-income households with a monthly household expenditure range of ₹5,000–₹20,000. Higher income brackets may subsequently shift to four-wheelers. They are graduates or senior secondary educated and in the working-age group of 25–40 years. Among first-time vehicle buyers, salaried individuals and the second- or third-time buyers, business owners are among the biggest early adopters of e2ws in Delhi.

**Travel use patterns:** The average range of electric scooters in survey was 54 km per charge and for motorcycles, it was 104 km per charge. Most early adopters of e2ws across professional categories use it for regular commutes and short-distance travel. They have replaced their previously owned conventional vehicles with e2ws for work-related travels. They travel between 1 km and 30 km per day, the estimated daily average being 22 km on working days and 11 km on non-working days. Nearly 55% of respondents who own a conventional two-wheeler along with an e2w, do not use their conventional vehicles on working days. Their daily vehicle kilometres using their previously owned conventional two- and four-wheeler were estimated to be 29 km and 41 km respectively on working days and 22 km and 51 km on non-working days.

**Purchase and usage of e2Ws:** Capital cost, range, operation and maintenance cost, government policies, high petrol prices, and environmental impact as factors are considered very important by 90% respondents. While availability of variants and public charging, performance vis-à-vis conventional two-wheelers, and high resale value are factors considered less important in their decision to purchase e2ws. Most respondents were satisfied with their e2ws, however, respondents expressed less satisfaction with the existing range, charging time, availability of charging infrastructure and waiting time at public charging stations. About 62% of respondents suggested improvements in the range, charging infrastructure, cost of charging, availability of fast charging, and better after-sales service quality. Nearly

39% of those who suggested improvements in the range, preferred a range of 80–100 km/charge. The preferred waiting time was one hour for 36% of respondents who suggested lower waiting times. Other suggestions include public charging stations every 2–3 km, or within every 10 km, or at every petrol pump and major commercial place, and free regular servicing in the first year and improved service quality with service centres all around.

**Availability of charging facilities:** Most of the e2w owners, who are early adopters, have access to basic parking facilities at home and hence, 90% of the respondents charged from home. Only 9% had charging options at their office and 94% were not aware of public charging facilities near their home or office. Among those respondents who are aware of public charging stations, only 60% and 50% have a public charging station within 5 km of their home and office respectively. None of the respondents visited a public charging station and so were unaware of the waiting times there.

**Charging behaviour:** Among the survey respondents, 39% charge their e2ws once a day, and 55% charge less than once a day implying an average charging frequency of at the most once a day. Regular charging requires around 7 hours to 8 hours and takes place in the time slot of 7 pm to 8 am. Only 9% and 16% of the respondents did top-up charging on a weekday and weekend respectively. During regular charging, 63% of respondents had 10% to 30% plug-in soc on working days and 52% had 40% to 60% plug-in soc on non-working days.

**Impact of e2W hourly load on the grid:** Assuming a 35% share of total two-wheelers by 2030, the impact of charging by e2ws on the total hourly load of the evening peak hours on weekdays and weekends is estimated to be around 4% and 1% respectively in the peak months and 13% and 3% respectively in the lean months. The increase in load during early morning hours will increase electricity distribution company (DISCOM) revenues.

This survey provides important information to auto manufacturers about the expectations for battery size, range, charging time, the demographic profile of buyers, their usage patterns and purpose of use. To urban planners, the survey identifies factors like environmental awareness and how to facilitate e2w usage by providing parking facilities and charging infrastructure. To the electric utility planners, the survey provides information about their charging needs and hourly electricity demand on the grid, and provision of electricity. It reassures that a sudden rush to electric vehicles may not jeopardise electricity supply and may even be helpful to increase the off-peak demand and capacity utilisation.

Our survey also covered other passenger vehicles, such as electric three- and four-wheelers (private and taxis), which will be published separately. We believe this to be the first comprehensive primary survey of e2ws that can throw some light on many decisions for various stakeholders. It provides a baseline survey that could be repeated to check for changes in consumer profiles over time or in other cities to understand the impact on the grid due to electric vehicle charging patterns.

With consumer awareness and availability of timers and appropriate time-of-use prices, charging patterns can be shifted to off-peak hours without the need for additional power capacity and bring more revenues for DISCOMs. These conclusions should

be reviewed after a few years to assess changes in demand and supply structures. Over the next five to 10 years, the electric vehicle growth can be managed, provided prudent planning measures to avoid 7 pm to 10 pm charging time slots begin soon.

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Annexure A: Sample Size of Surveys and Reliability

The survey undertaken in this study covered 120 current private users of e2w. Compared to usual travel surveys, the number of sample points included looks low. Although, ideally, a larger sample would have reduced sample variance and improved precision, at the time of the project, the market penetration of electric vehicles was very low and so it was decided to conduct small surveys.

The smaller sample size neither makes the estimates unbiased nor less precise. The survey data is used to compute various average values of variables and ratios of interest. Firstly, the computed sample averages and proportions are unbiased estimates of the actual population averages and proportions. For theoretical proof, see Chapter 2, theorem 2.1 in Cochran (1999), which states that the sample mean is an unbiased estimate of the population mean. This is independent of the sample and population size. The variance of the estimated sample average  $\bar{y}$ , denoted as  $V(\bar{y})$ , and estimated sample proportion  $p$  (possessing a particular characteristic) as  $v(p)$  is given by below equation,

$$V(\bar{y}) = \frac{S^2}{n} \cdot \frac{(N - n)}{N} \dots (A.1)$$

where  $S^2$  is the variance of the population distribution,  $N$  is the population size, and  $n$  is the sample size; see Theorem 2.2 in Cochran (1999). The equation below gives the variance of sample proportion of characteristic of interest,  $v(p) = \frac{(N-n)}{(n-1)N} pq \dots (A.2)$  where  $p$  is the estimated sample proportion of people having a characteristic of interest in the total sample and  $q=1-p$ . See Theorem 3.3 in Cochran (1999).

Table A1: Estimated Population Size of e2W in Delhi, 2019-20

	2019-20	Total Registered from 2015-16 to 2019-20
Motorcycle/scooter	956	1,743
Motorcycle/scooter-with side car	0	0
Mobile workshop	0	0
Moped	9	47
Total registered vehicles	965	1,790
Total estimated on-road vehicle stock	2,185	
Sample size as % (FPC) of total for electric vehicle early adopters based on total registered vehicles of e2Ws	6.7%	
Sample size as % (FPC) of total for EV early adopters based on total on-road vehicle stock of e2Ws	5.5%	

Source: Vahan Database for Delhi, viewed on 21 January 2022.

