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India's Free Trade Agreements

Pravin Krishna[*] [#]

Abstract

This paper reviews India's experience with the free trade agreements (FTAs) that it signed over the last two decades. The trade outcomes under the agreements are found to be quite modest: The trade shares of India's FTA partners stayed nearly constant over the past decade, and trade deficits with FTA partners, as a share of the overall deficit, did not increase over time. These findings challenge the assertion that India's trade agreements have led to a widening of trade deficits and that they were responsible for the stagnation of the Indian manufacturing sector.

JEL: F13, F14, F15

Keywords: Free Trade Agreements, trade deficits, GATT-WTO, Domestic manufacturing

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I. Introduction

A cornerstone principle of the General Agreement on Tariffs and Trade – World Trade Organization (GATT-WTO) system, which has overseen international trade relations between countries since the end of World War II, is the principle of non-discrimination. As established in Article I of the GATT, member countries may not discriminate between "like products" from "different trading partners," that is to say that imports must receive the same treatment regardless of the country of origin. However, in an important exception to (and derogation of) Article I, the GATT, through Article XXIV, permitted preferential treatment in trade, through the formation of free trade agreements and customs unions, provided these agreements result in comprehensive liberalization of 'substantially' all trade between the member countries. Subsequently, through an "Enabling Clause," introduced in 1979, the GATT permitted developing countries to enter into preferential agreements with each other in a manner that did not require the comprehensive liberalization mandated by Article XXIV. That is, under the Enabling Clause, partial liberalization of trade between "developing" and "least developed" member countries was permitted.

Prior to the 1990s, there were merely a handful of preferential trade agreements (PTAs) in force. However, with the perceived slowdown of the WTO process, and the abandonment of the principle of non-discrimination in favor of preferential trade by major players - such as the United States[1] - many countries have found it more attractive to negotiate trade treaties bilaterally, or with small groups of countries, rather than by substantially engaging the multilateral process. Such preferential agreements are now in vogue, with hundreds of GATT/WTO-sanctioned agreements (of both the Article XXIV and Enabling Clause variety) having been negotiated during this period. Nearly every WTO member-state is party to at least one PTA, and the average WTO member-state is party to over seven agreements.[2]

In recent years, India has negotiated a number of preferential trade agreements.[3] Some of these agreements are bilateral, while others are plurilateral agreements, signed with multiple countries. India's bilateral agreements are with Afghanistan, Bhutan, Chile, Japan, Malaysia, Nepal, Singapore, Sri Lanka, Thailand, and the Republic of Korea. India has also entered into plurilateral agreements with the Association of South-East Asian Nations (Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand, and Vietnam); the MERCOSUR countries (Brazil, Argentina, Uruguay, and Paraguay); the Asia Pacific Trade Agreement (APTA) involving Bangladesh, Sri Lanka, China, Korea, and Laos; and the South Asia Free Trade Agreement (SAFTA) involving Afghanistan, Bangladesh, Bhutan, Sri Lanka, India, Maldives, Nepal, and Pakistan.

The impact of these trade agreements on trade outcomes has been of significant interest in policy circles in India. It has been suggested that India's agreements led to a substantial widening of India's trade deficits - an argument that appears to have driven, in some measure, India's recent decision to withdraw from the Regional Comprehensive Economic Partnership (RCEP). A recently concluded trade agreement involving a large number of countries in Asia, RCEP will likely be the largest preferential trading bloc in the world (including essentially all of the ASEAN nations, along with China, Japan, Korea, Australia, and New Zealand).

Have such trade agreements indeed worsened India's trade imbalances? Is the potential worsening of the trade deficit a reasonable concern for India to have in the context of agreements, such as RCEP, that it might yet sign? This paper explores trade outcomes under India's trade agreements from the years 2007-2017 with the goal of addressing these questions.

II. Trade Outcomes Under India's Trade Agreements

A frequently expressed concern regarding India's trade has to do with its external balance, in particular, that India's trade deficits have widened over the last decade. Relatedly, it has been argued that India's previous trade agreements have contributed significantly to an expansion of its trade deficits with its partner countries (and that this will also be the case with any future agreements, such as RCEP).

While India's current account deficits did widen over the last decade in dollar terms, any student of economics would point out that the current account deficit is exactly equal to its savings-investment imbalance - and not, in the first instance, driven by trade policy.[4]

Table I: Trade shares with partner countries

	2007			2017		
	Import Share	Export Share	Trade Balance Share	Import Share	Export Share	Trade Balance Share
India-Bilateral	13.3	13.7	12.6	11.8	14	7.5
India-Afghanistan	0.3	0.1	-0.19	0.09	0.21	-0.15
India-Bhutan	0.09	0.04	0.18	0.05	0.13	-0.13
India-Chile	0.86	0.15	2.27	0.25	0.25	0.63
India-Japan	2.7	2.2	3.5	2.3	1.52	3.9
India-Malaysia	2.6	1.27	5.3	2	1.8	2.2
India-Nepal	0.2	0.8	-1	0.09	1.8	-3.4
India-Singapore	3.1	4.3	0.7	1.6	3.9	-2.9
India-Sri Lanka	0.2	1.7	-3	0.15	0.15	-2.5
India-Thailand	1	1.1	0.7	1.4	1.2	1.9
India-Republic of Korea	2.5s	1.7	4	3.6	1.5	7.8
India- ASEAN	9.6	9.5	9.9	10.2	12	6.6
Asia-Pacific Trade Agreement (APTA)	2.7	4.8	-1.39	3.9	5.4	10
South Asian Free Trade Agreement (SAFTA)	0.7	5.2	-8.2	0.5	6.6	-11.5
India-MERCOSUR	0.7	1.5	-0.8	1.7	1.3	2.6
India-China	11.2	6.5	20.7	16.1	4.2	39.7
India-USA	6.4	13.7	-8.1	5.4	15.6	-14.6
India-EU	14.8	21.7	1	9.9	17	-4.65

Table I provides statistics on the import and export shares of India with its partner countries, and the change in these shares between the years 2007 and 2017. Data on India's trade with the individual countries with which it has bilateral agreements is aggregated into an "India-Bilateral" category. Table I also provides information on trade trends under India's plurilateral agreements, including with ASEAN and MERCOSUR.[5] Finally, for comparison purposes, the table also provides data on trade between India and the United States, the European Union, and China.

It should be readily evident from Table I that trade between India and most of these partner countries has stayed very steady over the past many years. Consider first the trade between India and its bilateral agreement partners. Overall imports with these countries stood at 13.3% of total imports in 2007 and moved to 11.8% by 2017. Exports to these countries stood at 13.7% in 2007 and moved to 14% by 2017. Trade between India and its bilateral partners has, thus, simply kept up with its global trade patterns. Trade with the larger countries in this grouping -- Korea, Japan, Malaysia, and Singapore -- also looks remarkably steady, especially in the aggregate: the slight increase in import share from Korea appears to be offset by reductions in import share from Japan, Malaysia, and Singapore.

India's trade under plurilateral agreements – notably India-ASEAN and India-MERCOSUR – looks mostly steady as well. Trade with ASEAN countries rose slightly (import share rose from 9.6% to 10.2% and the export share rose from 9.5% to 12%). India-MERCOSUR trade rose slightly as well. MERCOSUR's import share rose from 0.7% to 1.7%, and the export share dropped slightly from 1.5% to 1.3% of overall exports. The conclusion here is a straightforward one. India's trade share with its bilateral and plurilateral partners did not rise significantly over the years 2007-2017.

One concern that is frequently expressed in India concerns the balance of trade between India and its PTA partners – specifically that India's trade agreements have led to an expansion of its trade deficits. However, the data indicate otherwise. Trade deficits with India's bilateral partners accounted for 12.6% of the overall trade deficit in the year 2007. In 2017, they accounted for a considerably smaller 7.5%. Similarly, India's trade with ASEAN and MERCOSUR accounted for 9.1% of the total trade deficit in 2007, which fell to 6.6% of the overall deficit in 2017. Thus, while India's trade deficits widened over the years in nominal dollar terms, PTAs do not account for an appreciably larger fraction of these trade deficit than they did before.[6]

While aggregate trade shares within India's agreements seem relatively steady over time, there is a question of what this looks like at a sectoral level. For instance, are there specific sectors where the growth of trade within agreements is significantly greater than growth outside of India's trade agreements? Might specific sectors in India have suffered due to a surge in imports from its partner countries?

An examination of disaggregated 3-digit trade data from 2007-2017 helps to identify sectors in which trade growth was faster within trade agreements than outside of it[7]. The data indicate that sectors in which trade within India's bilateral agreements grew 25% faster than trade with the world. The volume of trade amounted to about $18 billion of imports and $10.2 billion of exports in 2017. For ASEAN, the corresponding figures are $15 billion of imports and $26 billion of exports.

For sectors in which trade within bilateral agreements more than doubled relative to trade with the world, the volume of trade amounted to $4.8 billion worth of imports and $3 billion of exports. For ASEAN, the corresponding figures are $7 billion worth of imports and $10 billion of exports in 2017. Taken together, this amounts to $12 billion of imports and $13 billion of exports in 2017. From this, we can conclude that sectoral import "surges" do not exceed export "surges", and that these surges are small compared to the overall volume of trade (amounting to 6.5% of overall trade and only 3.5% of overall imports).

Overall, then, the data show that India's trade agreements do not account for an appreciably larger fraction of its goods trade deficit than they did before: trade deficits with India's bilateral agreement partners declined from 12.6% to 7.5% of the overall trade deficit between 2007 and 2017, and India's trade deficit under its one significant plurilateral agreement (with ASEAN) fell from about 9% to 6.6% of its overall deficit over the same period. Thus, India's trade agreements are neither to blame for its trade deficits, nor for the stagnant output and employment growth in its manufacturing sector, as is also sometimes alleged.

Why have India's agreements had such modest effects? One explanation for this has to do with the fact that India's agreements were relatively shallow – that they have entailed less liberalization, thus far, than one might have imagined. Importantly, most of India's agreements – with the exception of agreements with Japan and Singapore - were notified to the WTO under the Enabling Clause. This implies that unlike Article XXIV agreements, which require liberalization on "substantially all trade," the enabling-clause-notified agreements undertaken by India were generally of a "partial scope". The amount of liberalization undertaken varies across these agreements, but in general remains quite limited.

The agreements have also involved a range of implementation schedules, with liberalization undertaken – both by India and its partners – being phased over a number of years after the agreements were first notified to the GATT. Thus, for instance, while liberalization under the India-Japan trade agreement began in the year 2011, implementation is complete for only about 23% of the tariff lines. For 63% of the goods, tariff liberalization by India is only expected to be undertaken by the year 2021. Another 14% of goods excluded from the agreement altogether. Similarly, under the India-Korea agreement, signed in 2010, only about 8% of tariff lines had been fully eliminated prior to 2017. Over 60% of the tariff lines were to be liberalized by India only by 2017 and about 20% of tariff lines were excluded from elimination altogether. Equally, the India-ASEAN free trade agreement, which began liberalization in 2010, undertook the elimination of 9000 tariff lines - but to be completed only by the year 2016.

The trade outcomes under India's preferential trade agreements are mirrored, to some extent, in outcomes under preferential agreements in the rest of the world (see Krishna, 2014). Thus, the World Trade Report (WTR) 2011 argues that while there has indeed been a significant increase in the value of trade taking place between PTA members over time, much of this trade is *not* taking place on a preferential basis.

Consider trade in 1990 between PTA partners – this trade made up around 18% of world trade, rising to 35% by 2008 if one excludes intra-EU trade, and around 28% in 1990 rising to a little over 50% of world trade when the EU is included. In dollar terms, the value of intra-PTA trade, excluding the EU countries, rose from $537 billion in 1990 to $4 trillion by 2008, and from $966 billion in 1990 to nearly $8 trillion in 2008 once the EU is included.

On the face of it, this might suggest that a large share of world trade is taking place between PTA members. However, as the WTR importantly points out, these statistics vastly overstate the extent of preferential trade liberalization – and thus the extent of preferential trade that is taking place. Much of the trade between PTA members is in goods on which they impose Most Favoured Nation (MFN) tariffs of zero in the first place. Goods that are subject to high MFN tariffs are also often subject to exemptions from liberalization under PTAs, so that the volume of trade that benefits from preferences is - on average - quite low.

Specifically, WTR calculations indicate that despite the recent explosion in PTAs, only about 16% of world trade – in terms of the actual goods traded – takes place on a preferential basis (the figure rises to 30% when intra-EU trade is included). Furthermore, less than 2% of trade (4% when the E.U. is included)

takes place in goods that receive a tariff preference that is greater than 10%. For instance, well over 50% of Korean imports enter with zero MFN tariffs applied to them. Korea offers preferences to about 10% of its imports, but a preference margin greater than 10% on virtually none of its imports.

A similar picture emerges on exports. One of the countries that has actively negotiated PTAs is Chile, and 95% of Chilean exports go to countries with whom it has a PTA. However, only 27% of Chilean exports are eligible for preferential treatment, and only 3% of its exports benefit from preference margins greater than 10%. Taken together, the preceding statistics suggest that the extent of trade liberalization undertaken through PTAs has been quite modest, despite the large number of PTAs that have in fact been negotiated – a picture that is not altogether different from that of liberalization undertaken in Indian PTAs.

Perhaps this should not be too surprising. It is widely understood that a major factor working against trade liberalization is the political opposition of the import-competing lobbies. If this is the case, it is unclear why lobbies that oppose trade liberalization at the multilateral or unilateral level would easily support liberalization undertaken on a preferential basis. We should therefore expect that political lobbies would mostly only permit preferential agreements in which their rents were protected, either through access to partner country markets or – more simply – through an exemption of liberalization on imports of those goods that compete with their own production, suggesting complementarities between MFN and PTA tariffs.[8] This is similar to the Indian context, where, as we have argued, liberalization within India's agreements has been quite limited and where "exclusions" and "sensitive goods" categories are maintained in each trade negotiation.

Preference utilization is also limited by "rules of origin" (ROOs) which are formulated in the context of PTA agreements to prevent "trade deflection" (i.e., to ensure that goods that pass duty-free within the union are actually within-union goods and not produced outside). This is particularly important in the context of global production networks, which – through trade in intermediate goods – involve two or more countries in the production of a single final good. ROOs often result in far less trade liberalization than implied by the agreement, as they may raise transaction costs for firms to the degree that makes utilization of FTA preferences uneconomical. This is especially likely when margins of preference are small, as described above. Furthermore, as the number of concluded agreements increases, different ROOs in multiple, overlapping PTAs can pose an additional burden on firms.

As such, utilization of preferences can be cumbersome for a number of reasons. A recent report by Saraswat, Priya and Ghosh (2017) suggests that preference utilization under India's PTAs is only about 25%, due to a lack of information about preferences, low margins of preference, delays, administrative costs associated with rules of origin, and impediments caused by non-tariff barriers. While data on preference utilization is quite hard to come by, several surveys of trading firms suggest that preference utilization by exporting firms in Asian FTAs is not high in general; the Indian experience is not unusual. Thus, for a sample of 841 firms in East Asia, a study by Kawai and Wignaraja (2011) shows that only around 28% of exporting firms currently use PTA preferences. 36% of reporting firms in the Republic of Korea and 14% in China cited "having had no substantial tariff preference or having had no actual benefits from such" as the major reason for not utilizing the PTA preferential tariffs. Firms in the Philippines and Singapore attributed their low preference utilization to the countries' overwhelming "export concentration in electronics," which is characterized by "low MFN tariff rates".

III. Regional Comprehensive Economic Partnership – India's Withdrawal

For much of the last decade, India was involved in negotiations over a "mega-regional" agreement -- the Regional Comprehensive Economic Partnership (RCEP). This was to be a free trade agreement between ASEAN nations and ASEAN's FTA partners and included 16 countries: Australia, Brunei, Cambodia, China, India, Indonesia, Japan, Laos, Korea, Malaysia, Myanmar, New Zealand, Philippines, Singapore, Thailand, and Vietnam – a grouping that constitutes about a third of the world's trade, with a population of 3 billion and a gross domestic product (GDP) of about $20 trillion.

The fundamentals of the negotiating agenda of the RCEP covered trade in goods and services, investment, economic and technical cooperation, intellectual property, competition policy, and dispute settlement. Since RCEP's primary focus seems to be on trade itself, rather than on rules concerning the production of traded goods (such as labor or environmental standards), it was anticipated that agreement over RCEP might be easier to reach. However, after nearly a decade of negotiation, India announced its withdrawal from RCEP; the other RCEP countries have proceeded with the agreement in India's absence (although India still retains the option to join RCEP at will).

The lure of duty-free access to RCEP's markets, along with the opportunity to frictionlessly integrate with Asia's dynamic supply networks – and simultaneously provide domestic producers with a competitive fillip – should have been tempting. Nevertheless, India chose to withdraw because of its concerns about worsening trade balances and the potential for economic disruption. In particular, India feared that its domestic industry would be significantly challenged by competitive exports from RCEP countries, especially China. Moreover, it was claimed that RCEP did not allow sufficient protections against adverse economic contingencies.

While any government should be concerned about the disruptive implications of a trade agreement, the RCEP contains many features that mitigate the usual concerns. First, trade liberalization under RCEP has an extraordinarily long "phase-out" period of up to 20 years – surely a long-enough adjustment period for the Indian economy and its manufacturing sector. Second, in the event of "import surges" that cause commercial "injury" to domestic suppliers, RCEP allows for trade liberalization in those goods to be halted or even totally reversed for a period of three years, which can be further extended by another year, if necessary (see Appendix A.1 and A.2). Third, the RCEP, like the World Trade Organization (WTO), offers room for trade remedies such as the use of anti-dumping duties against predatory dumping of goods and countervailing duties against export subsidies used by trade partners (see Appendix A.3). Finally, in the settlement of disputes that arise in trade with RCEP members, India would be free to use the dispute settlement mechanisms of the WTO (see Appendix A.4)

The RCEP, then, provides India with a reasonable combination of economic opportunity and adjustment timelines. Unfortunately, the RCEP decision comes bundled with the China question: should geopolitical relations worsen, would greater dependence on China bring major economic and strategic risks? One could hope that trade interdependence itself would serve as a driver of peace. However, policy decisions cannot merely rest on such hopes – especially if interdependence is asymmetric, as would be the case between India and China.[9] For India, the border conflict with China has added geopolitical anxiety to an already vexed economic calculation over RCEP, while nourishing protectionist sentiment domestically and enabling vested economic interests to find nationalistic cover.

Domestic Reforms

Lacking improved market access, India's hopes in trade rest largely upon its ability to rapidly improve its competitiveness on a wide scale. Improving trade and participation in global production networks will require a number of domestic improvements. These include improvements in domestic transport and trade infrastructure, and reforms that increase the productivity of India's stagnating manufacturing sector.

The relatively weak performance of the manufacturing sector and the reasons for its low productivity are generally well understood. Land acquisition for projects is a major hurdle. The regulatory framework one must traverse to install capital and begin production is cumbersome – getting the necessary permits from the various ministries is highly challenging. Taxes relating to domestic and foreign investors have been variable, generating unnecessary uncertainty for investors.

More broadly, Indian infrastructure clearly needs dramatic improvement. The transportation network remains weak. The quality and coverage of Indian roads lag far behind countries like China, as do India's port facilities. Energy supply, a necessary input for production, remains inadequate and unreliable. The need for infrastructural investments to support economic activity is obvious. An additional factor that has been widely recognized as an impediment to the growth of the manufacturing sector is the restrictive set of labour laws that govern employment in India. Overall, the ease of starting and doing business in India remains low, despite many recent improvements.