The target population for the survey in this study is e2w users for which the numbers are very low compared to the whole vehicle stock. Hence, the population for the survey in consideration is finite.

The factor,  $\frac{(N-n)}{N}$ , is called the finite population correction (FPC) which tends to one as population size  $N$  tends to infinity. Thus, quoting Cochran (1999: 24), Section 2.6 "provided that the sampling fraction  $n/N$  remains low, these factors are close to unity, and the size of the population as such has no direct effect on the standard errors of the sample mean." Cochran further adds, "In practice the FPC can be ignored whenever the sampling fraction does not exceed 5% and for many purposes even if it is as high as 10%. The effect of ignoring the correction is to overestimate the standard error of the estimate  $\bar{y}$ " (p 25).

For an estimate of the size of population, we consider the total registered e2ws in Delhi and also estimated total on-road vehicle stock of e2ws in Delhi using survival rates for two-wheelers. This is shown in Table A.1 below.

The FPC for early adopters of e2ws is shown as the percentage of the total registered stock and on road vehicle stock of two-wheelers. The FPC for e2ws is 6.9% and 5.7% based on registered vehicle stock or on road vehicle stock respectively. Therefore, even though the target population for the surveys is low, the FPC based on the survey is below 10% and therefore, the variance of the estimated sample average is as shown below.

$$V(\bar{y}) = \frac{S^2}{n} \dots (A.3)$$

And the estimated sample proportion " $p$ " is as shown below.

$$v(p) = \frac{1}{(n-1)} pq \dots (A.4)$$

Thus, sample variance depends only on sample size and not on the size of the population under consideration. In statistics, a sample of size  $n > 30$  is generally considered to be a large sample and since the sample size is 123 which is greater than 100, we can consider the sample variances as a close approximation of the population variances and the sample estimates as reliable.

# Trajectories of Crime against Women in Contemporary India

## Exploring Trends and Patterns

RAMBOOSHAN TIWARI, SHUBHAM NARAYAN DIXIT

In India, incidents of crime and crime rates against women are increasing steadily during the 21st century with considerable distributional inequalities among the states, districts, and metropolitan cities. Most of the high-crime-prone districts are located in north and central India. Crime against women varies among the social groups and the crime against Scheduled Castes and Scheduled Tribes women is relatively high. The composition (nature) of CAW varies considerably across the states, with cases of dowry deaths largely concentrated in the Hindi-speaking states.

Crime is socially deviant and unacceptable behaviour punishable under the law of the land. Women are the victims of violence and other criminal behaviours in their personal lives as well as in the public sphere. Crime against women (CAW) is a worldwide phenomenon, yet it has no universally accepted definition. The United Nations General Assembly's (UNGA) resolution adopted defines violence against women as "any act of gender-based violence that results in or is likely to result in, physical, sexual or psychological harm or suffering to women" (UNGA 1993). The extent of violence against women is the most sensitive indicator to measure crime in any society. The CAW in India is considered cognisable under the Indian Penal Code (IPC)<sup>1</sup> and Special and Local Laws (SLL) (NCRB 2016). This study considers both IPC and SLL CAW for analysis. In 2018, the Thomson Reuters Foundation, in a global poll, levelled India as "the most dangerous country for women" ahead of Syria and Afghanistan (Goldsmith and Beresford 2018). The culture of silence on domestic violence in India, the norms that perpetuate silence, and the stigma around domestic violence in family and community settings also permeate the formal institutional response. Available evidence indicates that this silent crime reigns rampant within Indian homes. Not only has the overall number of cases of CAW gone up but there has been a dramatic increase in violence against women within the household (Bhatla and Rajan 2003).

The National Family Health Survey (NFHS)-5 has investigated the experience of women aged 18 to 49 with domestic violence. The NFHS-5 data reveals that 29.3% of the women in India have faced some kind of domestic violence while 6% have experienced sexual violence in their lifetime (IIPS and ICF 2021; Roy 2022). In this context, analysing reported CAW is of utmost importance. The number of violent crimes in India, especially those against women, in official statistics, is increasing with each passing year (Himabindu et al 2014). The increasing use of communal, caste, and ethnic identities in the pursuit of political gains is another factor behind the spreading of violence. Increasing participation of women in work and politics (especially at the grassroots level) is making them more vulnerable to crime. Moreover, attempts to control and intimidate women in decision-making processes also lead to violence. The CAW has roots in the male-dominated socio-economic, legal, and political order (Mukherjee et al 2001). There are many socio-economic factors and the subculture of violence is responsible for regional variation

Rambooshan Tiwari (*rambo\_bhu@rediffmail.com*) teaches geography and Shubham Narayan Dixit (*shubhamndixit@gmail.com*) is a research scholar at the Department of Geography, Indira Gandhi National Tribal University, Amarkantak, Madhya Pradesh.

in CAW (Tiwari 2022a). Furthermore, it has been argued that the theory of “diffusion and contagion” can be extended in the explanation of regional variation in the CAW where the term “diffusion” refers to the process of spread, while “contagion” refers to the process which propels such spreads (Cohen and Tita 1999). Thus, diffusion-induced individual interaction (due to proximity) among the areas with the culture of women subjugation and subculture of violence could lead to emergent collective behaviours and aggregate patterns of CAW (Kabiraj 2023). Hence, the underlying causes that led to state- and district-wise variation in CAW are complex and vary according to region.

Urbanisation is a significant determinant of CAW; higher crime incidents against women characterise Indian metropolitan cities. However, the “big-city hypotheses” have limited applicability in the Indian context, as many relatively small metropolitan cities (<2 million population) of India are characterised by higher crime rates against women. It is argued that metropolitan cities function as magnets and attract everything and everyone—including crimes and criminals—and many metropolitan cities have a deterministic impact on the regional distribution of CAW (Tiwari 2022b).

Scheduled Castes (scs) and Scheduled Tribes (sts) are probably the most vulnerable social groups having a long history of oppression and discrimination. The route of caste-based discrimination against scs and sts can be traced to the Hindu philosophy and the colonial rule in India has strengthened it in many ways (Kumar 2004). Despite legal protection, scs and sts are discriminated against and oppressed on a daily basis by the so-called upper caste groups. They are still victimised due to historical prejudice against them (Abraham 1999; Weiner 2001). The colonial legacy of target victimhood against some social groups with the assistance of upper caste groups has worsened the situation. The women of these social groups

(such as the criminal tribes) are more vulnerable (Bej 2021). Similarly, in the contemporary world, neo-liberal aggression against tribal women is also a cause of concern (Sharma 2018). The violence against women of oppressed classes is also disproportionately high in certain regions. Dalit women are particularly victims of a few upper caste groups (wss 2015). Studies conducted on atrocity crimes in India mainly focus on trends and patterns of crime against them and ignore the CAW of these oppressed classes.