IV. Conclusions

India's free trade agreements have had only a modest impact on its international trade, as can be seen from the data for 2007-17. The agreements can neither be credited with providing great stimulus for the Indian economy, nor can they be blamed for the widening of Indian's trade deficits or the stagnation of its manufacturing sector. This is because the agreements have, thus far, achieved only a limited liberalization of trade. Integrating more substantially with the global economy through agreements such as RCEP may provide significant economic opportunities, but will also bring some economic and geopolitical risks, which Indian policymakers seem disinclined to accept. Lacking greater market access and external integration, India's hopes in trade will have to rest more substantially on its ability to achieve domestic productivity improvements.

Appendix

A.1. Application of Transitional RCEP Safeguard Measures (Article 7.2)

1. If, as a result of the reduction or elimination of a customs duty under this Agreement, an originating good of another Party or Parties collectively is being imported into the territory of a Party in such increased quantities, in absolute terms or relative to domestic production, and under such conditions as to cause or threaten to cause serious injury to its domestic industry producing a like or directly competitive good, the importing Party may, to the extent necessary to prevent or remedy the serious injury to its domestic industry and to facilitate its domestic industry's adjustment:
    1. (a) suspend the further reduction of any rate of customs duty provided for in this Agreement on the originating good; or
    2. (b) increase the rate of customs duty on the originating good to a level not to exceed the lesser of:
        1. (i) the most-favoured-nation applied rate of customs duty in effect on the day when the transitional RCEP safeguard measure is applied; or
        2. (ii) the most-favoured-nation applied rate of customs duty in effect on the day immediately preceding the date of entry into force of this Agreement for that Party.

A.2. Scope and Duration of Transitional RCEP Safeguard Measures (Article 7.5)

1. No Party shall apply a transitional RCEP safeguard measure:
    1. (a) except to the extent, and for such time, as may be necessary to prevent or remedy serious injury and to facilitate adjustment;
    2. (b) for a period exceeding three years, except that in exceptional circumstances, the period may be extended by up to one year if the competent authorities of the Party that applies the transitional RCEP safeguard measure determines, in conformity with the procedures specified in this Article, that the transitional RCEP safeguard measure continues to be necessary to prevent or remedy serious injury and to facilitate adjustment and that there is evidence that the domestic industry concerned is adjusting, provided that the total period of application of a provisional and transitional RCEP safeguard measure, including the period of initial application and any extension thereof, shall not exceed four years. Notwithstanding this provision, a Least Developed Country Party may extend its transitional RCEP safeguard measure for an additional period of one year; or
    3. (c) beyond the expiration of the transitional safeguard period.

A.3. ANTI-DUMPING AND COUNTERVAILING DUTIES - General Provisions (Article 7.11)

1. The Parties retain their rights and obligations under Article VI of GATT 1994, the A.D. Agreement, and the SCM Agreement. This Section affirms and builds on those rights and obligations.

A.4. Article 19.5: Choice of Forum

1. Where a dispute concerns substantially equivalent rights and obligations under this Agreement and another international trade or investment agreement to which the Parties to the dispute are party, the Complaining Party may select the forum in which to settle the dispute and that forum shall be used to the exclusion of other fora.

References

Baldwin, R., and Seghezza, E., 2010, "Are Trade Blocs Building or Stumbling Blocs," Journal of Economic Integration, 25(2): 276-297

Bhagwati, J., 1993, "Regionalism and Multilateralism: An Overview," In Jaime deMelo and Arvind Panagariya, eds., New Dimensions in Regional Integration, Cambridge University Press.

Kawai, M. and Wignaraja, G., 2011, *Asia's Free Trade Agreements: How is Business Responding?*, Cheltenham (U.K.), Edward Elgar

Krishna. P., 2014, "Preferential Trade Agreements and the World Trade System: A Multilateralist View," in Feenstra and Taylor editors, Globalization in an Age of Crisis, NBER, University of Chicago Press, 2014

Panagariya, A., 2000, "Preferential Trade Liberalization: The Traditional Theory and New Developments," Journal of Economic Literature

Saraswat, V.K., Priya, P., and Ghosh, G., 2017, "A Note on Free Trade Agreements and their Costs," NITI Aayog, New Delhi.

World Trade Report, 2011, "The WTO and Preferential Trade Agreements," WTO, Geneva

NOTES

1 In somewhat of a reversal of its longstanding commitment to multilateral rather than bilateral approaches to trade liberalization, the US signed the Canada-US Free Trade agreement in 1988, which was subsequently expanded to form the North American Free Trade Agreement by including Mexico.

2 For a comprehensive economic analysis of the relevant issues in the economic and political analysis of preferential agreements, see Bhagwati (1993), Panagariya (2000) and Krishna (2014).

3 As will be discussed in greater detail later in this paper, most of India's agreements have been notified to the WTO under the Enabling Clause; the only exceptions being the agreements with Japan and Singapore.

4 Any skeptics should recall that India ran large current account deficits even as it implemented highly restrictive trade policies prior to the 1990s.

5 We should note that many countries have individual agreements with India and are also part of a separate plurilateral agreement. Thus, Singapore has its own trade agreement with India and is also part

of the India-ASEAN free trade agreement. Goods are free to be imported or exported under whichever agreement gives them "better" treatment.

6 Note that the trade balance share of APTA countries seems to have increased substantially. This is true. However, preferences within APTA are extremely modest. The increase in the trade share reflects the increased imbalance in trade with China (even in the absence of trade preferences).

7 Trade statistics are organized using various numerical coding systems. The longer the string of digits, the greater the degree of specificity of the commodity. One or two digit numbers represent greatly aggregated data for broad categories of commodities. Seven or ten digit numbers represent fairly specific commodities.

8 Baldwin and Seghezza (2010) examined correlations between MFN and PTA tariffs at the 10-digit level of disaggregation for 23 of the top exporting countries within the WTO (for which data was available) and find that MFN tariffs and PTA tariffs are complements, since the margin of preferences tends to be low or zero for products where nations apply high tariffs. The implication is that we should not expect liberalization that is difficult at the multilateral level, to necessarily proceed easily at the bilateral level.

9 China's share in India's trade (especially India's imports) is quite significant, while India's share in China's trade is rather low. India also depends heavily on Chinese electronics exports as well as inputs for its pharmaceutical industry.

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Decline in Poverty in India: Real or an Artifact of a Low Poverty Line?

Arvind Panagariya

Vishal More [#]

Abstract

After the erstwhile Planning Commission released the poverty estimates for India for the year 2011-12 in July 2013, a debate ensued on whether the impressive poverty reduction was not due to an excessively low poverty line set by the commission. Utilizing unit-level data from NSS consumer expenditure surveys of years 1993-94, 2004-05 and 2011-12, this research presents empirical evidence that puts to rest any doubts that India's poverty reduction is an artifact of a low poverty line. We show that even when the poverty line is set at expenditure levels higher than the Tendulkar poverty line by 25, 50, 75 and 100 percent, the broad trends in poverty reduction captured by the Tendulkar poverty line continue to be valid. Our estimates also show that the absolute number of individuals lifted out of poverty between 1993-94 and 2011-12 was in fact slightly larger when the poverty line is 25 percent above the Tendulkar line. Even though it is difficult to match this remarkable decline at progressively higher poverty lines, we show that the gains remain large even as we push the poverty line to a level twice the Tendulkar line and is reflective of a very broad-based growth during this period.

JEL: D63, I32

Keywords: Poverty Measurement, Poverty Line, Poverty Reduction

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Introduction

During the second term of the United Progressive Alliance (UPA 2), a debate had raged in the Indian media, with many commentators arguing that poverty reduction captured in the estimates published by the erstwhile Planning Commission was an artifact of an excessively low poverty line set by the latter. As an example, in a heated television debate, one commentator went so far as to argue that since bananas in Jor Bagh, an upmarket neighbourhood of Delhi, cost Rs. 60 per dozen, an individual could barely afford two bananas per meal per day at poverty line expenditure of Rs. 32 per person per day. Critics also argued – factually incorrectly – that the Planning Commission had revised downward the poverty line to show progress in poverty reduction.

Panagariya and Mukim (2014) review this debate in detail. They offer arguments why the Tendulkar poverty line is mostly right if the objective is to measure progress in combating extreme poverty. Nevertheless, sceptics continue to harbour doubts about the impressive success that India has achieved in bringing poverty down; in this paper, we provide for them estimates of poverty at higher poverty lines. Using the expenditure surveys of years 1993-94, 2004-05 and 2011-12, we measure poverty at expenditure levels that exceed the Tendulkar poverty line by 25, 50, 75 and 100 percent. We show that the broad trends in poverty reduction captured by the Tendulkar poverty line continue to be visible at these higher poverty lines.

For example, our results at the national level show that percentage point reductions in poverty between 2004-05 and 2011-12 at expenditure levels that are 25% and 50% higher than the Tendulkar poverty line are approximately the same as at the latter. Percentage point reductions get substantially smaller as we move to still higher poverty lines. Nonetheless, even as we push the line all the way up to twice the level of the Tendulkar line, the decline – at 9.4 percentage points over the seven-year period between 2004-05 and 2011-12 – remains larger than the reduction of 8.0 percentage points at the Tendulkar line over the eleven-year period between 1993-94 and 2004-05. Raising the poverty line to as high as twice the Tendulkar line does not wipe out the acceleration in poverty reduction during the high-growth phase.

A natural question concerns the level of poverty, as opposed to change in it, as we raise the poverty line. Our estimates show that this level climbs up rather steeply as we move toward the poverty line that is twice the level of the Tendulkar line. For instance, the poverty ratio in 2011-12 rises from 22.0 percent at the Tendulkar line to 40.9, 56.4, 67.6 and 75.6 percent at poverty lines that are 25, 50, 75 and 100 percent higher than the Tendulkar line, respectively. The poverty ratio of 67% implicitly assumed in the Food Security Act coincides almost exactly with the poverty line that is 75 percent higher than the Tendulkar line. Interestingly, implicitly assumed rural and urban poverty levels (at 75% and 50%, respectively) in the Food Security Act also approximately coincide with 75.5% and 47.8% poverty levels in rural and urban areas, respectively, at a poverty line that is 75 percent higher than the Tendulkar poverty line in 2011-12.

We also offer estimates of reduction in the absolute number of poor at various poverty lines. As explained later in the paper and argued earlier in Bhagwati and Panagariya (2013), this number must be calculated as the difference between the number of poor that would have been observed if poverty level as measured by the proportion of population below the poverty line had remained the same as in the base year and the actual number of poor observed in the year in which the reduction is measured. Our estimates show that the absolute number of individuals lifted out of poverty between 1993-94 and 2011-12 was slightly larger when the poverty line is 25% above the Tendulkar line and slightly smaller when it is 50% above it. At 175.7 million, the number remains large even as we push the poverty line to a level twice the Tendulkar line.

We make two final points regarding what to expect as we calculate poverty and poverty reduction at progressively higher poverty lines. First, it must be recognized that getting poverty to fall significantly at super-high poverty lines is difficult almost by definition. To make the point in the most dramatic manner, suppose we set the poverty line at one million rupees per month per household in 2004-05. We know that our expenditure survey in 2004-05 will place more than 99 percent of the households below this line. Moreover, it is inconceivable that even with eight percent plus annual growth experienced between 2004-05 and 2011-12, we will see the proportion of households earning less than one million rupees per month fall significantly enough to make a dent in the 99 percent estimate. Against this background, the 9.4 percentage points decline in poverty between 2004-05 and 2011-12 at twice the Tendulkar line is reflective of very broad-based growth.

The second point concerns the near certainty of substantial overestimation of the level of poverty at higher poverty lines. It is now well known that NSS expenditure surveys in India have been capturing progressively smaller proportion of expenditures captured by the National Accounts Statistics (NAS). In 2011-12, this proportion had fallen to just 46%. The consensus has been that the bulk of the understatement in the NSS expenditures is concentrated in households with high incomes. This suggests that as we move to higher and higher poverty lines, the problem of undercount in the expenditure becomes more and more serious. Because the proportionate undercount has risen over the surveys, it leads to a progressively larger count of poverty ratios and hence an understatement of the pace of decline in poverty.

In Panagariya and More (2014), we have provided very detailed poverty estimates for India at the Tendulkar line. These estimates are at the national as well as state level by social and religious groups for rural, urban and both regions taken together. At the national level, we also provide estimates by economic groups. In this paper, we limit ourselves to the national context and do not consider the economic groups.

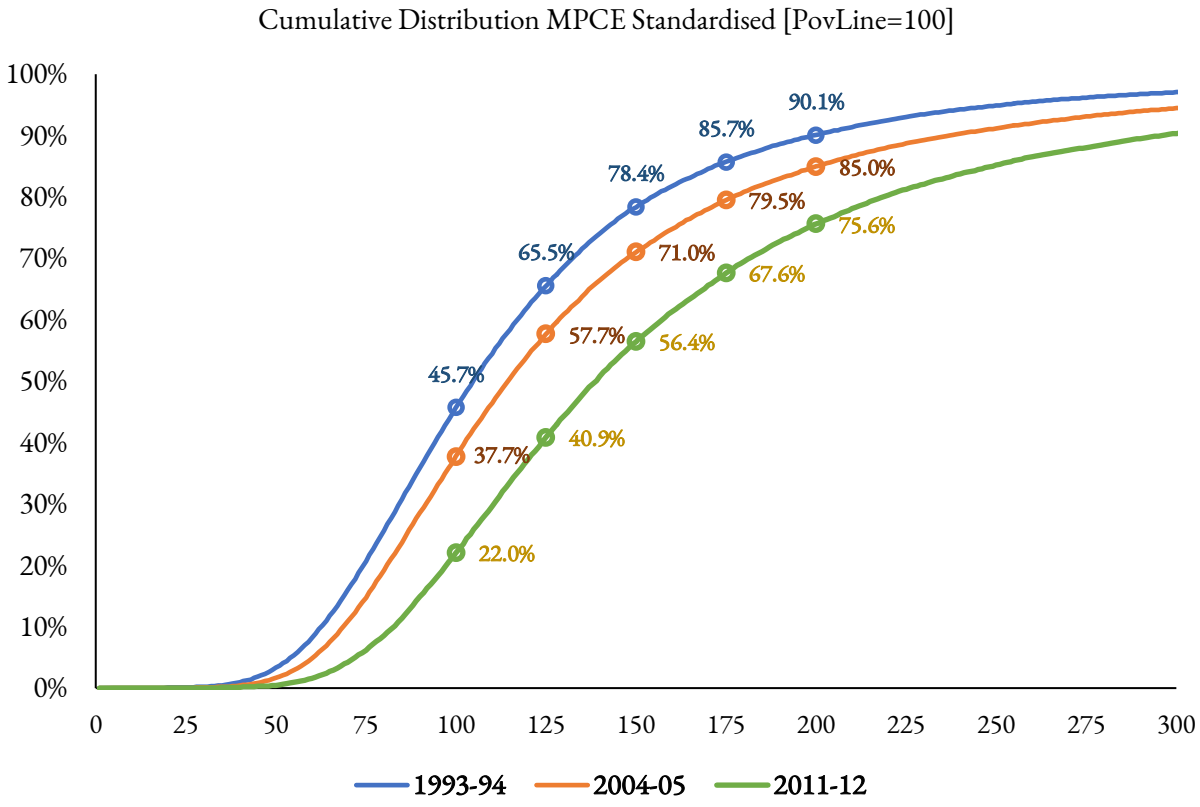
Overall Poverty at Different Poverty Lines at the National Level

In Figure 1, we show different poverty lines along the horizontal axis. The Tendulkar line is set at 100, with lower lines lying to its left and higher ones to its right. On the vertical axis, we measure the proportion of population with income below the respective poverty lines shown on the horizontal axis. We show these proportions for each of the 1993-94, 2004-05, and 2011-12 years.

Perhaps the most remarkable point to note about this figure is that the curve associated with each successive year lies uniformly below the preceding one with no intersections anywhere. What this means is that no matter where we fix the poverty line, poverty in India fell between 1993-94 and 2004-05, as well as between 2004-05 and 2011-12. Growth benefited all income groups. Any claims of growth leaving either the poor or low-middle, middle, or high-income groups behind are patently false.

Digging deeper into the extent of poverty at different poverty lines in any given year, we observe that percentage point increases in it are smaller and smaller as we move to higher and higher poverty lines. For instance, in 1993-94, raising the poverty line to just 1.25 times the Tendulkar line raises the poverty ratio by 19.8 percentage points. Successive increases of 12.9, 7.3 and 4.4 percentage points as we move to 1.5, 1.75 and 2 times the Tendulkar line, respectively, are smaller and smaller. This pattern survives for years 2004-05 and 2011-12.

Figure 1: Poverty Ratio at different poverty lines in 1993-94, 2004-05 and 2011-12



Source: Authors' construction using estimates based on expenditures surveys by the National Sample Survey Office

This pattern is along the expected lines, albeit not theoretically guaranteed. For one thing, population concentration is greater around lower expenditure levels, especially in 1993-94 and 2004-05. As a result, a gigantic 65.5 percent of the population already ends up below the poverty line in 1993-94 as we move the poverty line to 1.25 times the Tendulkar line. Additionally, as we move to higher and higher poverty lines, the scope for further increases in the poverty ratio becomes smaller and smaller.

A comparison of poverty levels at different poverty lines in 2011-12 further demonstrates the importance of these points. By this year, poverty ratio at the Tendulkar line had already dropped to 22 percent. Even then, moving the poverty line up by 25% adds 18.9 percentage points to the poverty ratio, almost doubling it. Raising the poverty line to twice the Tendulkar line adds 53.6 percentage points to the ratio and more than triples it.

Rural and urban Poverty at Different Poverty Lines

In Table 1, we report separate estimates for rural, urban, and overall poverty levels at the five poverty lines. The table also shows percentage point reductions in poverty at each poverty line between 1993-94 and 2011-12 and between 2004-05 and 2011-12. (In the next section, we translate these percentages into absolute numbers.) Disaggregation of population into those in rural and urban areas brings out some additional features of the changes in poverty levels with changing poverty lines.

Rural poverty level turns out to be extra-ordinarily high at the poverty line twice that of the Tendulkar line for all years. It stands at 93.8% in 1993-94 and 83.2% even in 2011-12. Only a small proportion of rural population was living in the vicinity of such a high poverty line in 1993-94. As a result, despite substantial growth, the reduction in poverty ended up being just 10.5 percentage points. Being targeted at those living in extreme poverty, even anti-poverty programs could not have done much at all for those living in the top two deciles of rural population.

Table 1: Poverty Ratio (percent) at the national level at different poverty lines

Poverty Line	1993-94	2004-05	2009-10	2011-12	Percentage point decline (1993-94 to 2011-12)	Percentage point decline (2004-05 to 2011-12)
			Rural + Urban			
The Tendulkar Line (TL)	45.7	37.7	29.9	22.0	23.7	15.7
1.25xTL	65.5	57.7	49.8	40.9	24.7	16.8
1.50xTL	78.4	71.0	64.5	56.4	21.9	14.6
1.75xTL	85.7	79.5	74.4	67.6	18.1	11.9
2.00xTL	90.1	85.0	80.9	75.6	14.5	9.4
			Rural			
The Tendulkar Line (TL)	50.3	41.8	33.3	25.4	24.9	16.4
1.25xTL	70.9	63.5	55.3	47.1	23.9	16.4
1.50xTL	83.6	77.3	71.1	64.0	19.6	13.3
1.75xTL	90.2	85.4	81.0	75.5	14.7	9.9
2.00xTL	93.8	90.2	87.2	83.2	10.5	7.0
			Urban			
The Tendulkar Line (TL)	31.9	25.7	20.9	13.7	18.2	12.0
1.25xTL	49.2	40.6	35.0	25.4	23.8	15.3
1.50xTL	62.6	52.7	46.8	37.6	25.0	15.1
1.75xTL	72.1	62.0	56.4	47.8	24.3	14.2
2.00xTL	79.0	69.6	63.9	56.6	22.4	13.0

Source: Authors' calculations from the expenditure surveys by the National Sample Survey Office

In rural India, percentage-point reduction in poverty becomes smaller and smaller as we move to higher and higher poverty lines. This feature obtains for reductions between 1993-94 and 2004-05 as well as between 2004-05 and 2011-12. By the time we double the poverty line, percentage point reduction drops to well below half of its level at the Tendulkar line for both periods.