In many respects, the CAW in India followed different trajectories than the overall crime rate in the 21st century. These trajectories of CAW vary according to population subgroups (scs and sts) and diverge according to space (state, district, and metropolitan cities). The prime focus of the study is to analyse the varying trajectories of CAW in India.

### Data Sources

Data on crime in India have been published annually by the National Crime Records Bureau (NCRB) since 1953. These data are compiled from records of police stations all over the country and are confined to reported/registered crimes only. For the analysis of crime trends, the NCRB data from 2000 onwards has been considered, while for the analysis of state- and district-wise patterns, the data of 2021 are considered. Despite all possibilities of under-reporting and under-registration of crimes in general and CAW in particular, the NCRB data are the only source to study the long-term trends and national-level patterns of crimes in India. Hence, the analysis of these data provides insight into understanding the trends and patterns of CAW in India.

### Trends of Crime against Women

Table 1 indicates that since the beginning of the 21st century, the incidents of total crime in India have increased from 5.16 million to about 6.1 million. An absolute growth of about 18% has been registered in total crime during the reference period (2000–21). At the same time, CAW increased from 1,41,373 in 2000 to 4,28,278 in 2021. An absolute increase of more than 200% was recorded in the CAW during the reference period. It is implicit that CAW has increased faster than the total crime in India. So the share of CAW in total crime has increased considerably from 2.74% in 2000 to 7.03% in 2021.

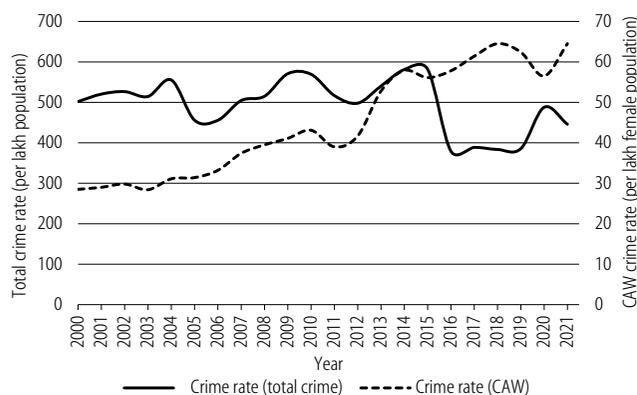
As mentioned, the CAW can be registered as an IPC or SLL crime. During the reference period, total IPC crime has increased from 1.77 million to 3.66 million, while the IPC CAW has increased from 1,28,320 in 2000 to 3,57,671 in 2021. An absolute growth of 179% in the incidents of IPC CAW is registered, which is much higher than the growth of total IPC crime (107%). Furthermore, the share of IPC CAW in total IPC crime has increased from 7.25% in 2000 to 9.76% in 2021 (Table 1).

Total SLL crime in India has declined from 3.39 million in 2000 to 2.43 million in 2021. An absolute

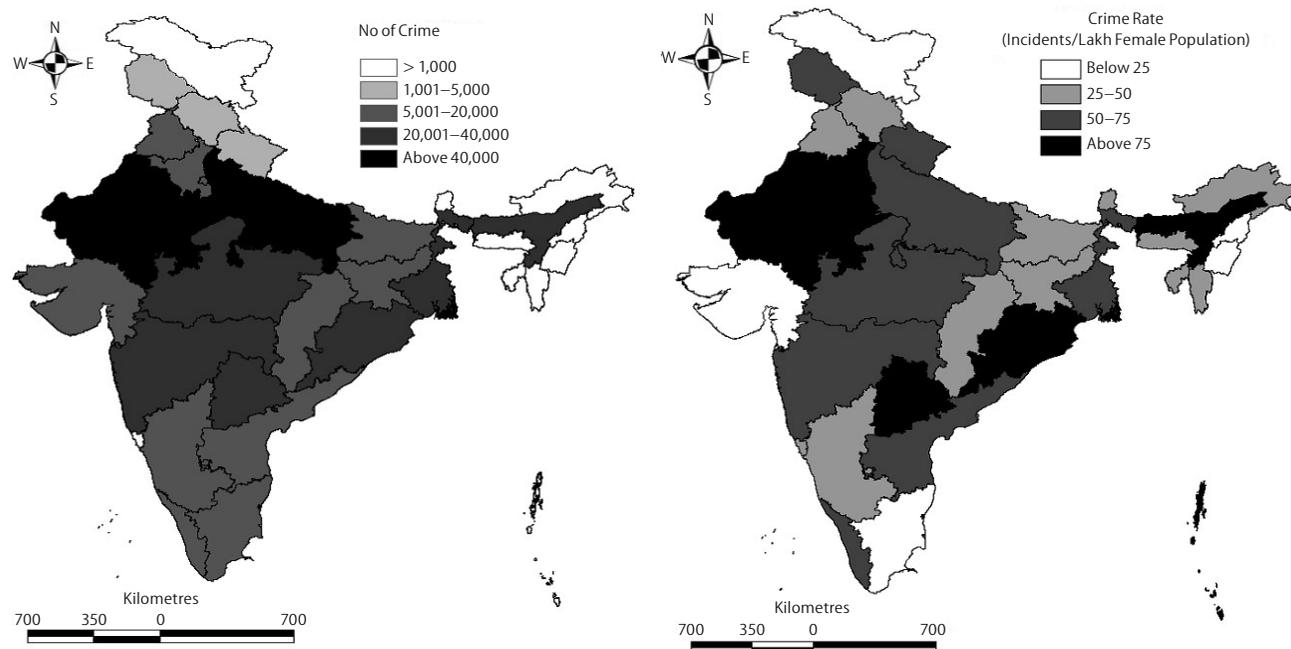
**Table 1: Trends of Crime and Crime against Women, 2000–21**