The story for urban India turns out to be a little different. In this case, percentage point reduction at higher poverty lines turns out to be uniformly larger than at the Tendulkar line between 1993-94 and 2004-05 as well as between 1993-94 and 2011-12. The reduction during the latter period rises from 18.2 percentage points at the Tendulkar line to 25 percentage points at 1.5 times the Tendulkar line.

The Absolute Number of Poor

We now turn to the absolute number of poor at different poverty lines. Percentage levels already give us an idea of how poverty level rises as we increase the poverty line. Yet, the absolute numbers give some additional information in view of changing population over time. The population figures we use to translate the proportion of poor in the population into the absolute number of poor are shown in Table 2. These are the same population figures that the erstwhile Planning Commission used to convert poverty proportions into absolute number of poor at the Tendulkar line.

Table 2: Rural and Urban Population in India (in Million)

Region	1993-94	2004-05	2009-10
Total	890.2	1095.0	1230.8
Rural	655.9	780.6	843.0
Urban	234.3	314.4	387.8

Source: Planning Commission; Press Note on Poverty Estimates 2011-12, July 2013.

Table 3 reports the absolute number of poor at different poverty lines in rural and urban India and the country as a whole. At the national (rural plus urban) level, the absolute number of poor in India rises at all poverty lines, including the Tendulkar poverty line, between 1993-94 and 2004-05. At the line twice that of the Tendulkar line, the number of poor zooms to 921.1 million. In our judgment, such a high poverty line is not meaningful for either counting those in extreme poverty or targeting social programs at the poor. For all practical purposes, such a choice amounts to declaring the entire population poor and making social programs universal. But that would greatly reduce social expenditure per person on those in genuine extreme poverty.

At the national level, the *addition* to the number of poor steadily rises from 2.7 million at the Tendulkar line to a massive 122.9 million at twice the Tendulkar poverty line between 1993-94 and 2004-05. This shows that poverty reduction during the early phase of reforms failed to keep up with rising population. The picture changes in the second phase spanning 2004-05 to 2011-12. During this phase, the absolute number of poor fell at all poverty lines. The *decline* in the number of poor between these two years is a high 139.9 million at the Tendulkar line, but drops to just 1.8 million as we move to twice the Tendulkar line.

Table 3: Absolute number of poor at different poverty lines (in Million)

Poverty Line	1993-94	2004-05	2011-12
		Rural + Urban	
The Tendulkar Line (TL)	404.3	407.0	267.1
1.25xTL	580.5	623.1	495.0
1.50xTL	694.8	768.7	685.1
1.75xTL	760.7	862.0	821.9
2.00xTL	800.0	922.9	921.1
		Rural	
The Tendulkar Line (TL)	329.6	326.3	213.9
1.25xTL	465.2	495.4	396.7
1.50xTL	548.1	603.1	539.5
1.75xTL	591.6	667.0	636.5
2.00xTL	615.0	704.1	701.6
		Urban	
The Tendulkar Line (TL)	74.7	80.7	53.1
1.25xTL	115.2	127.7	98.3
1.50xTL	146.6	165.6	145.6
1.75xTL	169.0	195.0	185.5
2.00xTL	185.0	218.9	219.4

Source: Authors' calculations using expenditure surveys by NSSO

The pattern observed at the national level broadly extends to separate estimates of the number of poor in rural and urban areas with two minor qualifications. First, at the Tendulkar line, the absolute number of rural poor exhibits a small decline in 2004-05 over that in 1993-94. But this reverses as we move to higher poverty lines. Second, between 2004-05 and 2011-12, the absolute number of urban poor at twice the Tendulkar line rises.

One final observation is that urban poor as a proportion of rural poor rise as we raise the poverty line. At the Tendulkar line, urban poor in 2011-12 are approximately one-fourth of the rural poor. But as we reach the line twice that of the Tendulkar line, they become approximately one-third of the latter.

The Number of Individuals Lifted Out of Poverty

A common approach to estimating the number of individuals lifted out of poverty during a given period is to subtract the number of poor in the terminal year from those in the initial year. This procedure will be fine if the population in the terminal year were the same as in the initial year. But the practice is faulty when populations in the two years are different.

Our estimates of poverty at the national level in 1993-94 and 2004-05 best illustrate the point. Table 1 shows that the proportion of poor living below the Tendulkar line fell from 45.7% in 1993-94 to 37.7% in 2011-12. But Table 3 shows that the absolute number of poor *increased* from 404.3 million to 407 million over the same period. Did poverty at the national level rise or fall between the two years?

The contradiction arises from the conceptually flawed approach to deriving the estimate of the number of individuals lifted out of poverty in the above example. As Bhagwati and Panagariya (2013)

explain, we cannot measure this number by subtracting the absolute number of poor in the terminal year from that in the initial year. When population is rising, we must decide whether the new additions to it are to be classified as poor or non-poor. When we calculate the number of those lifted out of poverty by subtracting the absolute number of poor in the terminal year from that in the initial year, we are assuming that the new additions to the population are *all* non-poor. That is to say, when the population went up from 890 million in 1993-94 to 1095 million in 2004-05, all 205 million new additions were born non-poor so that any success in poverty reduction would have to be reflected in a reduction in the absolute number of poor in 1993-94. This is patently nonsensical.

The conceptually correct approach is to assume that absent a change that impacts poverty in some way, additions to population will carry the same proportion of poor as the existing population. If a change takes place that impacts poverty, it will apply to the existing population as well new additions to it. Under this approach, the level of poverty falls, remains unchanged, or rises as the proportion of poor in the population falls, remains unchanged, or rises. Therefore, a rise in the absolute number of poor is fully compatible with a fall in poverty in the face of rising population.[1]

Under this definition, the number of those lifted out of poverty is obtained by subtracting the absolute number of poor observed in the terminal year from the (hypothetical) number of poor that would have prevailed in that year had the proportion of poor in the population remained the same as in the initial year. Therefore, the first step in calculating the number of those lifted out of poverty is to calculate the number of poor that would have obtained in the terminal year had the proportion of poor remained the same as in the initial year. Table 4 provides these calculations with 1993-94 as the initial year and 2004-05 and 2011-12 as terminal years.

A quick comparison of corresponding entries in Tables 3 and 4 provides a very different picture of the number of individuals lifted out of poverty than what one would glean by simply differencing the absolute number of poor in the terminal year from those in the initial year. The number of individuals lifted out of poverty can now be seen to be substantial in both 2004-05 and 2011-12 at all poverty lines.

Table 4: Absolute number of poor in 1993-94 and (hypothetical) number of poor in 2004-05 and 2011-12 had the poverty ratio remained at its 1993-94 level

Poverty Line	1993-94	2004-05	2011-12
		Rural + Urban	
The Tendulkar Line (TL)	404.3	492.5	547.3
1.25xTL	580.5	708.4	788.7
1.50xTL	694.8	849.1	947.2
1.75xTL	760.7	931.0	1040.2
2.00xTL	800.0	980.3	1096.7
		Rural	
The Tendulkar Line (TL)	329.6	392.3	423.6
1.25xTL	465.2	553.7	598.0
1.50xTL	548.1	652.4	704.5
1.75xTL	591.6	704.2	760.5
2.00xTL	615.0	732.0	790.5
		Urban	
The Tendulkar Line (TL)	74.7	100.2	123.6

1.25xTL	115.2	154.6	190.7
1.50xTL	146.6	196.8	242.7
1.75xTL	169.0	226.8	279.8
2.00xTL	185.0	248.3	306.2

Source: Authors' calculations combining poverty estimates for 1993-94 in Tables 1 with population estimates for 2004-05 and 2011-12 in Table 2.

Table 5 provides the estimates of number of individuals lifted out of poverty between 1993-94 and 2004-05 and those between 1993-94 and 2011-12 at different poverty lines. (The estimate for 2011-12 in each case includes the corresponding estimate for 2004-05. As such the estimates for the two years shown are not additive.)

Table 5: Number of individuals lifted out of poverty (in Million)

Poverty Line	Between 1993-94 and 2004-05	Between 1993-94 and 2011-12
	Rural + Urban	
The Tendulkar Line (TL)	85.5	280.2
1.25xTL	85.3	293.7
1.50xTL	80.4	262.1
1.75xTL	69.0	218.3
2.00xTL	57.3	175.7
	Rural	
The Tendulkar Line (TL)	66.0	209.7
1.25xTL	58.3	201.3
1.50xTL	49.2	165.1
1.75xTL	37.2	124.0
2.00xTL	27.9	88.9
	Urban	
The Tendulkar Line (TL)	19.5	70.5
1.25xTL	27.0	92.4
1.50xTL	31.2	97.1
1.75xTL	31.8	94.3
2.00xTL	29.4	86.8

Source: Authors' calculations obtained by subtracting the 1993-94 estimate of the absolute number of poor from the corresponding hypothetical estimates for 2004-05 and 2011-12, respectively, in Table 5.

The most remarkable feature of Table 5 is that the number of those lifted out of poverty remains large even when we set the poverty line at a level twice the Tendulkar line. Interestingly, the number of those escaping poverty between 1993-94 and 2011-12 first rises from 280.2 million at the Tendulkar line to 293.7 million at the line 1.25 times the latter. It then steadily falls but remains a robust 175.7 million even when the line rises to twice the Tendulkar line. A moment's reflection shows that the result is not altogether surprising. Though percentage point reduction is smaller, the population of poor to which this

reduction applies is larger at higher poverty lines. The net result depends on the relative magnitudes of the changes in the two variables.

Another interesting feature of Table 5 is that the number of those lifted out of poverty in urban areas jumps by a wide margin as we raise the poverty line to 1.25 times the Tendulkar line. The number continues to rise, albeit by a much smaller margin, as we raise the line to 1.5 times the Tendulkar line. Though the number begins to fall as we raise the poverty line yet further, it remains substantially larger than at the Tendulkar line. Even at the poverty line twice that of the Tendulkar line, the number is 86.8 million compared with 70.5 million at the latter. The definite message is that India has successfully lifted a very large number of individuals out of poverty between 1993-94 and 2011-12 even at poverty lines that are 1.75 times or twice the Tendulkar line.

Social and Religious groups

In India, poverty levels systematically vary across social groups. In particular, two majorly disadvantaged groups of castes and tribes identified in the Constitution through listing in schedules are known as the Scheduled Castes (SC) and Scheduled Tribes (ST). Given the generally lower levels of incomes of these groups, it may be hypothesized that poverty reduction among them will be especially limited at higher poverty lines. This is because only small proportions of them are likely to be concentrated in the vicinity of high per-capita expenditures.

We report poverty ratios for the SC and ST at different poverty lines in 1993-94, 2004-05, and 2011-12 in Table 6. For the SC, the reduction in poverty at the Tendulkar line between 1993-94 and 2011-12 is 31.1 percentage points. This decline drops to 21.3 percentage points when we raise the poverty line by 50%, and to only 11 percentage points when we raise it by 100%. The same phenomenon is observed for the ST.

Table 6: Poverty Ratio (percent) among Scheduled Castes and Scheduled Tribes

Poverty Line	1993-94	2004-05	2011-12
Scheduled Castes			
The Tendulkar Line (TL)	60.5	50.9	29.4
1.25xTL	79.3	72.0	51.8
1.50xTL	89.3	83.2	68.0
1.75xTL	94.0	89.7	79.2
2.00xTL	96.4	93.3	85.4
Scheduled Tribes			
The Tendulkar Line (TL)	63.7	60.0	43.0
1.25xTL	81.6	77.7	63.6
1.50xTL	90.7	87.6	77.1
1.75xTL	95.0	92.7	84.7
2.00xTL	96.9	95.5	90.0

Source: Authors' calculations using expenditure surveys by the National Sample Survey office

The tribes are predominantly rural and they are also less well integrated into the mainstream of the economy. Therefore, the benefits of growth and perhaps even social spending reach them less fully than is the case with their SC counterparts. Accordingly, at the Tendulkar line, despite higher initial level of poverty than among the Scheduled Castes, they experienced a 20.7 percentage point reduction in

poverty between 1993-94 and 2011-12, which is smaller than that experienced by the latter. Moreover, the gain declines to 13.6 percentage points as we raise the poverty line by 50% and to just 6.9 percentage points when we raise it by 100%.

Table 7: Poverty Ratio (%) among Other Backward Castes and Others (Unclassified/Forward Castes)

Poverty Line	2004-05	2011-12
Other Backward Castes (OBC)		
The Tendulkar Line (TL)	37.8	20.7
1.25xTL	59.7	40.9
1.50xTL	73.9	57.6
1.75xTL	82.5	69.3
2.00xTL	87.8	77.7
Others (Unclassified / Forward Castes)		
The Tendulkar Line (TL)	23.0	12.5
1.25xTL	40.2	26.2
1.50xTL	54.8	40.0
1.75xTL	65.3	51.5
2.00xTL	73.0	61.0

Source: Authors' calculations using expenditure surveys by the National Sample Survey office

For years 2004-05 and 2011-12, expenditure surveys identify a third category of castes referred to as Other Backward Castes (OBC). Therefore, for these years, we can estimate poverty separately for OBC and residual castes after exclusion of the SC, ST and OBC. The latter are sometimes referred to as forward castes. Poverty levels for these remaining groups for 2004-05 and 2011-12 at the five poverty lines are shown in Table 7. The pattern is along now-familiar lines, with some modifications. The level of poverty at each poverty line in each year shown is higher for OBCs than for other castes that are more well to do. At the Tendulkar poverty line and those up to 50% higher, percentage point reduction is higher for OBCs than other castes. But the pattern reverses for yet higher poverty lines. These differences reflect different degrees of concentration of population at different expenditure levels for OBCs and other castes.

Concluding Remarks

In this paper, we have provided estimates of poverty at poverty lines that are 25, 50, 75 and 100 percent higher than the Tendulkar poverty line. We may note three key findings.

First, claims that measured poverty reduction in India during the post-reform era is to be attributed to the choice of a low poverty line at which the measurement is done are unfounded. Even when we measure poverty at a line twice as high as the Tendulkar line, poverty declines by an impressive 14.5 percentage points between 1993-94 and 2011-12. This compares with a reduction of 23.7 percentage points at the Tendulkar line. Interestingly, the reduction is larger (24.7 percentage points) at the poverty line that is 25% above the Tendulkar line than at the latter.

Second, raising the poverty line significantly – such as doubling it from the Tendulkar line – results in a large jump in poverty levels. At the national level, it ends up reaching 90.1% in 1993-94 and remains a high 75.6% even in 2011-12. Setting a poverty line at such a high level for purposes of disbursal

of benefits to the poor in 2011-12 would have overwhelmed the system. It would have required covering 83.2% of rural and 56.6% of urban population. These percentages exceed even the coverage under the Food Security Act, at 75% of rural and 50% of urban population, which is considered quite generous. A more reasonable revision would be to use a line somewhere in the neighborhood of 1.5 times the Tendulkar line.

Third and somewhat surprisingly, the number of individuals India has lifted out of poverty in the post-reform era (until 2011-12) remains surprisingly large even when we set the poverty line at a level double that of the Tendulkar line. Nationally, this number amounts to 175.7 million between 1993-94 and 2011-12 at this doubled line. This compares with 280.2 million at the Tendulkar line. Interestingly, the reduction at 1.25 times the Tendulkar line, at 293.7 million, is even higher than that at the Tendulkar line itself. In urban India, the number of those lifted out of poverty at poverty lines 1.25, 1.5, 1.75 and 2 times that of the Tendulkar line remains uniformly higher than that at the Tendulkar line.

Finally, we have provided poverty estimates at different poverty lines for rural and urban India and by social groups. In no case have we found that raising the poverty line entirely wipes out the fall in poverty between 1993-94 and 2011-12. The percentage point reductions become considerably smaller, especially for the Scheduled Tribes, as we raise the poverty line to 1.75 and 2 times the Tendulkar line, but in no case are they minuscule. And the reduction in the absolute number of poor remains large even at these high poverty lines.

References

Bhagwati, Jagdish and Arvind Panagariya. 2013. *Why Growth Matters: How Economic Growth in India Reduced Poverty and the Lessons for Other Developing Countries*, New york: Public Affairs.

Panagariya, Arvind and Megha Mukim. (2014). "A Comprehensive Analysis of Poverty in India," Asian Development Review 31(1): 1-52.

Panagariya, Arvind and Vishal More. 2014. "Poverty by social, religious and economic groups in India and its largest states: 1993-1994 to 2011-2012," Indian Growth and Development Review 7(2): 202-230.

NOTES

[1] We belabour this point here because the World Bank and many civil society groups have associated the rise in the absolute number of poor with rising poverty even in the face of declining proportion of poor in the population. This is a conceptually flawed practice and one that downplays the success in combating poverty.

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Environmental Issues, Economic Policies and Agricultural Development: The Case of Punjab, India

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Abstract

This paper discusses economic policies that have supported a particular kind of agricultural development in Punjab, as well as environment-specific policies, that have sought to deal with various environmental problems arising from that pattern of development. In doing so, we highlight some major environmental issues associated with economic policies in the state, including with respect to water, air, soil and climate change. We analyse why and how economic policy failures, including at the national level, adversely affect environmental quality in Punjab. The aim of this paper is to highlight these issues, as a first step towards identifying policies that may do a better job of protecting the environment.

JEL: Q20, Q24, Q25, Q28, Q50, Q58

Keywords: Agricultural Development, Environment, Economic Growth, Climate Change

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[*] Liu and Singh, University of California, Santa Cruz; Sanyal, Reserve Bank of India and University of California, Santa Cruz: the views expressed in this paper are those of the authors and not to be attributed to the organizations to which they belong.

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I. Introduction

Generally, economic policies that help eliminate market distortions can stimulate growth and potentially also improve environmental quality. However, when economic policies fail to create appropriate environmental incentives, or when environment-specific policies fail to correct market failures, these policy shortcomings can contribute significantly to many environmental problems. This paper investigates how economic policies affect environmental quality, using the Indian state of Punjab as a case study.

Punjab, in north-western India, has been one of the richest states in India. It occupies only about 1.54% of the total area of India but produces a relatively high proportion of the national food output, especially when measured by contributions to the Public Distribution System (PDS) for wheat and rice. The PDS has been a vital part of national food policy, for providing the country's poor with access to affordable minimum quantities of foodgrains. Punjab has also been a trendsetter for much of the rest of India in terms of farm practices and policies.

Punjab has a long history of agricultural success, rooted in its natural resources, specifically, its fertile river plains. In the 1960s, Punjab was selected by the Indian government to be the first place to try new hybrid varieties of wheat (and later rice), partly because of its water resources and infrastructure, and partly for other reasons rooted in market access and political economy. The increase in yields and output that resulted from this policy came to be called the Green Revolution. Punjab's largest crop remains wheat, and it produces 20% of India's wheat (2% of the world's wheat) and 9% of India's rice (1% of the world's rice) (K. Yadav, 2013).

To support the expansion of agriculture in Punjab, especially as geared toward supplying the PDS, the government introduced policies for improving access to fertilizers, tractors, and (especially) water, in many cases building infrastructure and providing subsidies. Access to markets and price guarantees have also been an important part of this system. It should not be surprising that Punjab has done remarkably well in agriculture, and the economy of Punjab has continued to depend relatively heavily on that sector. However, the rapid growth of agricultural production in the pattern the state has followed has arguably put tremendous pressure on the state's natural resources and contributed to severe environmental issues in the state. In turn, those environmental problems may have negatively affected not just agricultural development, but also impeded overall economic development in Punjab.

In the following sections, we discuss economic policies formulated to support agricultural development in Punjab, as well as environment-specific policies meant to deal with various environmental problems that have arisen. We highlight some major environmental issues associated with economic policies in the state. Importantly, we analyse why and how economic policy failures adversely affect environmental quality in Punjab. The aim of this paper is to highlight these issues, as a first step towards identifying policies that may do a better job of protecting the environment. While Punjab is a relatively small state in a large country, it can serve as a useful case study for other parts of India, as well as regions elsewhere in the world.

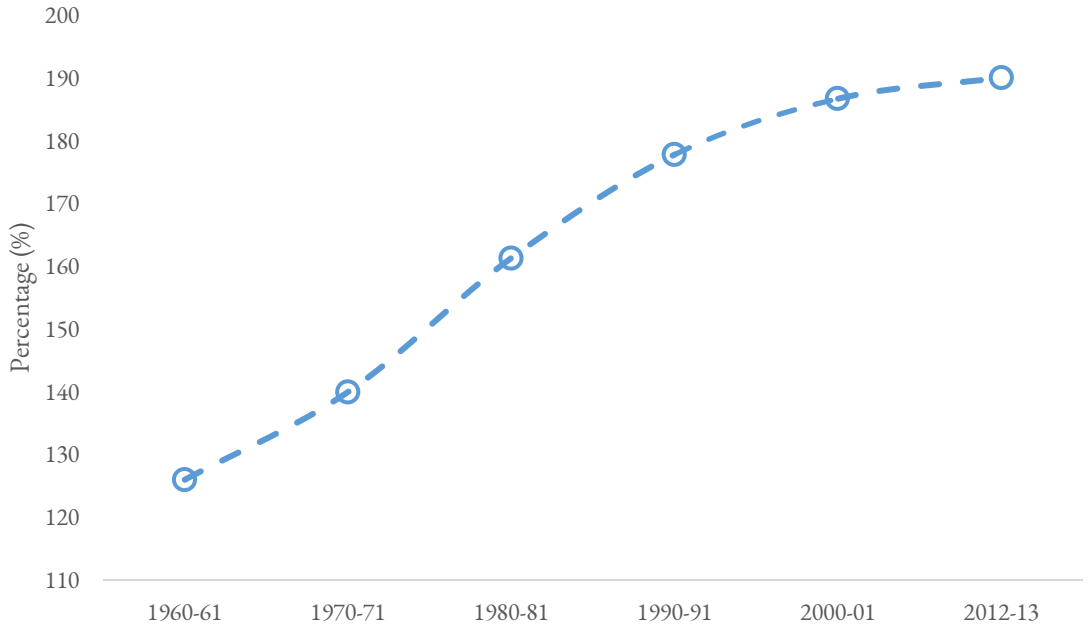
II. Background

Like many regions in developing countries, the state of Punjab in India is experiencing serious environmental problems. Population expansion and growth of agricultural production have put pressure on local natural resources and exacerbated levels of pollution. The nature of Punjab's environmental

problems is mostly associated with its pattern of agricultural development, rather than the state's limited industrialization. This pattern was the result of the national government's decision to introduce high-yielding varieties of wheat and later paddy (rice) as a way of achieving domestic food security: the Green Revolution.

Public procurement of these crops at guaranteed minimum prices provided an income floor and risk mitigation, encouraging adoption, and later discouraging switching to other crops. Village electrification in Punjab was achieved earlier than in other parts of India, and, as canal irrigation failed to keep up with demand for water, farmers increasingly turned to pumping groundwater for irrigation, which created pressures for subsidized or even free electricity and water for farmers. The development of this particular pattern of intensive agricultural practices has negatively affected the environment in Punjab over recent decades. In this region, about 83% of land is under agricultural cultivation and cropping intensity (crops per year) increased sharply, from 126% in 1960-1961 to 191% in 2012-2013, with the adoption of input-intensive agricultural practices (Figure 1).

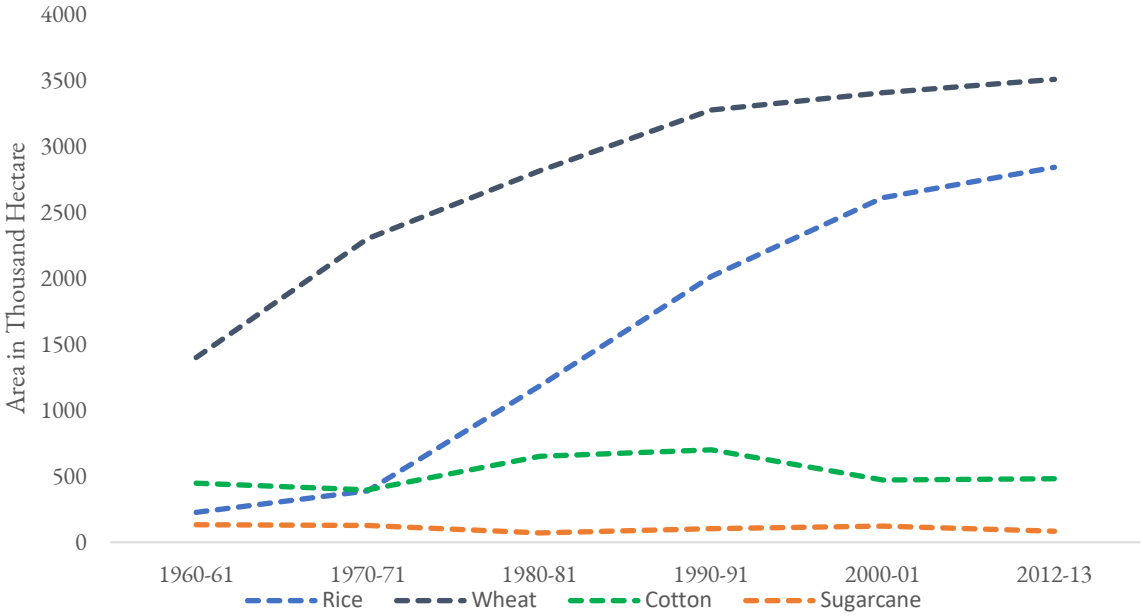
Figure 1: Cropping Intensity in Punjab



Source: Department of Agriculture, Punjab, 2013

This cropping pattern has been based on paddy-wheat dominance[1] since the Green Revolution and has arguably created many environmental issues in Punjab. It has harmed biodiversity and resulted in land degradation, soil nutrition depletion, a plummeting groundwater table, and pollution from heavy fertilizer and pesticide usage. Despite the fact that wheat and rice are crops with lower value-added compared with other options, the effective "monoculture" of wheat and rice grown in lockstep has not seen a significant decrease in recent years (Figure 2).

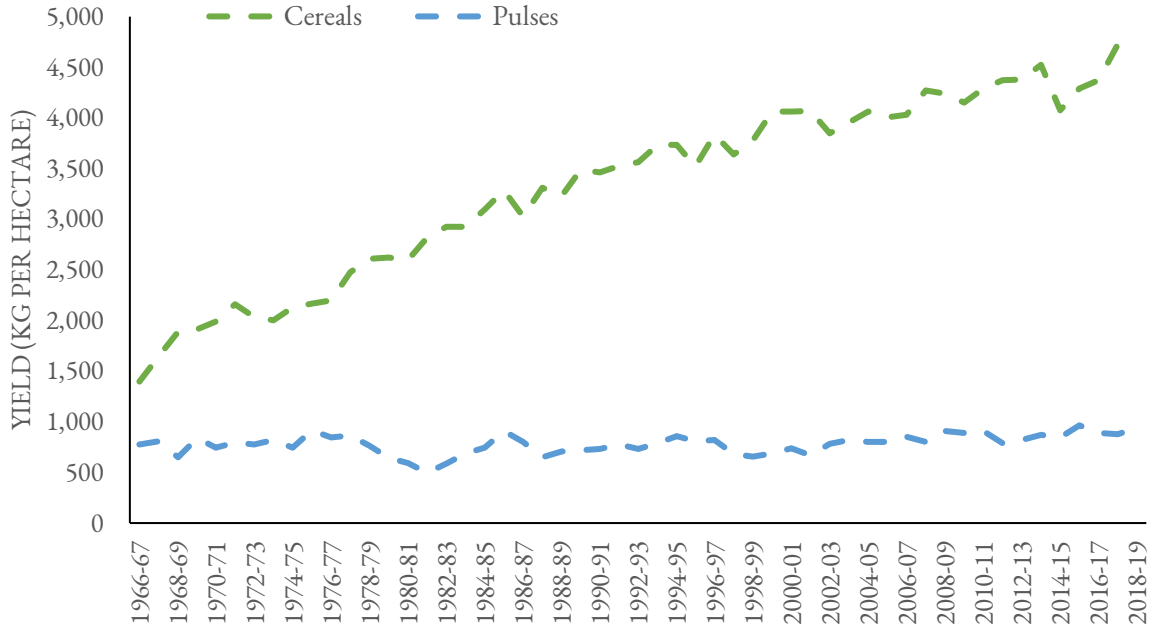
Figure 2: Showing the area under cultivation of different crops in Punjab



Source: Department of Agriculture, Punjab, 2013

Increases in the cultivated area and cropping intensity of wheat and rice have been associated with increased yields. This is evident in Figure 3, where the upward trend in the yield of cereals (chiefly wheat and paddy) is significant. By contrast, the yield for pulses has barely increased, and does not exhibit a steady trend. A statistical test for an endogenously determined structural break in the cereal yield series reveals a break in 1994-95.[2]

Figure 3: Yield of Cereals and Pulses in Punjab

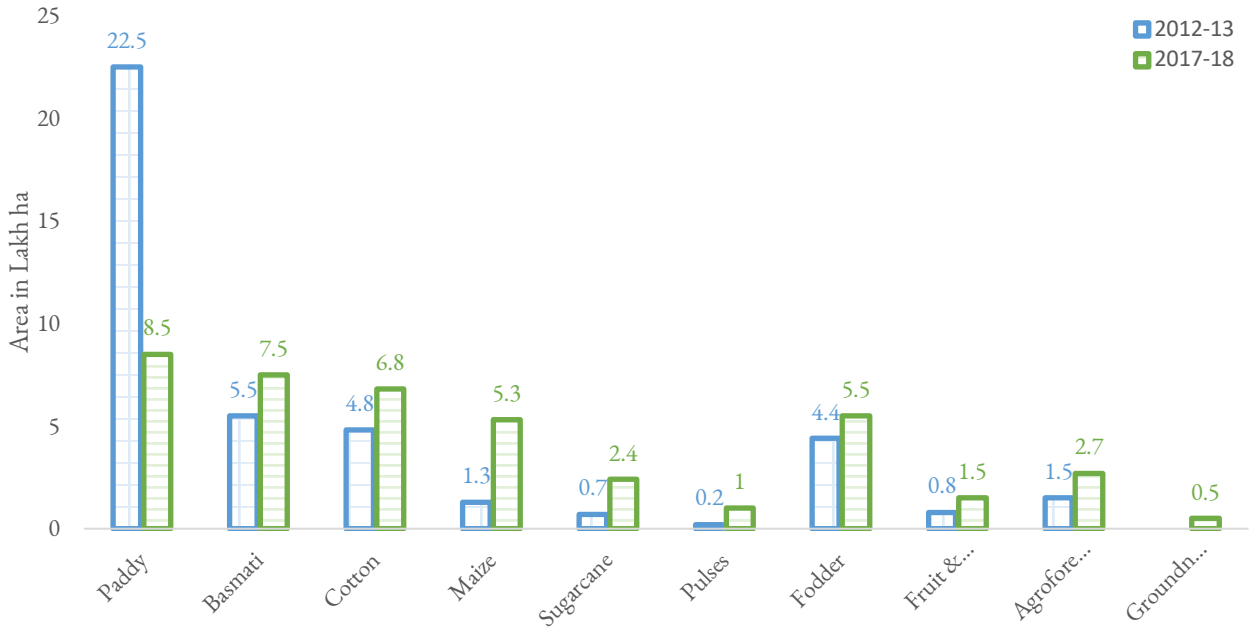


Source: Department of Agriculture, Punjab, 2013

The state government began to be concerned about diminishing returns to the Green Revolution a decade earlier than the 1994-95 break. A crop diversification policy was first formulated in the mid-1980s.

Subsequently, several fresh attempts were made at diversification, including setting various targets for alternative crops, as well as target reductions for paddy (Kaur, et al., 2015). The latter became an increasing focus of diversification because of rice's water intensity: after becoming an important second crop in the Green Revolution cropping system, paddy became a source of concern because of the increased reliance on groundwater for irrigation and rapid decline in the water table. Figure 4 illustrates the most recent plan for crop diversification in Punjab, showing actual cultivated areas in 2012-13 along with target areas in 2017-18, for a range of crops.

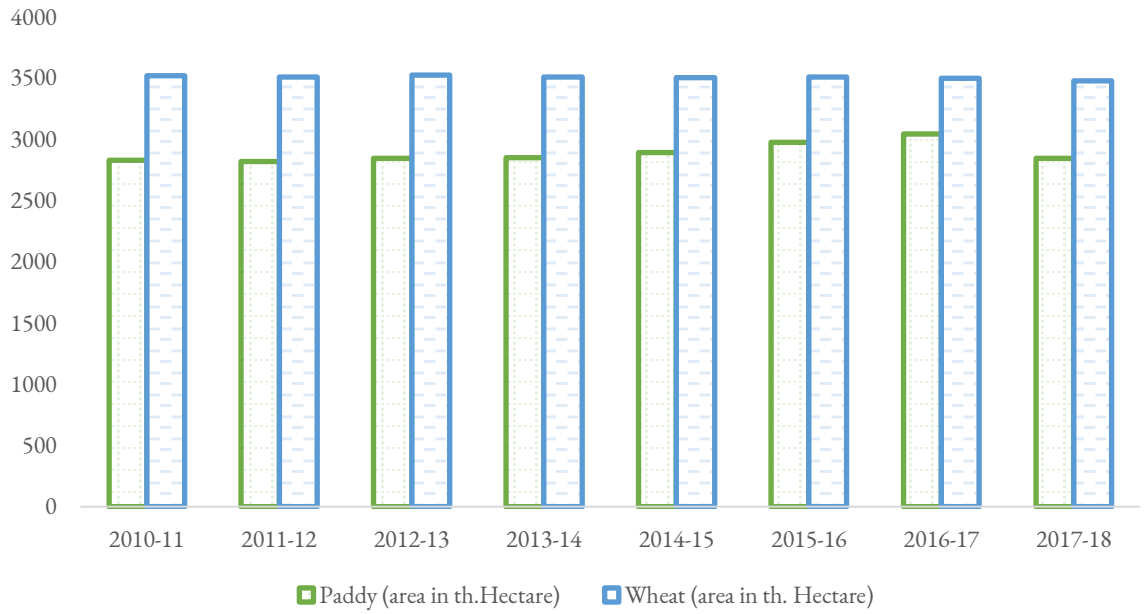
Figure 4: Proposed Plan for Diversification of Agriculture in Punjab



Source: Department of Agriculture, Punjab, 2013-14

However, there has been virtually no progress in achieving these crop diversification targets – compare Figure 4 to Figure 3. Farmers can perform their own cost and benefit analysis before switching to alternatives, and they have not been persuaded to switch, given the relative certainty of their current choices. The latest diversification program was started in some blocks (administrative units smaller than districts) where groundwater was critically overexploited, but it is faltering even in this limited implementation, suggesting that the design of the program is inadequate (Gulati et al., 2017).

Figure 5: Area under Paddy and Wheat in Punjab



Source: Department of Agriculture, Punjab

Aside from specific issues of design and implementation of the latest crop diversification effort, there are broader economic issues that continue as major obstacles to agricultural diversification (Singh, 2019). Farmers are relatively insulated against risks if they participate in the wheat-rice public procurement system. This infrastructure is relatively robust and familiar. Alternatives do not provide this market access and insulation from price and income risk. Even when minimum support prices for other crops (e.g., maize) exist, there is little public procurement, since they are not part of the national system for basic foodgrains. Other factors include the complex variety of alternatives, lack of experience, lack of adequate research and extension, longer growth cycles, greater vulnerability to weather and pests, and lack of market knowledge and infrastructure (Govil 2013). Some of these factors may be manifested as one-time switching costs, while others are ongoing issues.

To summarize, even though the intensive monoculture of paddy and wheat has triggered severe environmental problems, there have been significant and ongoing challenges to achieving any substantial degree of crop diversification in Punjab, despite decades of policies intended to promote it. Indeed, the discussion has continued to the present, when the Covid-19 pandemic created new economic pressures, and the central government announced major reforms in agricultural marketing. We return to these issues later in the paper.

III. Major Environmental Issues

The focus on a narrow range of crops in Punjab has reduced agricultural biodiversity, while expanding agricultural development into new areas has hurt wild biodiversity. The dominant pattern of agriculture has had dramatic effects on the amount of carbon cycling in the atmosphere. Wheat, rice, and soybeans account for a significant amount of the worldwide increase in carbon in the atmosphere over the last 50 years. Burning agricultural residue causes severe air pollution in certain months. Agriculture has contributed to soil pollution through the heavy use of chemical fertilizers and pesticides; this impact on soils has reduced agricultural productivity, aside from the negative health impacts.

Most significantly, agriculture dominated by the monoculture of paddy and wheat has led to overexploitation of water resources in Punjab: groundwater resources in 80% of the state's geographical area are overexploited. All these environmental issues have significant costs that are typically not fully recognized. In this section, we discuss these issues sequentially, as a prelude to an integrated discussion of possible policy responses.

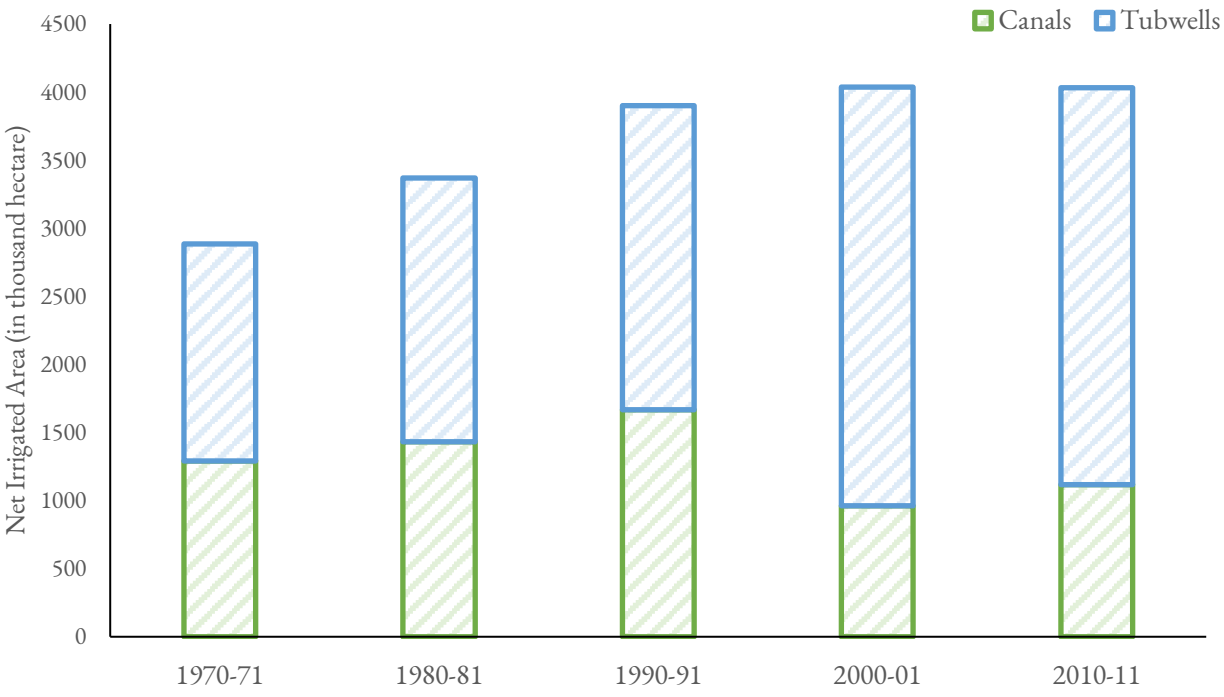
Water

Punjab is not endowed with ideal soils for growing rice; however, the availability of sufficient irrigation water made the rice-wheat pattern in this region highly productive. Rice grown by traditional practices requires approximately 1500 mm of water during a season, and about 50 mm more of water is required to grow seedlings to the transplanting stage. In Punjab, an area with mainly light-textured soils, the actual amount of water applied is much higher than recommended norms (Timsina and Connor, 2001).