Year	All Crime			CAW			Share of CAW in Total Crime		
	IPC	SLL	Total	IPC	SLL	Total	IPC	SLL	Total
2000	17,71,084	33,96,666	51,67,750	1,28,320	13,053	1,41,373	7.25	0.38	2.74
2001	17,69,308	35,75,230	53,44,538	1,30,725	13,070	1,43,795	7.39	0.37	2.69
2002	17,80,330	37,50,842	55,31,172	1,31,112	16,566	1,47,678	7.36	0.44	2.67
2003	17,16,120	37,78,694	54,94,814	1,31,364	9,237	1,40,601	7.65	0.24	2.56
2004	18,32,015	41,96,766	60,28,781	1,43,615	10,718	1,54,333	7.84	0.26	2.56
2005	18,22,602	32,03,735	50,26,337	1,43,523	12,030	1,55,553	7.87	0.38	3.09
2006	18,78,293	32,24,167	51,02,460	1,54,158	10,607	1,64,765	8.21	0.33	3.23
2007	19,89,673	37,43,734	57,33,407	1,74,921	10,391	1,85,312	8.79	0.28	3.23
2008	20,93,379	38,44,725	59,38,104	1,86,617	9,239	1,95,856	8.91	0.24	3.30
2009	21,21,345	45,53,872	66,75,217	1,94,835	8,969	2,03,804	9.18	0.20	3.05
2010	22,24,831	45,25,917	67,50,748	2,05,009	8,576	2,13,585	9.21	0.19	3.16
2011	23,25,575	39,27,154	62,52,729	2,19,142	9,508	2,28,650	9.42	0.24	3.66
2012	23,87,188	36,54,371	60,41,559	2,32,528	11,742	2,44,270	9.74	0.32	4.04
2013	26,47,722	39,92,656	66,40,378	2,95,896	13,650	3,09,546	11.18	0.34	4.66
2014	28,51,563	17,20,100	45,71,663	3,25,327	14,130	3,39,457	11.41	0.82	7.43
2015	29,49,400	17,61,276	47,10,676	3,14,575	14,672	3,29,247	10.67	0.83	6.99
2016	29,75,711	18,55,804	48,31,515	3,25,652	13,302	3,38,954	10.94	0.72	7.02
2017	30,62,579	19,44,465	50,07,044	3,15,215	44,634	3,59,849	10.29	2.30	7.19
2018	31,32,954	19,41,680	50,74,634	3,23,345	54,932	3,78,277	10.32	2.83	7.45
2019	32,25,701	19,30,471	51,56,172	3,43,177	62,684	4,05,861	10.64	3.25	7.87
2020	42,54,356	23,46,929	66,01,285	3,11,354	60,149	3,71,503	7.32	2.56	5.63
2021	36,63,360	24,32,950	60,96,310	3,57,671	70,607	4,28,278	9.76	2.9	7.03

Source: Compiled from NCRB (2022).

**Figure 1: Crime Rate of Total Crime and Crime against Women, 2000–21**

Source: Compiled from NCRB (2022).

**Figure 2: Incidents and Rate of Crime against Women, 2021**

The map is only for representational purposes and does not, in any way, indicate the national boundaries.

Source: Based on NCRB (2022).

decline of 28% is recorded in total SLL crime. It is observed from the NCRB data that a few states, like Uttar Pradesh (UP), have omitted certain crimes (such as violation of minor traffic rules) from the list of SLL crimes in 2014 onwards, resulting in a massive decline in the total SLL crimes in India (NCRB 2015). Contrary to it, a phenomenal growth of 440% has been registered in the SLL CAW during the reference period. In 2000, 13,053 SLL CAW were registered all over the country, which has increased to 70,607 in 2021 (Table 1). Furthermore, the share of SLL CAW in total SLL crime has increased from 0.38% in 2000 to 2.9% in 2021.

The crime statistics of 2020 and 2021 need more careful analysis. Due to the nationwide lockdown, the public space remained under surveillance for an extended period during these years. It is expected that the lockdown should bring down the incidents of crime. However, IPC crime has significantly increased during the lockdown period. In 2019, a total of 3.22 million incidents of violation of IPC were registered,

which has increased to 4.25 million in 2020 and 3.63 million in 2021 (Table 1). This growth in IPC crimes is primarily dedicated to the drastic increase in “other crimes.” The majority of these “other crimes” are pertaining to the violation of lockdown. In 2019, 2,52,268 cases were registered under “other crimes,” which increased to 10,62,399 in 2020, and decreased to 4,96,535 incidents in 2021 (NCRB 2022).

This phenomenal increase in “other crimes” has an indirect impact on the CAW. In 2019, the share of CAW in total crime was 7.9%, declining to 5.6% and 7% in 2020 and 2021, respectively. However, the actual CAW has not declined during the lockdown. In 2020, the CAW declined by 8%, but it increased by more than 15% in 2021 and raced to an all-time high. Particularly a surge in the incidents of domestic violence is widely reported and carefully documented (EPW Engage 2020). The

reporting of CAW probably declined during the strict lockdown in 2020, and many crimes were reported subsequently or not reported at all.

### Trends of Crime Rate

NCRB defines the crime rate as the “number of incidents per lakh population,” while in the context of CAW as the “number of incidents per lakh female population.” Long-term analysis of the crime rate reflects the relative growth of crime as compared to population growth. The growing crime rate in any society clearly indicates the faster growth of crime as compared to population growth. Figure 1 presents the trend of the total crime and crime rate against women from 2000 onwards.

Figure 1 reveals that the crime rate in India has declined from 502 in 2000 to 446 in 2021, while the crime rate against women has increased from 28.5 to 64.4 during the reference period (2000–21). This fact indicates that despite the absolute increase in total crime in India, crime has declined

relatively (decline in crime rate). Nevertheless, CAW has increased absolutely (increase in number) and relatively (increase in crime rate). These are very significant trends, and a 220% growth in the rate of CAW during the reference period is alarming.

**Statewise Distribution of Crime against Women in India**

The crime data of 2021 has been used in this study to explore the state-wise distribution of incidents and the rate of CAW in India. The CAW is unevenly distributed among different states of India (Figure 2, p 125). Out of the 4,28,278 incidents of CAW in India, 13.1% was registered in UP. About one-third of CAW in India are recorded in the three states, namely UP, Rajasthan, and Maharashtra and three-fourths of CAW in India are registered in 10 states.

Contrary to it, in 12 states/union territories (UTs), less than 500 cases of CAW were registered in 2021. These 12 states/UTs collectively contributed to about 0.5% of the total CAW in India. It is evident from Figure 2 that some north Indian states, such as UP, Rajasthan, and Madhya Pradesh (MP) have higher incidents of CAW.

Citing absolute data on crime incidents against women in any state can be misleading. So these data should be quoted cautiously in the public domain. For instance, as per the NCRB data of 2021, the number of incidents and share in total CAW was the highest (13%) in UP. However, the same report projected that more than 17% of the country’s female population resides there. So, the contribution of UP in CAW is lower than the state’s share in the total female population. Table 2 provides a detailed analysis of this phenomenon.

A high positive correlation (+0.86) is observed between the number of CAW in the states and their female population. This fact indicates that many states registered more CAW (Figure 2) because of their larger population size.

Table 2 reveals that 12 states/UTs of the country have a higher share in CAW as compared to their share in the total female population of the country. Rajasthan, Maharashtra, West Bengal, Assam, MP, Odisha, and Delhi are examples of such states.

**Table 2: States’ Share in Crime against Women and Female Population, 2021**

Category	Number of States
1 States/UTs have a higher share of the CAW in comparison to their share in the total female population of the country	12
2 States/UTs have a lower share of the CAW in comparison to their share in the total female population of the country	24

Source: Calculated based on NCRB (2022).

Contrary to this, 24 states/UTs have a lower share in the CAW as compared to their share in the total female population of the country. All the UTs and north-eastern states fall into this category, with Delhi and Assam being notable exceptions.

Figure 2 indicates that states having higher crime rates against women are mainly concentrated (but not confined) around north and central India, which is characterised by the existence of a subculture of crime and violence (Dutta et al 1979). The highest rate of CAW in 2021 was registered in Assam (168), followed by Delhi (148), Odisha (137), Haryana (120), Telangana (111), and Rajasthan (105). The other states having a

rate of CAW above the national average (66) are MP (75), West Bengal (75), Kerala (73), Andhra Pradesh (AP) (67), and Maharashtra (66). Despite the highest number of incidents, the crime rate against women in UP (51) was much lower in 2021.

**District-wise Distribution of Crime against Women in India**

The state-level distribution of CAW provides a general picture of the crime distribution pattern against them. Hence, studying the distribution of these crimes at the district level is of paramount importance.

In 2021, a total of 865 districts were identified by the NCRB for crime registration and record-keeping. However, out of 865 districts in India, 734 were geographical districts (actual districts), while the remaining 131 were special-purpose districts created exclusively for police administration. Cyber-crime cells, crime investigation department (CID), narcotics cells, and railway thana are typical examples of these special-purpose districts which are spread across many districts and sometimes the complete state. The boundary of these districts is not confined to a particular district. And more importantly, less than 1% of total CAW was recorded in these special-purpose districts. So these districts are not considered in the discussion pertaining to the distribution of district-wise crime in India. Table 3 provides the quantitative distribution of CAW in India, while Figure 3 (p 127) presents the concentration and dispersion pattern of incidents in these districts across the country.

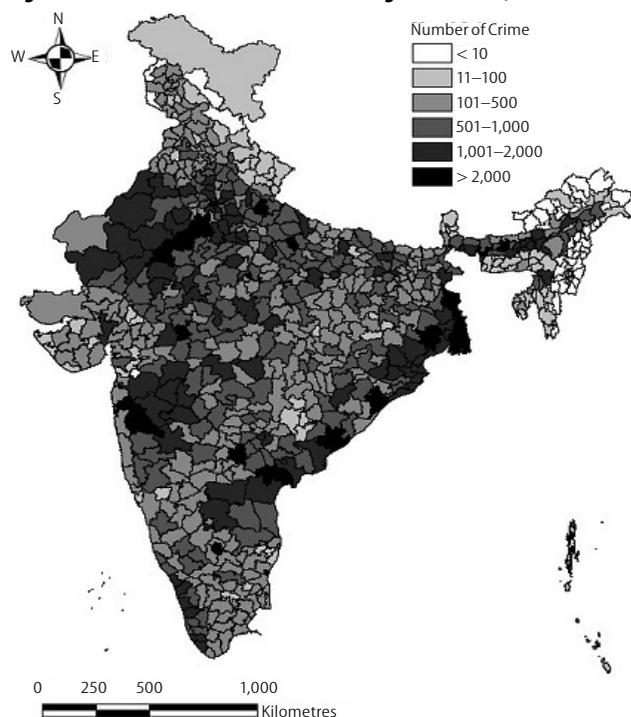
Table 3 evinces the distribution of CAW in geographical districts (henceforth districts) of India. More than 99% of CAW occurred in these districts. Table 3 reveals that 27 districts contributed to 19% of CAW in India. An interesting fact is that out of 36 states/UTs, 15 have registered less than 2,000 incidents of CAW, while 27 districts have recorded more than 2,000 incidents. Of course, these high crime-prone districts are mainly confined to a few states, such as Rajasthan, MP, Odisha, West Bengal, and Assam. The underlying fact reveals the higher extent of spatial inequalities in the distribution of CAW.

Over 5,500 crime incidents against women were registered in North 24 Parganas and Mumbai City in 2021. Contrary to this, 143 districts collectively registered 1.18% of the total CAW in India. The collective total incidents of CAW in these 143 districts (4,994 incidents) were considerably below the total of a single district of North 24 Parganas (5,843 incidents) or Mumbai City (5,543 incidents). Figure 3 displays the concentration pattern of districts that registered higher and lower CAW.