Due to the increasing demand for water for irrigation, the amounts provided through the public surface water supply systems are well short of current irrigation needs (Hira, 2009). Reduction in canal capacity due to siltation has reduced canal efficiency far below designated capacity, so traditional canal irrigated area has reduced, while the area irrigated by tube wells has increased. All of this has driven farmers to switch over to the development and use of groundwater, sometimes even low-quality groundwater. To support this reliance on groundwater, the state government has provided easy or subsidized credit for tube well installation, as well as subsidies or other support for electrification of tube wells. With fuel subsidies, diesel-operated pumps – to draw up water from such wells - have become a major fossil fuel consumer in the state. Furthermore, increasing temperature because of climate change increases evaporative demand, which has further increased drawing of groundwater.

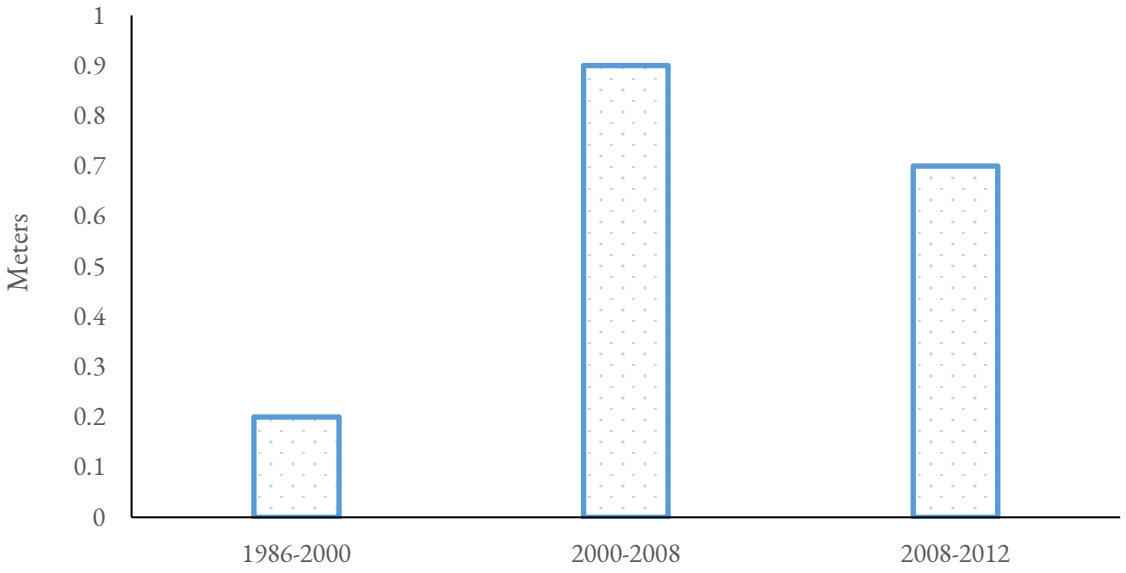
Punjab has the highest proportion of net irrigated area among the states of India. 97.9% of area under agriculture receives irrigation, and 27% of it is from canals, while the vast majority (73%) is from tube wells (ENVIS 2015). Figure 6 displays the proportions of canals and tube wells in irrigation. The unsustainable use of groundwater in excess of recharge is reducing Punjab's water table at an alarming rate. The situation in central Punjab is the worst: the water table in 34 out of 73 blocks has gone down beyond 20-meter depth, and the cumulative fall in groundwater during the last three decades is more than 9 meters (Figure 7). However, in some southwestern parts of Punjab, the water table is rising, because water extraction for irrigation in these areas is limited due to its brackish and saline quality.

Figure 6: Irrigation Methods



Source: Punjab Pollution Control Board, Punjab

Figure 7: Water Table Decline (meters)



Source: Punjab Pollution Control Board, Punjab

These water issues have caused substantial social and economic costs. According to Sekhri (2011), a one-meter reduction in groundwater results in 8% decline in food grain production. As farmers are faced with the need to move to deeper wells, there is a nonlinearity in cost to access groundwater at 8 meters, while almost 100% of these areas had already developed a water table below 9 m by the year 2010 (Kumar, et al., 2010). Small and marginal farmers are proportionately the most affected.

Clearly, agricultural production in Punjab is unsustainable in its current form (Hira, 2009). New management policies and institutions will need to be set up to help Punjab break away from this dilemma. Furthermore, both incentives and controls are called for to regulate farmers' water-using behaviors. The state government has realized the problem and proposed policies and programs for groundwater management. It introduced reforms in agricultural power and an artificial recharge project in Moga district, where all blocks are categorized as overexploited. It enacted the Preservation of Subsoil Water Act in 2009, which mandated delayed paddy nursery and sowing activities by farmers in Punjab. This was to save groundwater by prohibiting sowing and transplanting paddy before specified dates in the hot and dry summer period. Any farmer who contravenes the provisions of the act is liable for a potentially heavy monetary penalty.

However, the groundwater situation worsened in rice-growing areas after the policy change (Sekhri, 2012a). Possibly, farmers responded with an increased number of rounds of irrigation, or more water per irrigation round. In contrast to Sekhri, Tripathi, et al. (2016) found that the groundwater table initially improved after implementation of the 2009 Act, but, thereafter, higher shares of tube wells per total cropped area and increased population density led to a significant decline in groundwater tables (Figure 7). They also note that rainfall and the use of surface water for irrigation protect the groundwater table: seasonality and monsoon rainfall are important, but changing climate patterns are coming into play.

Other approaches for saving water include laser land leveling, alternate wetting and drying, delayed rice transplanting, shorter duration rice varieties, cultivation on raised beds, and crop substitution for rice, mulching rice and wheat with crop residue, irrigation for wheat grown after rice being applied based on atmospheric demand and soil water status rather than growth stage, replacing wheat with other crops, and using furrow-irrigated raised beds. All of these can help, but it is not clear which is best, or if they can make a significant aggregate difference.

Agencies such as the Central Groundwater Authority (CGWA) and Central Groundwater Board (CGWB) are institutionally responsible for enforcing protection of surface and groundwater resources. However, weak or absent coordination between agencies and a lack of regulatory oversight are significant challenges for such enforcement. Lack of clarity over their status, technical capacity shortfalls, under-staffing, marginalization and outdated mandates make these regulatory institutions ineffective in supporting sustainable groundwater management.

Finally, the use of groundwater has been distorted by specific economic policies for years. A critical issue is the effect of water pricing policy on the efficiency and use of water. Resolution of the crisis in Punjab's water resources may need fundamental changes in water pricing and in institutional structures. Pandey (2016) summarizes some potential price-based and quantity-based economic instruments for promoting sustainable use of groundwater, including user fees and tradable groundwater rights, but they have not been tried. Other policies such as subsidies/user charges for promoting investment in or leasing of water-saving methods/equipment and supporting environment for uptake / marketing of alternative crops – to encourage farmers to gradually reduce cropping of water-intensive crops – are also potential instruments to drive sustainable use of groundwater.

Air

Burning of agricultural residue in the fields by farmers at the end of the harvesting season is one of the main sources of air pollution in Punjab, as also a much wider area in northern India. Venkataraman et al. (2006) estimated that farmers all over India burned 116 million metric tons of crop residue in 2001,

accounting for a quarter of all black carbon, organic matter, and carbon monoxide emissions, and 9-13% of fine particulate matter (PM 2.5) and carbon dioxide emissions in India that year. Field burning in Punjab, Haryana, and western Uttar Pradesh was the largest likely contributor to these emissions.

Every year, Punjab produces about 20 million tons of rice straw and 17 million tons of wheat straw. Some is used to feed livestock, an insignificant quantity of rice straw is used as fuel in domestic cook stoves, and a small fraction is ploughed into the soil to serve as fertilizer for the next crop[3] – but the vast majority is (81% of rice straw and 48% of wheat straw) burned *in* situ / open fields. This contributes to severe air pollution during March-April and October-November, adversely affecting health (Long et al., 1998; Vander Werf et al., 2006; Kharol and Badarinath, 2006; Pandey et al., 2005), climate and yields (Auffhammer et al., 2006), and the overall economy (Meesubkwang, 2007).

The crop residue disposal method is strongly affected by the harvesting mode. According to Gupta (2012), farmers burned 90% of the residue from rice left by combine-harvesters, while they burned only 1% of the residue that was manually harvested. There are two broad types of rice varieties grown by farmers, coarse and Basmati, and farmers tend to harvest the latter one manually to avoid a loss of grain, as it has a much higher price. But for coarse varieties with support prices and public procurement, combine-harvesters are preferred, being cheaper and faster than hiring labor.[4] Finally, there are ways to utilize residue instead of burning it (Kumar, et al., 2015), but the supply of residue far outweighs potential demand, and residue collection has high costs.

Recently, as the problem of air pollution from burning paddy residue has worsened, it has once again drawn attention to the difficulties that the Punjab agricultural economy faces, as well as the problem of unintended consequences of policymaking. As noted in the previous subsection, the state government tried to reduce the depletion of groundwater in areas growing rice (in rotation with wheat) by mandating delays in sowing paddy. This delayed the harvesting of rice and shortened the gap until the sowing of the next wheat crop. The end result was greater residue burning, to manage the much shorter time window between harvesting one crop and sowing the next.[5]

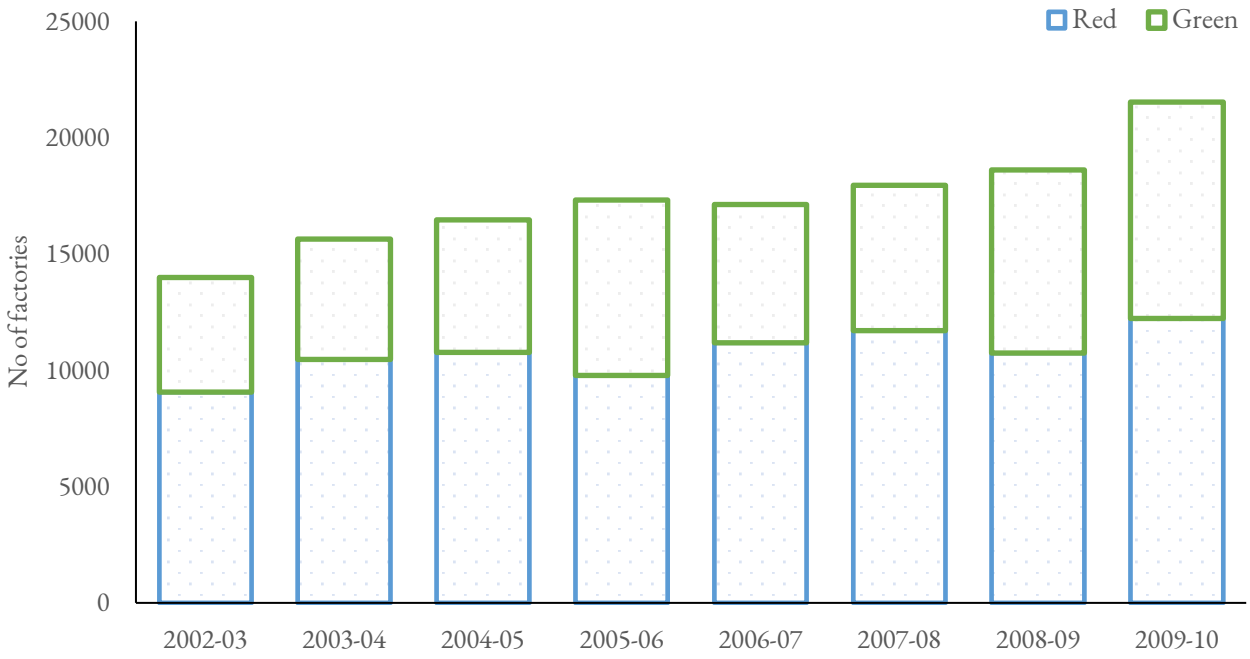
Recently, the Happy Seeder or similar technologies have been proposed: they allow farmers to plant wheat into the loose residue.[6] Happy Seeder is a tractor-mounted machine that cuts and lifts the rice straw, sows wheat into the bare soil, and deposits the straw over the sown area as mulch, eliminating the need for residue burning. But farmers need to purchase the machine or rely on an underdeveloped leasing market. They must also first uniformly spread the loose rice straw left by the combine-harvester on the field. The evidence is that net gains are small, and not enough to motivate farmers to switch (ANI, 2020). Policy makers have also tried subsidies for, and education about, the technology, but with limited impacts. In 2019, higher-than-ever pollution in Delhi led to India's Supreme Court requiring penalties for stubble burning, but these have been difficult to enforce, and have only exacerbated tensions among farmers.

Given our focus, this subsection has concentrated on air pollution associated with burning of crop residue. Other sources of air pollution include vehicle emissions, cooking and heating fires, and industry. For the most polluted cities of northern India, these three sources may rank above crop residue burning as contributors to pollution and are more persistent throughout the year. Nevertheless, crop residue burning adds to an already serious problem throughout northern India.

In addition, the problem of industrial pollution in Punjab is not a trivial one, and while the Punjab Pollution Control Board attempts to regulate emissions by factories in the state, significant progress is lacking. Figure 8, showing the numbers of factories that are "clean" (green on chart) or not (red), indicates that the number in the latter category has not decreased over time. If Punjab deals with the environmental

and economic problems associated with agriculture by accelerating industrialization, this source of air pollution can easily worsen, if not attended to by policymakers.

Figure 8: Number of Factories causing Pollution

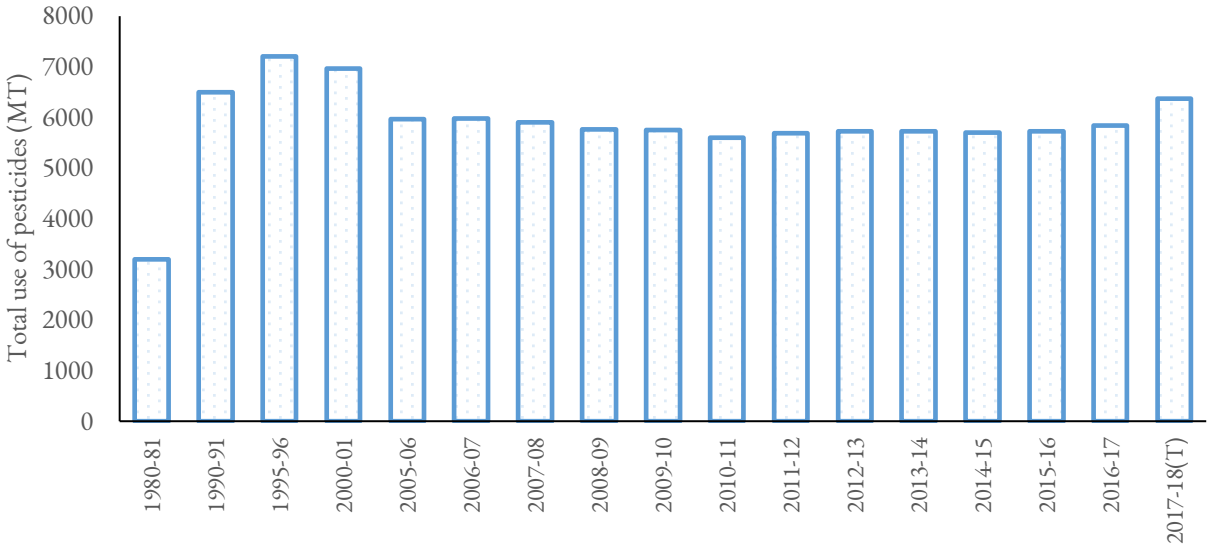


Source: Punjab Pollution Control Board, Punjab

Soil

The soils of Punjab are classified into numerous types, each with different suitability for different crops (Department of Soil and Water Conservation). Crop and cultivation choices, as well as climate patterns, can affect soils, including causing problems such as salinity or erosion. With the success of the Green Revolution, land under agriculture increased from about 75% in 1960-61 to about 80% in 1971, after which it has remained more or less constant. The high wheat-paddy cropping intensity leaves soil with no time for natural rejuvenation. Modern agriculture has contributed to soil pollution, through the non-judicious use of chemical fertilizers, herbicides, insecticides and fumigants. Most of these are stable chemicals: they remain in the soil for long periods without degradation and have cumulative effects. In Punjab, the use of chemical pesticides jumped in the 1980's and has remained high ever since (Figure 9). Pesticide residues are found in soil, air, water and living organisms.[7] Tilling and irrigation deepen the impacts. Ultimately, the continuous use of the chemicals adversely affects soil productivity (ENVIS, 2015).

Figure 9: Total Use of Pesticides (in Metric Tonnes)



Source: Punjab Pollution Control Board, Punjab

The soils in Punjab are generally alkaline in nature with low to medium Nitrogen (N), medium Phosphorus (P), and medium to high Potash (K). Agricultural practices in the past three decades have removed varying amounts of mineral nutrients from the soil, and resulted in a steady decline in its fertility, with respect to these three macronutrients (Tandon and Sekhon, 1988) as well as micronutrients (zinc, iron, manganese). The quantities removed are greater than the amount reintroduced into the soil through fertilizers, which leads to deterioration in soil quality. Sulphur deficiencies (Sharma and Nayyar, 2004) and zinc deficiencies have also emerged.

Field burning of wheat and paddy residues is also contributing to loss of soil fertility. Specifically, 80% to 85% of potassium absorbed by rice and wheat crops remains in the straw, and potassium removal by crop residue is approximately five times as much as is supplied by fertilizers (Chander, 2011). Also, removal of potassium by crops far exceeds that of nitrogen and phosphorus, creating a nutrient imbalance that is very difficult to remedy.

Despite this imbalance, fertilizer use is highly skewed towards nitrogen, with a very low rate of potassium application. This is largely due to the structure of fertilizer subsidies, which are determined by the central government, and beyond the state government's control. Overall, the partial factor productivity of N, P, and K for food grain production has dropped dramatically (Benbi and Brar, 2009). Years of application of inorganic fertilizers have changed the physical and biochemical composition of soil organic matter and caused a decline in the nutrient-supplying capacity of soil. Degraded soils are inherently poor in fertility and crop production, and therefore respond to fertilizer application in the short run, but with negative longer-run consequences. Lower efficiencies and degradation of soil results in uneconomic returns to the users and will eventually lead to even greater overall environmental degradation.