**Table 3: District-wise Distribution of Crime against Women, 2021**

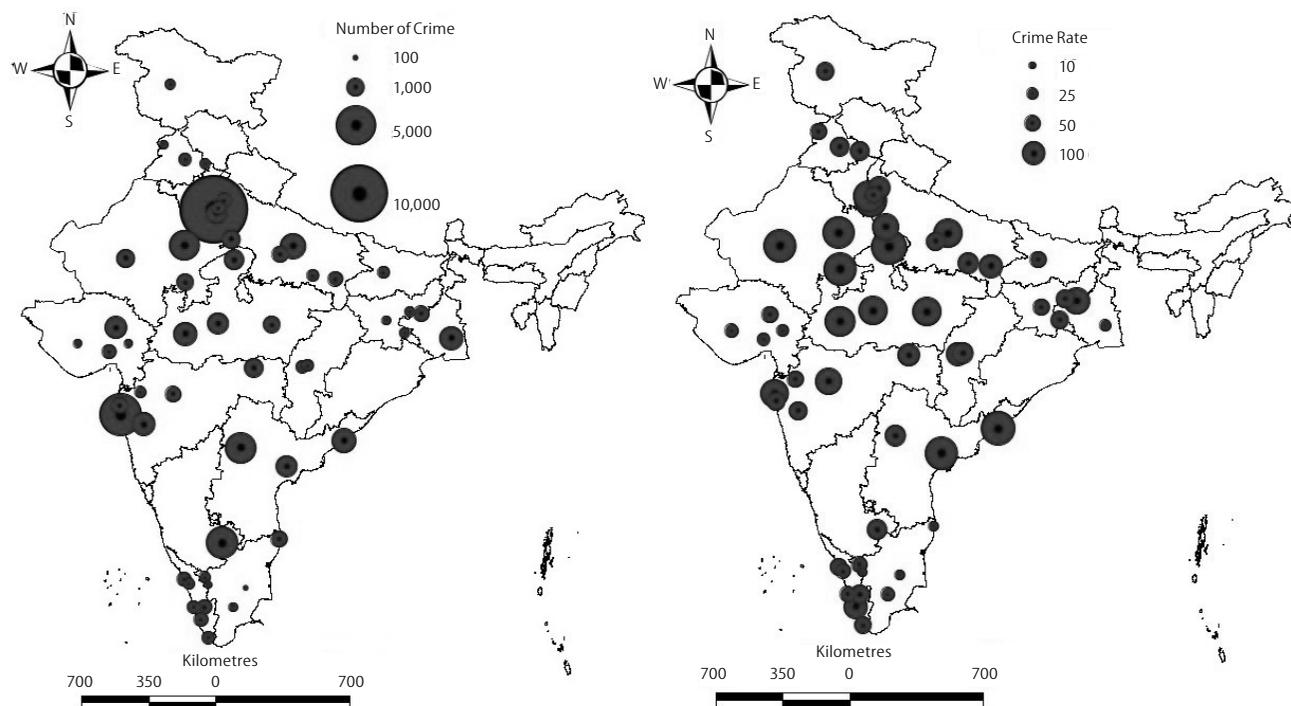
Number of CAW	Number of District	Total Incidents of CAW	Share in Total CAW (%)
<10	49	172	0.04
10–100	94	4,822	1.14
101–500	289	78,885	18.63
501–1,000	183	1,30,111	30.73
1,001–2,000	92	1,28,179	30.27
2,000	27	81,261	19.19
Total	734	4,23,430	100

Source: Compiled from NCRB (2022).

**Figure 3: District-wise Distribution of Crime against Women, 2021**

The map is only for representational purposes and does not, in any way, indicate the national boundaries.

Source: Compiled from NCRB (2022).

**Figure 4: Incidents and Rate of Crime against Women in Metropolitan Cities, 2021**

The map is only for representational purposes and does not, in any way, indicate the national boundaries.

Source: Compiled from NCRB (2022).

An observation of Figure 3 indicates that the district with higher incidents of CAW is highly concentrated in Rajasthan, Maharashtra, MP, Odisha, Assam, West Bengal, and Kerala. Urbanisation in general and the presence of metropolitan cities in the districts have mainly contributed to the higher

concentration of CAW. Earlier studies also indicate that a strong subculture of patriarchy and violence against women makes them vulnerable in many parts of the country (Johnson and Johnson 2001). The regional pattern of CAW may also emerge due to the diffusion-induced individual interactions among the areas with the culture of women subjugation that could lead to an emergent collective behaviour (Kabiraj 2023).

### Crime against Women in Metropolitan Cities of India

Like many other socio-economic phenomena, crime is also disproportionately accumulated in metropolitan cities (with population over a million). With 166.7 million population in 2011, 53 metropolitan cities have 13.78% of the country's total population. While in 2021, 23% of crime incidents and 15.5% of incidents of CAW occurred in metropolitan cities. So the incidents of crime and CAW are disproportionately concentrated in metropolitan cities of the country.

In general, big metropolitan cities (population above 2 million) are the accumulator of many socio-economic phenomena and CAW are also concentrated in these big metropolitan cities. Figure 4 indicates that the incidents of CAW are higher in big metropolitan cities like Delhi, Mumbai, and Bengaluru. However, "the big city hypotheses" has limited applicability in the case of CAW as the correlation between the population size of metropolitan cities is slightly negative (-0.11). This negative

correlation indicates that the contribution of many small cities in CAW is higher than their share in the total population of metropolitan cities. Figure 4 demonstrates that many small metropolitan cities (population below 2 million) of north and central India, such as Kota, Jabalpur, Raipur, and Bhopal, have

high crime rates against women compared to the many relatively big cities.

### Crime against Scheduled Caste and Scheduled Tribe Women

CAW is not only unevenly distributed among the state/UTs and districts but also unevenly distributed among the social groups. The women of oppressed and disadvantageous social groups, such as SCs and STs, are more vulnerable than other women. Table 4 indicates that the share of CAW in the total crimes of India was about 7% in 2021. However, the share of crime against SC women in the total crime against SC was

**Table 4: Share of Crime against Scheduled Caste and Scheduled Tribe Women, 2021**

Total crime incidents (IPC + SLL)	60,96,310
Incidents of CAW (IPC + SLL)	4,28,278
Share (%) of CAW in total crime	7.03
All crime against SC	50,900
Incidents of crime against SC women	8,770
Share (%) of crime against SC women in total crime against SCs	17.24
All crime against ST	8,802
Incidents of crime against ST women	2,444
Share (%) of crime against ST women in total crime against STs	27.76

Source: Compiled from NCRB (2022).

more than 17% in 2021. Similarly, the crime against ST women contributed to about 28% of the crime against them. The disproportionately high share of CAW of SCs and STs in total crime indicates their higher vulnerability.

### Nature of Crime against Women

CAW can take several forms. The source of many CAW lies within the family. For instance, crimes such as cruelty by relatives and dowry deaths are committed within the family. In contrast, crimes such as acid attacks and cybercrimes are committed outside the family. Apart from this, the nature of these crimes may differ significantly across the states. Table 5 presents the share of different crimes that occurred against women in 2021.

Out of 4,28,278 crime incidents against women registered in India in 2021, 31.8% of them were cases of cruelty by husbands and relatives. The highest number of incidents of cruelty by husbands and relatives were registered in West Bengal (19,952), followed by UP (18,375), Rajasthan (16,949), Assam (12,950), and Maharashtra (10,095). In fact, the top four states account for over half of these cases. A very rigid patriarchy characterises the social system in India, and these incidents are reflections of the patriarchy in personal relations. These kinds of cases are omnipresent all over the country. North-eastern states (barring Assam) are the only exception where such incidents are relatively low.

A total of 89,200 incidents of sexual assault on women with an intent to outrage their modesty were registered

in 2021. Odisha (14,853) and Maharashtra (10,568) collectively contributed to more than one-third of the total incidents of sexual assaults in 2021. UP (9,393), Rajasthan (9,079), MP (5,680), AP (5,108), Karnataka (5,105), Assam (4,499), Telangana (4,365), and Kerala (4,059) are the other states where such cases are in abundance. A smaller number of such cases were registered in Nagaland (11), Sikkim (17), Mizoram (31), Manipur (92), and Meghalaya (92). Nagaland (1 per lakh) and Gujarat (2 per lakh) have the lowest crime rate of sexual assaults among the states.

A total of 75,369 incidents of kidnapping and abduction of women was registered in the country in 2021. The majority of the incidents were recorded in north Indian Hindi-speaking states such as UP (10,574), Bihar (8,661), MP (6,106), and Rajasthan (5,964). Outside the Hindi-speaking states, Maharashtra (7,559), Assam (5,739), Odisha (5,175), and Telangana (1,934) are other major contributors. A very clear north-south divide is evident in these cases as a relatively smaller number of such cases are registered in the south Indian states (except Telangana). Particularly, kidnapping women/girls for marriage is less evident outside the Hindi belt states. In 2021, 12,300 such cases of kidnapping for marriage were registered, and more than 80% of them were registered in UP (3,515), Bihar (2,905), Punjab (1,367), and MP (1,262). Similarly, dowry deaths are also disproportionately concentrated in a few states, as UP (4,594) and Bihar (3,362) collectively contributed to more than 60% of all the cases of dowry deaths (N=13,568) registered in 2021.

In 2021, 31,677 rape cases were registered in the country, and 3,033 of these occurred in girls below 18 years of age. Rajasthan (6,337), MP (2,947), UP (2,845), and Maharashtra (2,496) are the prime contributors to the rape cases. However, these cases are distributed relatively more evenly across the states, and as many as 13 states/UTs registered more than 1,000 cases of rape.

**Table 5: Nature of Crime against Women, 2021**

Crime Head	Incidents of Crime		Remark
	No	Share (%)	
Cruelty by husband and relatives	1,36,234	31.81	Sec 498A IPC
Sexual assault	89,200	20.83	Sec 354 IPC
Kidnapping and abduction of women	75,369	17.60	Sec 336, 363A, 364, 364A, 366, 367, 368, 369 IPC
Rape	31,677	7.40	Sec 376 IPC
Dowry prohibition	13,568	3.17	SLL
Dowry deaths	6,753	1.58	Sec 304B IPC
Abetment to suicide	5,292	1.24	Sec 305, 306 IPC
Attempt to commit rape	3,800	0.89	Sec 376/511 IPC
Cyber CAW	2,597	0.61	Sec 67A/67B (Girls) Information Technology (IT) Act
Murder with rape/gang rape	284	0.07	Sec 302, 376 IPC
Acid attack	102	0.02	Sec 326A IPC
Other	63,402	14.80	IPC and SLL
Total	4,28,278	100	

Source: Compiled from NCRB (2022).

In the same year, 52,974 cybercrimes were recorded in the country, and 2,597 crimes were classified as CAW. It is generally assumed that cybercrimes are more concentrated in urban areas. But the data suggests otherwise, as low-urbanised states like Odisha (565) and Assam (432) have registered the highest number of these cases. The victim (women) of

technology-oriented crimes is spread across the country as south Indian states, such as Kerala (172) and Karnataka (177) have also registered more than 100 such crimes in 2021.

### Summary and Conclusions

Ever-increasing CAW is a serious cause of concern for society. The pace of CAW in the 21st century has surpassed the pace of total crime in India. It is reflected in an increasing share of CAW in total crime, which increased from 2.7% in 2000 to 7% in 2021. Women of all states/UTs are not equally affected by crime against them; the incidents and rate of crime against them are particularly high in a few states of north

and central India. Apart from these states, West Bengal, Assam, and Odisha are other notable states where CAW is high. Similarly, the district-wise pattern of CAW indicates that high crime-prone districts are also disproportionately concentrated in a few states. The study highlights that women of disadvantaged and oppressed social groups (SCs and STs) also face a relatively higher crime against them. The metropolitan cities are characterised by high incidents of CAW. The share of metropolitan cities in CAW is much higher than their share in the country's total population. These underlying trajectories of CAW may highlight the requirement for more diversified crime prevention strategies.

### NOTE

- 1 The IPC has been replaced by the Bharatiya Nyaya Sanhita (BNS), 2023 with effect from 1 July 2024.

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## Economic & Political WEEKLY

### Review of Urban Affairs

February 25, 2023

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Kanak Rajadhyaksha

Participation through WhatsApp in Urban Waste Management: Citizen–Government Relations and Outcomes in Mumbai's Participatory Waste Management Policies

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Invisible Custodians: A Critical Inquiry into the Continuing Obscurity of Women Waste Pickers at Dhapa Landfill of Kolkata

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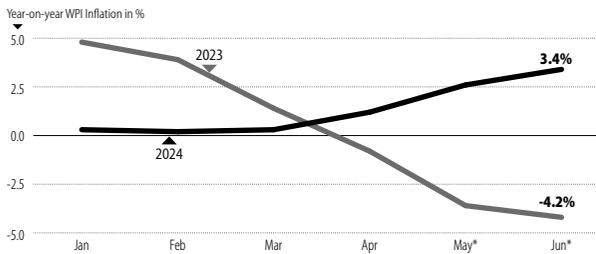
**Wholesale Price Index**

The year-on-year WPI-inflation rate increased to 3.4% in June 2024 from -4.2% registered a year ago and 2.6% a month ago. The index for primary articles grew by 8.8% against -3.0% reported a year ago and 7.2% a month ago. The rate of inflation for food articles rose to 10.9% from 1.3% a year ago and 9.8% a month ago. The index for fuel and power grew by 1.0% compared to -12.5% recorded a year ago and that for manufactured products stood at 1.4% against -2.8% a year ago.

**Consumer Price Index**

The CPI-inflation rate increased to 5.1% in June 2024 from 4.9% reported a year ago and 4.8% a month ago. The consumer food price index grew by 9.4% compared to 4.6% recorded a year ago and 8.7% a month ago. The CPI-rural inflation rate stood at 5.7% and the urban inflation rate at 4.4% compared to 4.8% and 5.0%, respectively, registered a year ago. According to Labour Bureau data, the CPI for agricultural labourers (CPI-AL) stood at 7.0% in May 2024 compared to 6.0% a year ago and that for industrial workers (CPI-IW) at 3.9% against 4.4%.