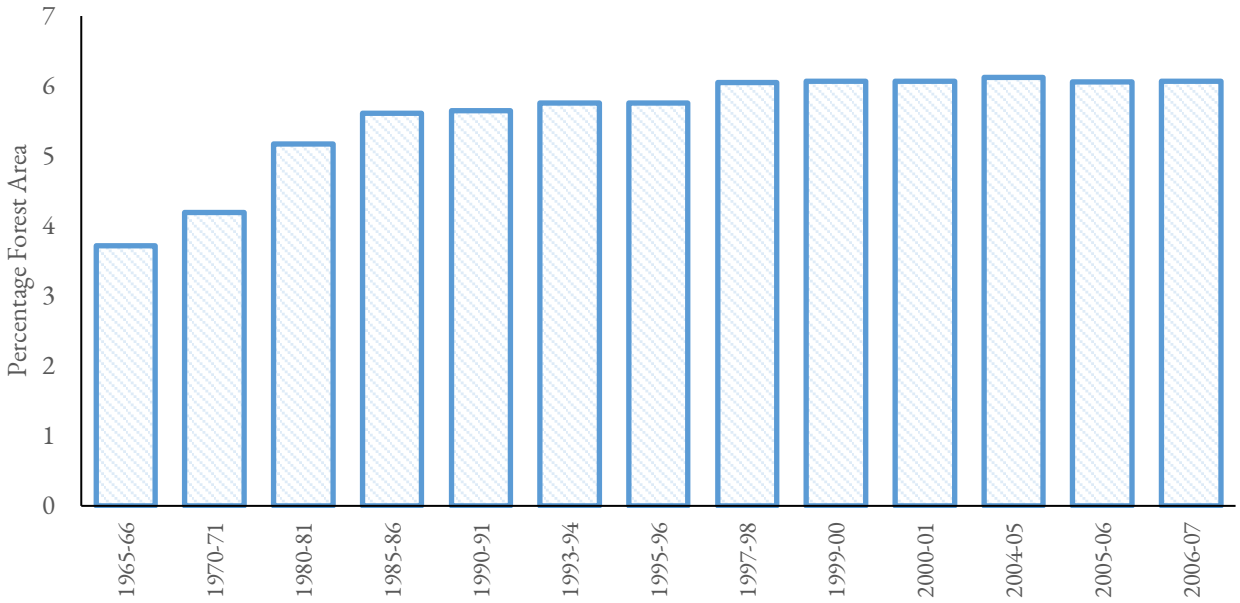
To tackle these issues, the state government has tried various measures for soil conservation: alternative land use, agro-forestry systems (intercropping of trees with field crops) and recycling of crop residue. Specifically, forest species or fruit species have been introduced to places where traditional field crops are increasingly being grown. Intercropping trees with field crops is meant to restore the productivity of soils

and increase farmers' profits. Similarly, eco-friendly systems based on the use of nitrogen-fixing trees or trees that are capable of reducing soil pH have some potential to bring about favourable changes in soil properties by promoting soil conservation. However, little research has been done on refining these approaches and on their more detailed impacts, especially on the fine tuning needed to take account of the socioeconomic situations of small farmers. Of course, tree planting can have other potential positive or negative impacts with respect to water and carbon emissions.

Biodiversity

While it is difficult to compare systematically the decline in Punjab's biodiversity with other regions, one can at least document the pattern of change in Punjab to the extent possible. Paleontological records of Punjab indicate that it was floristically and faunistically rich in the geological past. But a review of various components of Punjab's physical environment indicates that intensive and extensive agriculture, over-exploitation of soil and water resources, and consolidation of land holdings have adversely affected natural habitats and biodiversity. Detailed data on diversity of flora is not easily available, but it appears that total forest cover increased slightly or remained relatively constant, at least until 2007 (Figure 10), and likely declined thereafter, with a 2015 estimate of below 4%.

Figure 10: Forest Area as percentage of Total Area



Source: ENVIS Centre, Punjab

More narrowly, in the context of cultivated crops, prior to the Green Revolution, numerous varieties of wheat, rice, maize, millet, sugarcane, pulses, oil seeds, and cotton were documented, being propagated through pure line selection. Subsequently, however, agricultural biodiversity has sharply reduced, with a major focus on the wheat-paddy crop rotation and higher dependence on a narrow range of high-yielding varieties of crops. Even though many new varieties of each crop have been released since the Green Revolution, very few are actually in use by farmers. They have replaced a broad range of traditional

varieties which were naturally suited to the climate and soil-related conditions with a small number of high-yielding varieties.

Specifically, the area under input-intensive high-yielding varieties of wheat increased from 69% in 1970-71 to 100% in 2000–01, and has not declined thereafter, and the area under input intensive high-yielding varieties of rice increased from 33% in 1970-71 to 100% by 2005. This has resulted in the severe loss of domesticated floral biodiversity, as well as a decline in areas under other major crops, including maize, millet, pulses, gram, barley, mustard, and sunflower.

In addition to loss of biodiversity in crops, Shiva (1991) highlights the case of animal husbandry, with the introduction of exotic breeds. Together, there are threats to both agricultural biodiversity and species biodiversity in Punjab. As noted, reduced crop diversity has exacerbated soil degradation, depletion of groundwater, and resurgence of resistance in pests, while adversely affecting the population of natural enemies of pests. Additionally, land degradation and soil nutrient depletion have led to clearing of formerly forested areas.

The state government has been aware of its biodiversity loss and proposed a strategy and action plan for conservation of biodiversity in Punjab. Preparation of a Biodiversity Strategy and Action Plan began in 2000: it established a general framework for the state's policy on conservation and sustainable use of biological resources, defined their current status, identified processes leading to deterioration of biological resources, and set out guidelines and specific programs for future actions. The initiatives taken up by relevant departments include promotion of social instruments to protect biodiversity, enactment of specific laws, and promotion of scientific studies. However, unsustainable development models, lack of administrative coordination among institutions and individuals participating in planning, and separate implementation of various developmental projects continue to contribute to the biodiversity loss. Certainly, economic instruments that shape incentives – such as crop insurance or a broader procurement system – need to be strengthened for the purpose.

Climate Change

Due to an increase in concentration of greenhouse gases, the world witnessed warming of 0.74^0C between 1906 and 2005 (IPCC, 2007b). This source predicted a temperature rise in the range of 0.5 to 1.2^0C by 2020 for South Asia, and current data is consistent with this. Higher temperatures negatively affect the growth and productivity of many crops, reducing crop duration, increasing crop respiration rates, reducing crop yield, and numerous other negative impacts (Chauhan, et al., 2011). According to Wassmann, et al. (2009), a 2^0C increase in the mean air temperature will lead to a 0.75% decrease in rice productivity. Ortiz, et al. (2008) predict a similar reduction in wheat yields. Surveys indicated that terminal heat stress in Punjab in 2009-2010 led to an average decline of 5.8% in crop yield compared with the previous year.

A rise in CO_2 should have a positive effect on C_3 plant species[8] in arid regions; however, a rise in temperature would offset this benefit (Timsina and Humphreys, 2006a). On another front, paddy cultivation and residue burning are two significant sources of methane (CH_4). Activities that increase the production of rice, such as the application of organic manures, crop residue, and inorganic fertilizers, also contribute to the increase of CH_4 emissions. Interestingly, irrigated rice is the largest source of CH_4, but also the most obvious option for mitigating emissions, because in Punjab, rice is grown in rotation with wheat on coarse-textured soils of high percolation rates, with a high requirement of irrigation, and constant inflow of oxygen into soils restricts CH_4 emissions (Jain et al., 2000). Improving the irrigation

schedule might substantially reduce CH_4 emissions (Wassmann et al., 2000). In fact, continuous flooding emitted more CH_4 than alternated flooding and drying (Mishra et al., 1997). Clearly, there is potential for significant improvements in these emissions, by educating and training farmers.

At the national level, the Indian government was concerned about the impacts of climate change as early as 1992 (Kumar, 2018). In 2008, it released a set of policy programs (eight "missions") on climate change, together enshrined in its National Action Plan on Climate Change (NAPCC). Furthermore, it had undertaken a voluntary domestic commitment for reducing its emission intensity of GDP by 20-25% by 2020 compared to 2005, to be achieve through the missions focused on mitigation. However, these targets have been pushed out into the future, and remain challenging even so.

Through the Ministry of Environment, Forest, and Climate Change (MoEF&CC), the national government directs each state to identify their climate change concerns and propose mitigation strategies. Depending on each state's specific circumstances, relevant strategies have been formulated as a part of each State Action Plan on Climate Change (SAPCC). As the technologies for mitigation evolve, the strategies identified in these documents are expected to evolve periodically. Punjab's action plan was finalized several years ago (Jerath et al., 2014), although it is now being updated, as is the case for all states. The document covers issues of water, air quality, and biodiversity, as well as emissions, and includes an integrated discussion of sustainable agriculture, as well as identification of various government departments and agencies to be involved. However, in an overall analysis of SAPCCs, Kumar (2018) identifies several problems with formulation and with implementation strategy. Many of the issues raised there are general problems with policymaking in India, including environmental policy, and we discuss them in more detail in the next section.

Discussion

Of all of Punjab's environmental issues, as detailed in the previous section, the most salient is the unsustainable depletion of groundwater for irrigation. This depletion is supported by policies that favour growing rice to sell to the national foodgrains procurement system, which focuses almost exclusively on wheat and rice. Rice is water-intensive, and surface water resources such as canals are inadequate for the current cropping pattern. The state government's efforts to perpetuate this system have led to policies that subsidize, or just give away, water and electric power. Other environmental issues of waterlogging, water pollution, soil nutrient depletion, and soil pollution are all symptoms of the same problem, reflecting the production techniques chosen during the period of agricultural development based on high-yielding varieties.[9]

The classic phenomenon of diminishing returns, evident in falling agricultural growth rates in Punjab, is behind behaviours such as overuse of fertilizers, as well as the problems with water use. Diminishing returns to agriculture, and inadequate growth in other sectors, have been reflected in income distress among small farmers. Social problems such as alcohol and drug abuse are also arguably associated with the failing nature of the state's agricultural economy. It is remarkable, therefore, that there has been no effective policy intervention to tackle the problem of diminishing returns in agriculture. One could more easily understand the relative neglect of associated environmental problems if the agricultural economy were thriving, since externalities, especially those with negative consequences beyond the next election, are easier for policymakers to ignore.

Here, the role of India's national food grains procurement system deserves attention. Without an overhaul of this system, detailed recommendations for reviving agricultural growth in Punjab, however, careful and comprehensive (e.g., Gulati, et al., 2017), may not gain much traction, just as they have not in the past. The lock-in created by the system extends to the state government, which receives significant revenues from charges levied in the markets where wheat and rice are procured.

Changing the national procurement system would force the Punjab government to make significant and difficult adjustments, although there may be potential savings in electric power subsidies if farmers are using less groundwater extracted from deep wells. The current electric power subsidy is extremely fiscally costly, besides incentivizing groundwater depletion. Agricultural reforms announced by the national government in Fall 2020 may not address the heart of the problem, at least in Punjab. The reforms attempt to increase competition and efficiency in agricultural marketing, but without addressing the design and operation of the PDS, leading to anxiety among farmers in Punjab (and elsewhere), and continued protests.

By contrast, Devineni et al. (2020), illustrate a more fruitful approach to policy reform. They consider the issue of groundwater depletion in an integrated national analysis, while linking it explicitly to the goal of national food security. Their calculations demonstrate that it is possible to reconfigure the PDS while preserving national food security and reducing groundwater depletion. Indeed, a redesigned PDS could also increase national revenues from agriculture and reduce energy usage. Even if there are potential issues of switching costs, income redistribution and implementation, it is noteworthy that improvements from reforming the current system might be available with careful policy design.[10]

At the state level, Punjab has proposed policies and regulations to protect the environment, as was illustrated at various points in the previous section, where environmental issues were discussed individually. But the motivation for these policies has been largely in the context of prolonging the already compromised viability of the current agricultural economy. In particular, the recent focus on crop diversification has been to reduce the unsustainable depletion of groundwater associated with rice growing for the PDS, rather than any calculation of the larger implications of this depletion a decade from now. There is no articulation of the harm being done to drinking water resources in the state through this depletion, or overall assessment of the environmental impact of the current shape of the agricultural economy. One example of this absence of an integrated perspective was the state government's effort to reduce groundwater use by restricting dates of paddy sowing. This led to an increase in rice stubble burning. Much of the cost of increased air pollution was then borne outside the state.

One can argue that highlighting the environmental damage resulting from the current agricultural economy and tying it explicitly to the slowdown in the growth of Punjab agriculture, could lay the groundwork for greater political acceptance of reform. Environmental policy has to be seen as an essential component of, not subsidiary to, policies for reforming agriculture to restore its growth rate. Also, environmental policy has to be formulated and articulated in a way that incorporates other sectors of the economy. For example, drinking water and water for industrial uses are also being affected by groundwater depletion and water pollution, so an optimal policy for water usage must take account of these alternative uses.

In this context, the analysis by Kumar (2018) is instructive: he considers eight different SAPCCs, including Punjab's. These SAPCCs consider a range of environmental issues, including water, urban habitats, agriculture, and biodiversity, as well as global warming. There are some common issues of lack of stakeholder inputs, lack of local specificity, and lack of clear understanding of the financing of adaptation measures. However, the most striking observation is that over half of Punjab's notional

SAPCC budget is allocated for sustainable urban habitats. Water and agriculture are assigned much smaller planned allocations, equivalent to only 3-4% of the state budget. Correspondingly, the adaptation actions proposed are deemed to be clearly insufficient, especially without a comprehensive assessment of climate impacts and vulnerability for the agricultural sector.

Putting aside the need for an integrated and sufficiently comprehensive approach to environmental issues associated with Punjab agriculture, even within the context of the existing system and a piecemeal approach to its reform, there are promising policy initiatives that correct or mitigate distortions created by mispricing, such as providing free electricity to farmers.

One approach that is being piloted is to provide payments to farmers that are not tied to electricity use, essentially an income subsidy that makes power affordable, without distorting its price in a manner that incentivizes overuse of water and is environmentally damaging. Such mechanisms do not rely on changes in cropping patterns or public procurement systems, but at least correct the worst input distortions within the existing system. The state government has recently piloted projects in partnership with J-PAL, to test various incentive schemes for reducing water use by replacing free electricity with cash transfers and cutting stubble burning by offering financial incentives (Chandran, 2020). These projects can provide concrete demonstration of impacts and increase acceptance of policy changes by farmers and government officials.

Meanwhile, the neighbouring state of Haryana is more aggressively pursuing policies that reward farmers for switching from paddy to a number of other possible crops, all less water-intensive. These efforts are relatively new, but preliminary estimates suggest that the fiscal costs are not high, supporting the argument that lack of salience of environmental damage, relative to the overall agricultural economy, holds back effective policies.[11]

At the same time, one can reiterate that grand goal setting by the state government in the absence of specific policies to overcome or deal with the technical, financial, and institutional constraints is a futile exercise. Therefore, these constraints need to be relaxed, rather than just announcing unattainable goals. Pilot projects may provide valuable information on the detailed design and implementation of new policies, not just the costs and benefits.[12]

The tendency to set goals without considering constraints and incentives is a weakness of policymaking, in India as a whole, not just in Punjab.[13] At the next policy stage after goal setting, that of trying to achieve those goals, weak institutions and a lack of trained staff have hampered implementation of an appropriate environmental strategy because of inadequate enforcement and monitoring capabilities. One solution could be for the relevant government institutions to work more closely with farmers, as also with NGOs. The latter can often help to bridge the information gap between farmers and policy makers more efficiently and aid the government in designing and implementing programs for sustainable development of agriculture. A related issue for implementation is that the roles of some state government agencies are not clearly defined, making it difficult to assign tasks and accountability. Of course, it is also possible that the weaknesses in policy design and implementation are a symptom of a lack of political commitment to sustainable environmental improvement, which is a much more intractable problem.

Concluding Remarks

This paper identifies several key environmental issues relevant to the state of Punjab, particularly with respect to its current system of agricultural production. It highlights the increasing pressure on natural resources, including water, land, and air. Following previous analyses, we have argued that many of the environmental issues in Punjab are associated with economic policies that have negative spillovers for the state's environment, particularly in the agricultural sector. Although policymakers have tried to identify the major environmental problems and their causes, progress in effecting positive changes has been slow, because of the incentive structures created by existing policies.

As long as the government continues supporting an assured purchase of wheat and rice at guaranteed prices, farmers will likely choose to remain dependent on the wheat-paddy cropping pattern to maintain their livelihoods without taking on new risks. One contribution of our analysis is to suggest that Punjab's environmental problems associated with its pattern of agriculture will not be adequately addressed until the policies that shape that pattern are altered. Those policies, put into place decades ago to provide food security, are now nationally suboptimal, besides leading to environmental degradation in Punjab. The urgency of the state's environmental situation, and the failure of the national government to act, make it a somewhat different case than those discussed in the recent, compelling formulation of how to conduct economic policymaking in India (Kelkar and Shah, 2019). Our suggestion that the failure of national policymaking has dominated state government efforts (whatever their weaknesses) also provides a counterpoint to the label of a "flailing" state (Pritchett, 2009), which puts the blame for governance failures in India in the states rather than at the center. The reasons for this governance failure are complex, and beyond the current scope, but our analysis can be seen as making more general contributions to conceptualizations of governance capabilities.

Even while shifting the policy reform emphasis from the state to the national government, one can still argue that not enough attention has been paid to the protection of the environment at the state level. For instance, even within the current pattern of agricultural production, a very strong case exists for eliminating subsidies (particularly electricity subsidies causing groundwater depletion) that degrade natural resources or harm human health. This change could be supported by the government revising its agricultural economic indicators and associated policy analyses to reflect the depletion and degradation of natural resources, making the environmental costs more visible.

Finally, it is important to recognize that the major environmental issues facing Punjab are not just region-specific problems but national and global challenges. Kumar (2018) also notes the lack of coordination and consultation between the national government and the various state governments with respect to the different levels of climate change action plans. Even the PDS fails to maximize national interests by balancing procurement across different parts of India (Devineni, et al., 2020). Economic policies that encourage conservation and sustainable development, policies targeted at specific environmental problems, and regulatory structures with sufficient enforcement are needed at multiple levels of government. The state and national governments need to work in a coordinated manner to make sure that economic incentives created by their policies do not conflict with the goal of sustainable use of natural resources. Punjab is perhaps one of the most critical regions of India because of its rapid decline in groundwater, and associated problems of water and soil pollution. But air pollution is another example of a rapidly worsening environmental problem that requires coordinated action at different geographic scales, as well as a combination of structural change and changes in marginal incentives.

References

Alagh, Y.K., "On agriculture, think creatively," *Indian Express*, May 20, 2003, https://indianexpress.com/article/news-archive/on-agriculture-think-creatively/.

Alagh, Y.K., *Report of the Expert Committee to Examine Methodological Issues in Fixing MSP*, New Delhi: Government of India, Ministry of Agriculture, June 27, 2005.

ANI, Amritsar farmers continue to burn stubble as alternative methods are expensive, *Business World*, http://www.businessworld.in/article/Amritsar-farmers-continue-to-burn-stubble-as-alternative-methods-are-expensive-/26-09-2020-325019/, 26 September, 2020.

Auffhammer, M., V. Ramanathan, J. Vincent, "Integrated Model Shows that Atmospheric Brown Clouds and Greenhouse Gases have Reduced Rice Harvests in India," *Proceedings of the National Academy of Sciences*, 2006, 19668.

Benbi, D.K., J.S. Brar (2009). "A 25-year Record of Carbon Sequestration and Soil Properties in Intensive Agriculture", *Agron. Sust. Dev*, 2009, 257 - 265.

Buresh, R. and K. Sayre, "Implications of Straw Removal on Soil Fertility and Sustainability", *Expert Consultation on Biofuels. IRRI, Los Banos, Pilippines*, 2007, 34.

Chander, S., "Annual Review of Fertilizer Production and Consumption 2010 - 11", *Indian J. Fert.*, 2011, 141-188.

Chandran, S., "The institutional partnership model: Embedding evidence into the policy equation," *Ideas for India*, June 22, 2020, available at https://www.ideasforindia.in/topics/miscellany/the-institutional-partnership-model-a-method-for-embedding-evidence-into-the-policy-equation.html.

Chaturvedi, A., M.S. Saluja, A. Banerjee, R. Arora, "Environmental Fiscal Reforms", *Science Direct*, 2014.

Chauhan, B.S., V.P. Singh, A. Kumar, D.E. Johnson, "Relations of Rice Seeding Rates to Crop and Weed Growth in Aerobic Rice", *Field Crop Res.*, 2011.

ENVIS Centre: Punjab, "Status of Environment & Related Issues", *Punjab State Council for Science & Techonogy Chandigarh*.

Devineni, N., S. Perveen, U. Lall, "Solving Groundwater Depletion in India while achieving Food Security," Columbia Water Center Working Paper, New York: Columbia University, 2020.