**Movement of WPI Inflation January–June**



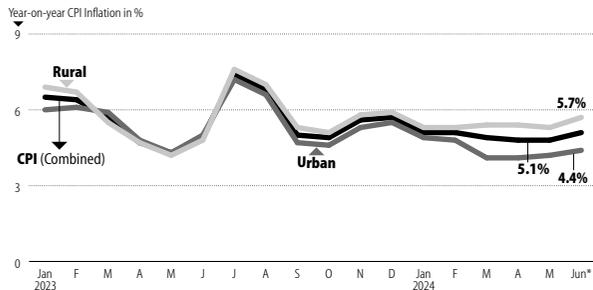
\* Data is provisional; Base: 2011–12 = 100.

**Trends in WPI and Its Components June 2024\* (%)**

	Weights	Over Month	Over Year	Financial Year (Averages)		
				2021–22	2022–23	2023–24
All commodities	100	0.4	3.4	13.0	9.4	-0.7
Primary articles	22.6	2.1	8.8	10.2	10.0	3.5
Food articles	15.3	3.0	10.9	4.1	7.3	6.6
Fuel and power	13.2	-1.9	1.0	32.5	28.1	-4.7
Manufactured products	64.2	0.1	1.4	11.1	5.6	-1.7

\* Data is provisional; Base: 2011–12=100. Source: Ministry of Commerce and Industry.

**Movement of CPI Inflation January 2023–June 2024**



\* June 2024 is provisional. Source: National Statistical Office (NSO); Base: 2012=100.

**Inflation in CPI and Its Components June 2024\* (%)**

	Weights	Latest Month Index	Over Month	Over Year	Financial Year (Avgs)	
					2022–23	2023–24
CPI combined	100	190.2	1.3	5.1	6.7	5.4
Consumer food	39.1	198.7	3.2	9.4	6.6	7.5
Miscellaneous	28.3	182.2	0.3	3.4	6.3	4.5

**CPI: Occupation-wise#**

	2016 = 100	Over Month	Over Year	2022–23	2023–24
Industrial workers (2016 = 100)	139.9	0.4	3.9	6.1	5.2
Agricultural labourers (1986–87 = 100)	1269	0.5	7.0	6.8	7.1

\* Provisional; # May 2024; Source: NSO (rural and urban); Labour Bureau (IW and AL).

**Foreign Trade**

The trade deficit widened to \$21.0 bn in June 2024 against \$19.2 bn, reported a year ago. Exports went up by 2.5% to \$35.2 bn and imports by 5.0% to \$56.2 bn from \$34.3 bn and \$53.5 bn, respectively, registered a year ago. Oil imports stood higher at \$15.1 bn compared to \$12.6 bn a year ago and non-oil imports at \$41.1 bn against \$40.9 bn. During April–June 2024, the cumulative exports increased by 5.8% to \$110.0 bn and imports by 7.6% to \$172.2 bn compared to \$103.9 bn and \$160.1 bn, respectively, reported during the corresponding period last year.

**Index of Eight Core Industries**

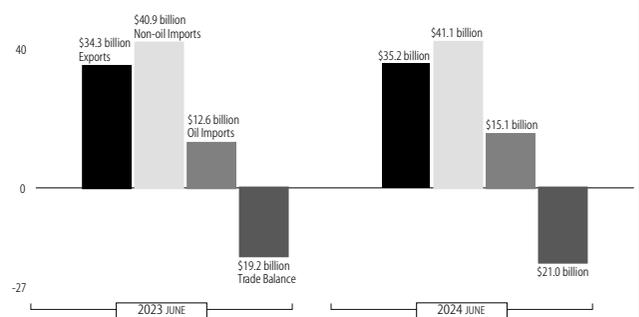
The ICI increased by 6.3% in May 2024 compared to 5.2% reported a year ago. Production in the coal segment rose by 10.2%, natural gas by 7.5%, and electricity generation by 12.8% against 7.2%, -0.3% and 0.8%, respectively. Growth rate of cement segment declined to -0.8% and fertilisers to -1.7% from their respective growth rates of 15.9% and 9.7% a year ago. Production of petroleum refinery products grew by 0.5% and steel by 7.6% compared to 2.8% and 12.0%, respectively. Growth rate in crude oil segment stood at -1.1% against -1.9%.

**Merchandise Trade June 2024**

	June 2024 (\$ bn)	Over Month (%)	Over Year (%)	April–June (2024–25 over 2023–24) (%)
Exports	35.2	-7.7	2.6	5.8
Imports	56.2	-9.3	5.0	7.6
Trade balance	-21.0	-11.8	9.3	10.9

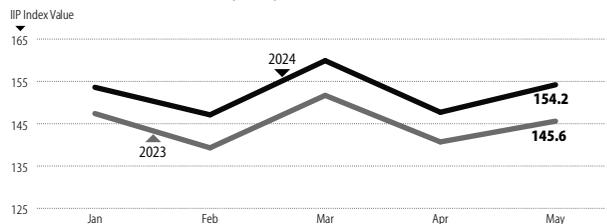
Data is provisional. Source: Ministry of Commerce and Industry.

**Components of Trade June 2023 and June 2024**



Oil refers to crude petroleum and petroleum products, while non-oil refers to all other commodities.

**Movement of IIP January–May**



\* May 2024 are quick estimates; Base: 2011–12=100.

**Index for Eight Core Industries May 2024\* (%)**

	Weights	Over Month	Over Year	Financial Year (Avgs) in %	
				2023–24	2024–25
Infrastructure industries	40.27@	3.7	6.3	4.9	6.5
Coal	10.3	6.6	10.2	8.2	8.9
Crude oil	9.0	2.1	-1.1	-2.7	0.2
Natural gas	6.9	5.2	7.5	-1.6	8.0
Petroleum refinery products	28.0	2.8	0.5	0.7	2.2
Fertilisers	2.6	15.4	-1.7	15.7	-1.2
Steel	17.9	-0.3	7.6	14.2	8.2
Cement	5.4	-0.4	-0.8	14.1	-0.6
Electricity	19.9	7.3	12.8	-0.1	11.6

(Base: 2011–12=100); \* Data is provisional; @ The revised eight core industries have a combined weight of 40.27% in the IIP. Source: Ministry of Commerce and Industry.

Comprehensive current economic statistics with regular weekly updates are available at: <http://www.epwrf.in/currentstat.aspx>.