Faeth, P. "Building the Case for Sustainable Agriculture: Policy Lessons from India, Chile, and Chile, and the Philippines", *Environment: Science and Policy for Sustainable Development*, 1994, 16 - 39.

Faruqee, R., "Role of Economic Policies in Protecting the Environment: The Experience of Pakistan", *Pakistan Institute of Development Economics, Islamabad*, 1996, 483-506.

Govil, R., "Why don't Indian Farmers Grow More Fruits and Vegetables?", *IFMR Blog*, 2013.

"'Green Revolution' Brings Greater CO_2 Swings ", *www.climatecentral.org*, 2016.

Gulati, A., "Reforming Agriculture," *Seminar*, No. 629, January 2012, available at https://www.india-seminar.com/2012/629/629_ashok_gulati.htm.

Gulati, A., R. Roy, S. Hussain, *Getting Punjab Agriculture Back on High Growth Path: Sources, Drivers and Policy Lessons*, New Delhi: ICRIER, July 2017.

Gupta, R., "Causes of Emissions from Agricultural Residue Burning in North-West India: Evaluation of a Technology Policy Response", *SANDEE Working Papers*, 2012.

Hira, G.S., "Water Management in Northern States and the Food Security of India", *J. Crop Improv.*, 2009, 136 - 157.

Hobbs, P., M. Morris, "Meeting South Asia's Future Food Requirements from Rice-Wheat Cropping Systems: Priority Issues Facing Researchers in the post-Green Revolution Era", *NRG Paper*, 1996.

Hrynchuk, L., "Rice Straw Diversion Plan", *California Air Resources Board, California*, 1998, 23.

IPCC, "Summary for Policymakers", In M.L. Parry, O.F. Canziani, J.P. Palutikof, P.J. van der Linden, C.E. Hanson (Eds.), *Climate Change 2007: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*, 2007.

Jain, M.C., S. Kumar, R. Wassmann, S. Mitra, S.D. Singh, J.P. Singh, R. Singh, A.K. Yadav, S. Gupta, "Methane Emissions from Irrigated Rice Fields in Northern India (New Delhi)", *Nutr. Cyd. Agroecosyst*, 2000, 75 - 83.

Jayan, T.V., "Mandi fee cut by Haryana, Punjab to benefit basmati trade," *The Hindu Business Line*, September 23, 2020, available at \url{https://www.thehindubusinessline.com/economy/agri-business/mandi-fee-cut-by-haryana-punjab-to-benefit-basmati-trade/article32679531.ece}.

Jerath, N., P. Nangia, A. Kaur, J. Chadha, "Strategy and Action Plan for Conservation of Biodiversity in Punjab", *Punjab State Council for Science and Technology*, 2002.

Jerath, N., S.S. Ladhar, S. Kaur, V. Sharma, P. Saile, P. Tripathi, S. Bhattacharya, H.K. Parwana, *Punjab State Action Plan on Climate Change*. Punjab State Council for Science and Technology and GIZ (Deutsche Gesellschaft for Internationale Zusarnmenarbeit GmbH - German International Cooperation, India), 2014.

Jayan, T.V. "New Crop Scheme for Punjab Farmers", *Down To Earth*, 2015.

Kaur, B., K. Vatta, R.S. Sidhu, "Optimal Crop Plans for Sustainable Water Use in Punjab", *Ind. Jn. of Agri. Econ.* Vol.70, No.3, 2015, 307 - 318.

Kelkar, V., A. Shah, *In Service of the Republic: The Art and Science of Economic Policy*, New Delhi: India Allen Lane, 2019.

Kharol, S.K., K.V.S. Badarinath, "Impact of Biomass Burning on Aerosol Properties over Tropical Urban Region of Hyderabad", *India, Geophys. Res. Lett.*, 2006.

Kothari, A., "Environment and New Economic Policies", *Economic and Political Weekly*, 1995, 924-928.

Kumar, P., S. Kumar, L. Joshi, "Socioeconomic and Environmental Implications of Agricultural Residue Burning - A Case Study of Punjab, India", 2015.

Kumar, R., R. Gopal, M.L. Jat, R.K. Gupta, "Conservation Agriculture Based Strategies for Sustainable Weed Management in Maize (Zea mays). Training Manual, Maize for Freshers", *New Delhi, India: Directorate of Maize Research*, 2010.

Kumar, V., *Coping with Climate Change: An Analysis of India's State Action Plans on Climate Change*, New Delhi: Centre for Science and Environment, 2018.

Long, W., R. Tate, M. Neuman, J. Manfreda, A. Becker, N. Anthonisen, "Respiratory Symptoms in a Susceptible Population due to Burning of Agricultural Reside", *Chest*, 1998, 351.

Mishra, S., A.K. Rath, T.K. Adhya, V.R. Rao, N. Sethunathan, "Effect of Continuous Flooding and Alternate Water Regimes on Methane Efflux from Rice under Greenhouse Conditions", *Biol, Fertil. Soils*, 1997, 399 - 407.

Meesubkwang, S., "Chiang Mai's Polluted Air", *http://www.chiangmai-mail.com/212/news.shtml*, 2007.

Ortiz, R., K.D. Sayre, B. Govaerts, R. Gupta, G. V. Subbarao, T. Ban, D. Hadson, J. M. Dixon, J. I. Ortiz-Monasterio, and M. Reynold, "Can Wheat Beat the Heat?", *Agric. Ecosyst. Environ*, 2008, 46 - 58.

Pandey, R., "Groundwater Irrigation in Punjab: Some Issues and A Way Forward", In: Singh L., Singh N. (eds) *Economic Transformation of a Developing Economy. India Studies in Business and Economics*, 2016, 97 - 117.

Pandey, J.S., R. Kumar, S. Devotta, "Health Risks of NO_2, SPM and SO_2 in Delhi", *Atmos. Environ.*, 2005, 6868 - 6874.

Pritchett, L., "Is India a Flailing State?: Detours on the Four Lane Highway to Modernization," HKS Faculty Research Working Paper Series RWP09-013, John F. Kennedy School of Government, Harvard University, 2009.

Ravi, R., "Haryana: Farmers Who Diversified From Paddy To Get First Instalment Of Rs 2,000 Per Acre," *The Logical Indian*, August 13, 2020, available at

https://thelogicalindian.com/welfareschemes/farmers-who-diversified-from-paddy-to-get-rs-2000-22996?infinitescroll=1.

Sekhri, S. "Sustaining Ground Water: Role of Policy Reforms in Promoting Conservation in India", *Paper Presented in India Policy forum 2012, IIC New Delhi*, 2012a.

Sekhri, S. "Missing Water: Agricultural Stress and Adaptation Strategies", *University of Virginia, Mimeo*, 2011.

Sharma, P.K., V.K. Nayyar, "Diagnosing Micronutrient Related Constraints to Productivity in Muktsar, Patiala, Hoshiarpur and Ludhiana Districts", *Information Technology for Sustainable Agriculture in Punjab (IT - SAP) UNDP - TIFAC Sponsored Project. Punjab Remote Sensing Centre*, 2004, 1 - 18.

Sharma, P.V., "India's Agricultural Development under the New Economic Regime: Policy Perspective and Strategy for the 12th Five Year Plan", *Indian Journal of Agricultural Economics*, 2012.

Shiva, V., "The Green Revolution in the Punjab", *The Ecologist*, 1991, 57 - 60.

Singh, B., A.J McDonald, A.K. Srivastava, B. Gerard, "Tradeoffs between groundwater conservation and air pollution from agricultural fires in northwest India," *Nature Sustainability* Vol. 2, 580-583, 2019.

Singh, N., "Punjab's Agricultural Innovation Challenge", Chapter 21 in Singh, L. and Singh, N. 2016.

Singh, L., N. Singh, (Eds.) *Economic Transformation of a Developing Economy: The Experience of Punjab, India*, Singapore: Springer, 2016.

Tandon, H.L.S., G. S. Sekhon, "Potassium Research and Agricultural Production in India", *New Delhi, India: Fertilizer Development and Consumption Organization*, 1988.

Timsina, J., D.J. Connor, "Productivity and Management of Rice-wheat Cropping Systems: Issues and Challenges", *Field Crop Res.*, 2001, 93 - 132.

Timsina, J., E. Humphreys, "Applications of CERES-Rice and CERES-Wheat Models in Research, Policy, and Climate Change Studies in Asia: A Review", *Int. J. Agric. Res*, 2006, 202 - 225.

Tripathi, A., A.K. Mishra, G. Verma, "Impact of Preservation of Subsoil Water Act on Groundwater Depletion: The Case of Punjab, India", *Environmental Management*, 2016.

Vander Werf, G.R., J. Randerson, T. Giglio, G.J. Collatz, P.S. Kasibhatla, A. F. Arellano, "Interannual Variability in Global Biomass Burning Emissions from 1997 to 2004", *Atmos. Chem. Phys.*, 2006, 3423 - 3441.

Venkataraman, C., G. Habib, D. Kadamba, M. Shrivastava, J. Leon, B. Crouzille, O. Boucher, D. Streets, "Emissions from Open Biomass Burning in India: Integrating the Inventory Approach with High-resolution Moderate Resolution Imaging Spectroradiometer (MODIS) Active fire and Land Cover Data", *Global Biogeochemical Cycles*, 2006, 2013.

Wassmann, R., L.V. Buendia, R.S. Lantin, C.S. Bueno, L.A. Lubigan, A. Umali, N.N. Nocon, A.M. Javellana, H.U. Neue, "Mechanisms of Crop Management Impact on Methane Emissions from Rice Fields in Los Banos, Philippines", *Nutr. Cycl. Agroecosyst*, 2000, 107 - 119.

Wassmann, R., S.V.K. Jagadish, K. Sumfleth, H. Pathak, G. Howell, A. Ismael, R. Serraj, E. Redona, R.K. Singh, S. Heuer, "Regional Vulnerability of Climate Change Impact on Asian Rice Production and Scope for Adaption", *Adv. Agron.*, 2009, 91 - 133.

Yadav, K., "Punjab - The Leader in Agricultural Sector", *Agriculture Today*, 2013, 40 - 43.

Yadav, P., "Punjab ranks high in water pollution by industries," *Times of India*, January 30, 2013, available at https://timesofindia.indiatimes.com/city/chandigarh/Punjab-ranks-high-in-water-pollution-by-industries/articleshow/18249998.cms.

NOTES

[1] It is worth noting that this cropping pattern – growing rice and wheat in rotation throughout the year (Gupta, 2012) – is dominant not only in Punjab but in much of South Asia (Hobbs and Morris, 1996), so its environmental problems are also more widespread.

[2]See also Gulati, et al. (2017).

[3] Soil incorporation of rice straw may be conducive to crop disease (Hrynchuk, 1998) or affect rough rice yield due to short-term nitrogen immobilization (Buresh and Sayre, 2007).

[4] The open-field burning of crop residue generated from mechanized harvesting is not restricted to India, e.g., Yang et al. (2008) for China.

[5] A rigorous quantitative analysis is in Singh, et al. (2019).

[6] The combine-harvester leaves two types of residue into the field: loose residue and intact residue. Loose residue is hard to retrieve (Gupta 2012).

[7] Again, it is important to note that these problems are not unique to Punjab: other regions of the globe also suffer from pesticide-caused illness: for example, the Philippines (Faeth, 1994).

[8] This term refers to the nature of photosynthesis. About 85% of plant species, including rice and wheat, are C_3 species.

[9] Water pollution by industry is also a serious problem: even though Punjab is not highly industrialized, it appears to rank poorly in this dimension, with very poor enforcement of anti-pollution regulations (P. Yadav, 2013).

[10] Vijay Kelkar has emphasized to us that such reforms will have many components, and that the debate over how to modify the existing system is not new. He noted the roles of the Food Corporation of India, which procures and stores grains, and the Commission on Agricultural Costs and Prices, which sets MSPs. Another possible policy lever for food security he suggested is the use of international trade agreements or long-term contracts with land-abundant countries. See also Alagh (2003, 2005) for related perspectives. A key point is that these are central government policies; the state government has little or no say.

[11] Based on figures from the Haryana incentive scheme to encourage switching from paddy to cotton (Ravi, 2020), the total cost of one-time payments would be less than 2% of state government revenue from agricultural market fees, or the cost of electric power subsidies. In another example, Punjab and Haryana cut market fees for basmati rice, but Haryana reduced its fees more aggressively (Jayan, 2020).

[12] For example, research into sustainable farming practices could be given much higher priority and funding than it has received so far. Gulati (2012) calculates that the return in terms of increased agricultural GDP is higher for R&D than for any of the existing subsidies.

[13] Kelkar and Shah (2019) emphasize the weakness of governance and regulatory institutions in India, and argue for strengthening such institutions before ambitious policies are formulated and attempted. The case of Punjab has additional nuances. The policies that enabled the Green Revolution and ultimately led to Punjab's environmental problems were ambitious and successful, providing food security for India. The problem now is policy inertia. One cannot wait for institutional strengthening to correct urgent problems.

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Mandatory Mediation in India - Resolving to Resolve

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Abstract

This paper explores the concept of mandatory mediation as a solution for reducing pendency in the traditional court system. After discussing the concept of mediation and the existing regulatory framework governing it in India, this paper identifies the problems afflicting mediation in India. It proceeds to examine how many of these problems can be overcome by making mediation mandatory. It discusses the benefits of mandatory mediation and attempts to address some concerns surrounding it. To zero-in on the most appropriate model for introducing mandatory mediation India, this paper looks at how mandatory mediation has fared in other jurisdictions like the European Union, Australia, the United States and Italy. This paper finally recommends that India should introduce a modified version of the Italian opt-out model of mandatory mediation in the country in a phased manner.

Keywords: Alternative Dispute Resolution; Mediation; mandatory mediation; Italian opt-out model; pendency

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I. Introduction

Pendency in Indian courts is the first issue that comes to mind when one thinks about the problems facing the Indian judiciary. According to data obtained from the National Judicial Data Grid, the total pending cases (civil and criminal) across all courts in the country as of November 12, 2020 are 3,59,08,679. Out of these, civil cases number 98,01,986, which is a little over 27% of the total pending cases. According to the World Bank's Ease of Doing Business Rankings for 2020, even though India ranks 63 overall, it stands at a dismal 163 (out of 190 countries) as far as contract enforcement (mainly a judicial function) is concerned.[2]

There are two major approaches to deal with this judicial backlog. While the first seeks to reform processes and structures to make adjudication faster, the second tries to prevent disputes from reaching courts in the first place (Vidhi ODR Report 2020, 6). Alternative dispute resolution (ADR) mechanisms like arbitration, conciliation and mediation fall in the latter category. They can play a significant role in reducing the number of cases that enter the formal justice delivery system by providing redress outside it.

However, the time has perhaps come to reconsider the status of ADR mechanisms as 'alternatives'. Given the huge pendency in Indian courts, and more importantly, the suitability of ADR mechanisms to resolve certain categories of disputes, they should be treated at par with the public court system. In fact, in some categories, they should be the primary choice of dispute resolution. This paper delves into the manner in which mainstreaming of one of the alternative modes of dispute resolution - mediation, can be achieved.

Mediation and the existing regulatory framework governing it

Mediation is an ADR mechanism in which a neutral third party helps disputing parties arrive at a settlement. The neutral third party, the mediator, serves as a facilitator of a process wherein the parties attempt to reach some middle ground. The mediator is expected to remain value-neutral, serving only as a conduit for the needs of the parties (Cohen 1991, 33). According to Rule 4 of the Civil Procedure Alternative Dispute Resolution and Mediation Rules, 2003, ('Model Rules, 2003') the mediator facilitates discussion between the parties by assisting them in identifying issues, reducing misunderstandings, clarifying priorities, exploring areas of compromise and generating options. As opposed to arbitration, mediation is preferred for disputes which do not involve complex questions of law or evidence and hold potential for amicable resolution outside the formal and rigid procedures of the traditional legal system (Vidhi ODR Report 2020, 9).

The core value and benefit of mediation is that it provides an opportunity for the parties to converse, negotiate and arrive at an amicable compromise that is acceptable for all the concerned parties (Narain and Sankaranarayanan 2018, 82). An important benefit of agreements resulting from mediation is that they are more likely to be complied with voluntarily and more likely to preserve an amicable and sustainable relationship between the parties (Cutolo and Shalaby 2010, 137). Globally, mediation has come a long way since Frank Sander first proposed the idea of a 'Multi-door Courthouse' as a single establishment to provide alternative avenues for citizens to amicably resolve their disputes in an informal manner.[3] However, it is yet to realise its full potential in India.

At present, mediation in India can be initiated in three ways – first, by providing for it in a dispute resolution clause in contracts and resorting to it either through institutional or ad-hoc mediation; second,

by way of reference by the court under Section 89 of Code of Civil Procedure, 1908 ('CPC') or under special legislations such as Section 37 of Consumer Protection Act, 2019 after the case is filed in courts; and third, mandatory pre-litigation mediation as provided under Section 12A of Commercial Courts Act (Vidhi ODR Report 2020, 11).

While the first mode is self-explanatory, the following section gives an overview of the effectiveness of the other two modes of initiating mediation in India, and thereby assesses the need for mandatory mediation in India.

Reference to mediation under Section 89 of CPC, 1908

Unlike arbitration and conciliation, which are governed by the Arbitration and Conciliation Act, 1996, there is no umbrella legislation governing mediation in the country. The enactment of Section 89 of the CPC, 1908 marked a major step towards institutionalising ADR through its incorporation in the civil procedure .[4] This provision empowers civil courts to refer civil disputes to, among other things, mediation, 'where it appears to the court that there exist elements of a settlement which may be acceptable to the parties.'

Mediation in India received an impetus due to the Supreme Court's judgment in the case of *Salem Advocate Bar Association* v. *Union of India* (AIR 2005 (SC) 3353). In this case, a Committee was constituted by the Apex Court in order to enable better implementation of Section 89 by ensuring quicker dispensation of justice. This Committee drafted the Model Rules, 2003 which served as the model for various High Courts in framing their own mediation rules.

In the landmark case of *Afcons Infrastructure Ltd. and Ors.* v. *Cherian Varkey Construction Co. (P) Ltd. and Ors.* (MANU/SC/0525/2010), while examining Section 89 of the CPC, 1908, the Apex Court held that having regard to the tenor of the provisions of Rule 1A of Order 10 of the CPC,[5] the civil court should invariably refer cases to the ADR process, except in certain recognised excluded categories of cases. It went on to state that where the case is unsuited for reference to any of the ADR processes, the court will have to briefly record the reasons for not resorting to any of the settlement procedures prescribed under Section 89. Consequently, it is mandatory to have a hearing after completion of pleadings to consider recourse to an ADR process under Section 89, but actual reference to an ADR process in all cases is not mandatory.

To assess the impact of this judgment, one would have to examine the statistics pertaining to cases referred to ADR processes under Section 89. However, there is a lack of data on the number of cases referred to ADR processes across different jurisdictions under Section 89 and the final outcome of these disputes.[6] The limited data available for specific jurisdictions referred to below (Vidhi Mediation Report 2016) suggests that the *Afcons* judgment has failed to have the desired impact in making ADR mechanisms the first mode of resolution for most civil disputes.

In *K. Srinivas Rao* v. *D.A. Deepa* ((2013) 5 SCC 226), while dealing with a divorce matter, the Apex Court went to the extent of saying that criminal courts could also refer to mediation cases where a complaint has been filed under Section 498-A of the Indian Penal Code, 1860. The Supreme Court further directed all mediation centres to set up pre-litigation desks or clinics to settle matrimonial disputes at the pre-litigation stage.

The above case laws seem to indicate that the higher judiciary is by and large in favour of mediation and is keen on pushing all suitable matters to be resolved through mediation instead of adding to the court's burden. However, in reality, Section 89 of the CPC and the above judicial pronouncements have not had the desired impact due to the lack of adequate training given to the judges in the district judiciary,

who are empowered under Section 89 to refer matters to mediation. The discretion vested in them has not been used to reduce the court's burden in any noticeable manner. Apart from lack of training, there are several systemic issues that have prevented the adoption of mediation, as discussed in the coming section despite the clear mandate given by the judiciary in favour of mediation.

Mediation under Special legislations

Mediation is increasingly being included as a dispute resolution mechanism in newer legislations. For instance, the Parliament included a provision for mediation of consumer disputes in the new Consumer Protection Act, 2019. Section 37 of this Act prescribes that at the first hearing of a complaint after its admission, or at any later stage, if it appears to the District Commission that there exist elements of a settlement which may be acceptable to the parties, it may refer the matter to mediation except in such cases as may be prescribed.

Chapter V of the Act provides detailed provisions pertaining to mediation of consumer disputes, including those concerning establishment of consumer mediation cells attached to each of the District Commissions and the State Commissions of a State (Section 74), empanelment of mediators (Section 75), the procedure for mediation (Section 79), etc.

The Consumer Protection (Mediation) Rules, 2020 came into force with effect from July 20, 2020. The Rules make it amply clear that the general rule is to refer all matters under the Consumer Protection Act, 2019 to mediation. However, they make an exception for certain categories of cases that may not be considered appropriate for mediation.[7] The proviso to Rule 4 further provides that in any case other than the ones mentioned in Rule 4, the Commission may choose not to refer it to mediation if it appears to the Commission that no elements of a settlement exist which may be acceptable to the parties or that mediation is otherwise not appropriate having regard to the circumstances of the case and the respective positions of the parties.

Section 442 of the Companies Act, 2013, provides for a Mediation and Conciliation Panel to be maintained by the Central Government for mediating proceedings before the Central Government or National Company Law Tribunal ('NCLT') or National Company Law Appellate Tribunal ('NCLAT'). This provision allows any of the parties to the proceedings to opt for mediation. The Central Government, the NCLT or the NCLAT may also refer a matter pending before it for mediation *suo motu*. The Mediation and Conciliation Panel shall dispose of the matter referred to it within a period of three months from the date of such reference and forward its recommendations to the Central Government or the NCLT or the NCLAT, as the case may be.

Mandatory Pre-litigation Mediation under the Commercial Courts Act, 2015

An example of an attempt to introduce mandatory mediation in the Indian context is the Commercial Courts Act, 2015, which was amended in 2018 to provide for pre-institution mediation and settlement. Section 12A of this Act makes it mandatory for the disputing parties to attempt mediation before initiating a suit. The only exception provided in the law is if there is a requirement of urgent relief from the court. The settlement agreement arrived at by the parties shall have the same legal force as an arbitral award mentioned under Section 30 of Arbitration and Conciliation Act, 1996. However, despite this provision having been in force for over two years, no data is readily available on its implementation.

Problems with the existing framework governing mediation

Even though mediation is speedier, more cost-effective and offers greater possibility of preserving the relationship between disputing parties, the existing mediation framework in India has not allowed for reaping its full potential.

The Supreme Court highlighted some glaring drafting errors in Section 89 in its landmark judgment in the *Afcons Infrastructure Ltd.* case. These include the mixing up of definitions of the terms 'judicial settlement' and 'mediation' in Section 89 and the lack of clarity as to the procedure to be followed by the court while referring matters to mediation under Section 89. Section 89 was examined by the Law Commission of India in its 238th Report wherein it recommended substituting Section 89 with an amended provision that would bring it in line with the judgment in *Afcons Infrastructure Ltd*. The recommendations included specifying the stage at which the court should refer the matter to the various ADR processes mentioned in Section 89 and interchanging the definitions of mediation and judicial settlement. However, this Report has not been implemented so far.

According to data from the Bangalore Mediation Centre, between 2011-2015, 31441 cases were referred for mediation, which amounted to 4.29% of the cases freshly instituted in the Bangalore High Court (Vidhi Mediation Report 2016, 11). As per the Mediation and Conciliation Centre of the Delhi High Court, during the same period, 13646 were referred for mediation, which amounted to 2.66% of the total number of cases in the Delhi High Court (12). Finally, data for Allahabad High Court Mediation and Conciliation Centre reveals that during 2011-2015, 11618 cases were referred for mediation. These constituted 0.85% of the cases freshly instituted in the Allahabad High Court (13).

From this data, it is evident that judges are not using Section 89 to its full potential. There are a number of factors responsible for this. First and foremost, the fact that data on Section 89 referrals is not tracked for the National Judicial Data Grid or made a part of their assessment reports means that judges are not incentivised to refer cases to ADR processes. Further, referral judges are expected to be objective while determining the possibility of settlement between parties, but this objectivity may be hampered because judges may be more attuned to the adjudicatory processes (Vidhi Mediation Report 2016, 20). This is further aggravated by the fact that there is a lack of regular training sessions for judges to sensitise them about the benefits of mediation (2).

Another factor why mediation has failed to take off as hoped in India is the lack of clarity in the enforceability of its outcomes. Section 89 does not talk about how the outcome of mediation will be enforced. It took the Supreme Court in *Afcons Infrastructure* to clarify that where the reference is to a neutral third party on a court reference, even though it will be deemed to be reference to a Lok Adalat, the mediation settlement will be governed by Section 21 of the Legal Services Authorities Act, 1987 and will have to be placed before the court for recording the settlement and disposal. Consequently, in cases referred by courts to mediation, a settlement reached by the parties is not enforceable automatically. Even then, it is unclear how a settlement arrived during pre-litigation mediation or ad-hoc mediation would be enforced if one of the parties reneges on its promises. Applying the regular law of contract to such cases would only result in delays, defeating the entire purpose of resorting to mediation. With so much confusion around enforceability, lawyers hesitate to advise their clients to opt for mediation.

Further, even though the amendment to the Commercial Courts Act, 2015, held a lot of promise, it has not achieved its full potential. The limited implementation of this Act has faced certain challenges like the appointment of mediators through legal aid cells, lack of expertise in mediators to handle commercial cases and concerns raised regarding the report that the mediator needs to submit in the event of failure to

reach a settlement. The procedure for appointment of the mediator provided under the Act and the Commercial Courts (Pre-Institution Mediation and Settlement) Rules, 2018 makes the Authorities constituted under the Legal Services Authorities Act, 1987 responsible for appointing mediators. This process is beset with challenges. First, the number of empanelled mediators with these Authorities is highly inadequate to meet the demands of the Act and second, there are issues with the quality of mediators as many of them may not have the required subject specific knowledge that would enable them to resolve commercial disputes effectively. It is imperative that any law providing for mandatory mediation stay clear of these pitfalls that have been experienced with the Commercial Courts Act.

Clarity is also lacking as far as the enforceability of cross border settlements is concerned. India is a signatory to the recent United Nations Convention on International Settlement Agreements resulting from Mediation (the Singapore Convention on Mediation), which applies to international settlement agreements resulting from mediation. It establishes a harmonised legal framework for the right to invoke settlement agreements as well as for their enforcement (UN Commission on International Trade Law). However, presently there is no statutory framework for implementing the provisions of this Convention.

Despite attempts to spread awareness about mediation and its inclusion as part of the legal education curriculum, knowledge of mediation is sorely lacking among the general public. Even where parties are aware about mediation, a major challenge is the lack of incentives for them to attempt mediation. In India, there are certain myths associated with mediation which make it difficult for lawyers and their clients to consider it as a viable dispute resolution mechanism. For instance, it is believed that suggesting or engaging in mediation demonstrates a kind of weakness and uncertainty of success at trial (Gupta 2018, 62). Due to this 'first to blink' syndrome, each party is waiting for the other to make the first move and does not want to be seen as weak (Hutchinson 1996, 89-90).

Another myth is that mediation yields a lesser form of justice and is only second to litigation (Gupta 2018, 62). These myths essentially stem from the fact that mediation continues to be an unfamiliar process that is often misunderstood by many lawyers leading to mistrust and hence avoidance. In some cases, a barrier to initiating mediation is the client's expressed desire to punish the opposition through litigation. In such cases, it becomes incredibly difficult for the lawyer to suggest mediation without appearing weak and risking loss of the client to another lawyer (Hutchinson 1996, 90).

This is where mandatory mediation comes into play. While some of the problems in the present mediation framework that have inhibited the growth of mediation in the country are institutional, a number of others can be addressed by introducing mandatory mediation in the country in a phased manner. For instance, the issues that can be addressed by introducing mandatory mediation are the ones stemming from lack of incentives for judges and lawyers to nudge parties towards mediation, hesitation amongst disputing parties to attempt mediation and the overall lack of mediation culture in India.

However, what will still be left unaddressed is the issue of lack of clarity in enforceability of mediation agreements. In this, the need of the hour is a dedicated legislative effort to recognise mediation and provide for a framework to govern all its facets, along the lines of the Arbitration and Conciliation Act, 1996. Such legislative framework becomes all the more important while introducing mandatory mediation, since easy enforceability of mediation agreements is one of the basic requirements for such an initiative to be adopted and welcomed. However, the details of a mediation legislation is beyond the scope of this article and hence the authors will restrict themselves to the manner in which mandatory mediation can be introduced in India, under the presumption that an umbrella mediation legislation will become a reality soon.

Before we proceed to further understand how mandatory mediation can help tackle some of the challenges faced in mainstreaming mediation, and how it can be introduced in India, it would be important to understand what the authors mean by the expression 'mandatory mediation'.

Understanding mandatory mediation

As often misunderstood, 'mandatory mediation' does not mean mandating parties to *settle* their disputes through mediation. It simply means mandating parties to *attempt* mediation. It has been described as 'coercion into and not within' the process of mediation (Quek 2010, 485). All that is required from the parties is to give mediation a shot. This can be done in a number of ways. For instance, a law can make mediation mandatory for particular kinds of disputes prior to institution of proceedings in courts or even after cases have been brought before courts. If it is prior to the institution of proceedings, then it is in the nature of 'mandatory pre-litigation mediation'. There are instances of both forms of mandatory mediation - prior to and after institution of proceedings - present in other jurisdictions.

When considering whether to implement mandatory mediation in a jurisdiction, domestic factors like the time it takes for cases to reach trial, the cost of litigation, the prevailing legal culture and political climate, and the attitudes of the legal profession, judiciary and general public are extremely important (Hanks 2012, 929). In India, despite the long delays in courts, the failure of voluntary mediation to grow as a popular dispute resolution mechanism calls for a rethink on how mediation has been approached in the country so far. A different approach, which takes away the initial discretion in opting for mediation, may offer the elusive solution.

Mandatory mediation has been provided for in different jurisdictions through one or more of the following three modes (Hanks 2012, 930). First, some mandatory mediation schemes categorically provide for an automatic and compulsory referral of certain matters to mediation. Such schemes are generally legislative and often require parties to undertake mediation as a prerequisite to commencing proceedings in courts of law (930). A second type of mandatory mediation, often referred to as court-referred mediation, gives judges the power to refer parties to mediation with or without the parties' consent on a case-by-case basis. Third, some mandatory mediation schemes can be described as quasi-compulsory because even though they do not mandate mediation, it is effectively compelled in the form of potential adverse costs orders if mediation is not undertaken prior to commencing proceedings (931). Before we proceed to identify the suitability of one or a combination of these above modes in the Indian context, it is essential to examine the benefits and concerns associated with the very policy of mandatory mediation.

Benefits of Mandatory Mediation

Multiple studies have clearly shown that the best way, if not the only one, to significantly increase the number of mediated disputes is to require that litigants make a serious and reasonable initial effort at mediation (De Palo 2018, 1). One of the major advantages of mandatory mediation is that it can help deal with some of the myths associated with mediation. As far as the 'first to blink' syndrome is concerned, when the law mandates that parties at least attempt mediation, the burden of suggesting mediation is alleviated. Because the law mandates it, parties or their lawyers do not have to risk appearing weak by suggesting mediation.

The second myth that mediation only provides second-hand justice is busted by the legitimacy that is afforded to mediation once it is mandated by law. Thus, mandatory mediation can help bring parties into the fold of mediation by helping them get over the initial inertia associated with voluntary mediation.

Often, there are cases where a party is keen on litigation because they believe that forcing the other side to go through the long and painstaking process of litigation would be a form of punishment for the opposite party. This 'make them pay' attitude of the client puts even the most well-meaning lawyer in a quandary, as she may feel hesitant to suggest mediation as an alternative to her client. By shifting the burden of referring a dispute for mediation to the law or the court, mandatory mediation relieves the lawyer of this dilemma (Hutchinson 1996, 90).

Mandatory mediation is not just beneficial for the parties but also for the country's legal system. By creating massive demand for people and institutions providing mediation services, mandatory mediation offers an opportunity to mainstream mediation and create capacity at scale. The demand for mediators spurred by mandatory mediation, if met through proper capacity building, will lead to the creation of a body of skilled mediators (Hutchinson 1996, 90). Training lawyers in mediation will not only help overcome the shortage of qualified mediators, it will also improve 'legal health' (Susskind 2019, 113) in the country.

Further, once lawyer mediators understand the value of mediation, they would be more inclined to suggest mediation to their clients voluntarily (Hutchinson 1996, 90). Consequently, mandatory mediation can become a stepping stone towards voluntary adoption of mediation in the country.

Lastly, the emergence of mediation as a distinct profession will not only create additional employment opportunities for professionals in various fields, but will also help create a culture of amicable settlement of disputes.

While it is obvious from the discussion above that making mediation mandatory can be advantageous for the legal system as a whole, it is also important to address some of the concerns that have surrounded the debate on mandatory mediation.

Concerns about mandatory mediation

Some authors argue that mandatory mediation is 'the antithesis of mediation' and denigrates the process to such an extent that it would lose most of its advantages (Vettori 2015, 356). There is a concern that mandating mediation and taking away voluntary decision making from the parties is tantamount to denial of access to justice.

There is no denying that voluntariness is a major characteristic of mediation. However, it is an exaggeration to argue that mandating parties to simply *attempt* mediation (for instance, by attending one mandatory mediation session) would mean that mediation no longer remains voluntary. Even in mandatory mediation, parties are free to decide whether to continue with the process of mediation, or to enter into a settlement, after attending the sessions mandated under the law. Therefore, it is important to look at the entire process of mediation in a holistic manner and not just focus on one element which is made compulsory.

Further, some argue that a one-size-fits-all approach towards mediation could hurt the prospects of voluntary uptake of mediation. It is argued that mediation may not be the most appropriate method of resolving a particular type of dispute (Vettori 2015, 357). Therefore, mandatorily referring all disputes to mediation may actually end up doing more harm than good.

It is important to note that the proponents of mandatory mediation (including the authors) are not arguing for such an approach. In fact, it is argued that mediation should only be made mandatory for certain categories of disputes, and that too, in a phased manner. Any other approach would thwart the purpose for which it is adopted. It is in fact suggested that before introducing mandatory mediation, a study be carried out to identify categories of disputes that have shown the highest potential for settlement through mediation within the existing framework. Mandatory mediation should be first introduced in such categories so that they show an even greater percentage of settlement.

Critics further argue that coercing parties into the process of mediation may make them reluctant to attempt mediation in its true spirit and thereby negate the possibility of a settlement (Vettori 2015, 358). In the same vein, it is further said that even when coercion can manage to bring the parties to the table, the latter are frequently focused on litigation; mediation is merely an unnecessary stop on the way for them (Cohen 1991, 43). This results in additional costs, both in terms of time, money and efforts and makes mediation an impediment to access justice (Vettori 2015, 358).

It is also argued by some that mandatory mediation will be totally ineffective if the parties to the dispute and their lawyers do not participate in the process in good faith and are only there to try to obstruct the process (Hutchinson 1996, 95) or merely comply with the letter of the law.

While these may be legitimate concerns, it can also be argued that parties may be able to appreciate its benefits better, when they are compelled to enter the process of mediation. Sometimes it takes a compulsory process to educate a reluctant adversary about the benefits that can flow from mediation (Hutchinson 1996, 91). At the bare minimum, the process should cause parties to realistically assess their case at an early stage and could enhance opportunities for settlement in the future (91-92).

A skilled mediator can be instrumental in parties overcoming their mental block towards a non-adversarial process. Further, adopting an opt-out model for mandatory mediation can ensure that parties always have the option to leave the mediation process after going through its mandatory element. Consequently, mandatory mediation would not obstruct access to justice. Further, laws providing for mandatory mediation can always carve out an exception for cases where compelling parties to mediate would lead to defeating the ends of justice.

Opponents of mandatory mediation also argue that compelling parties to attempt mediation may lead them to disclose sensitive information during the proceedings which might be used to their detriment if the mediation fails to result in a settlement and the matter eventually reaches the court (Vettori 2015, 363). This concern can be addressed by requiring the parties to attempt mediation in good faith. Additionally, unlike open court proceedings where the other party is entitled to access the information relied upon by the opposite party, in mediation, the parties and the mediator are bound by confidentiality. The process of mediation offers greater confidentiality as compared to the courts.

To discourage incidents where parties try to abuse the information they become privy to during mediation, the Supreme Court in *Perry Kansagra* v. *Smriti Madan Kansagra* (MANU/SC/0220/2019) held that statements made by the parties during the course of mediation may not be relied upon during court proceedings on the ground of confidentiality. Holding confidentiality as an important element of mediation, the Apex Court said that statements which were essentially made in order to see if there could be a settlement, ought not to be used against the maker of such statements in case attempts at mediation completely fail at a later point.

If, however, mandatory mediation is implemented in the country, the lack of sufficient number of quality mediators in the country would pose a major challenge. At present, mediation is not treated as a separate profession, so there are hardly any courses at the university or college level that students can take

up in order to become mediators. According to the Mediation Training Manual of India, issued by the Mediation and Conciliation Project Committee of the Supreme Court, training to potential mediators should be provided for a minimum of 40 hours.

Further, while the Model Rules, 2003 allow professionals apart from legal practitioners to become mediators, they impose an onerous burden of having at least fifteen years standing at the Bar for lawyers and fifteen years standing for other experts or other professionals. Further, while the Model Rules also recognise institutions specialising in mediation if they have been recognised as such by the concerned High Court, few such institutions exist in the country. Adding to this is the lack of awareness among professionals about the process and benefits of mediation. A combination of these factors has resulted in a paucity of quality trained mediators in the country. In the case of *Daramic Battery Separator India Pvt. Ltd.* v. *Union of India* (W.P.(C) 7857/2018), the petitioner had to approach the Delhi High Court because the National Legal Services Authority was unable to find a suitable commercial mediator within its pool of mediators (NITI Aayog 2020, 75).

In such a scenario, it may be argued that the system is not prepared for implementing mandatory mediation. However, the authors believe that once demand for mediators is gradually increased, market forces will ensure that sufficient capacity is built. However, this will require the legislative framework to provide for such scaling up of resources. This means and includes encouraging private mediators and mediation centres to offer their services to parties and not restrict recognition to just court-annexed ADR centres.

In the coming section, a brief overview of the trajectory followed in a few jurisdictions to arrive at a successful model of mandatory mediation is examined. This is also aimed at understanding the manner in which other jurisdictions have addressed the above listed concerns before recommending a suitable customised model for India.

Mandatory mediation in other jurisdictions

The experience of the European Union and Italy, the United States and Australia has been discussed below.

European Union

In 2008, the European Union ('the EU') adopted Directive 2008/52 ('Mediation Directive') to provide guidance to the EU Member States to develop legislation pertaining to mediation in civil and commercial matters. The Mediation Directive's stated goal was to encourage the use of mediation and achieve a balanced relationship between mediation and judicial proceedings (Article 1). According to Article 1 of the Directive, it applies only to cross-border civil and commercial matters, and provides a common set of rules for mediation practice in the European Union (Nolan-Haley 2012, 992). Article 1.2 further provides that it shall not extend to revenue, customs or administrative matters or to the liability of the State for acts and omissions in the exercise of State authority.

The Mediation Directive establishes the minimum regulatory standards for mediation legislation to be implemented by the Member States in their national legal systems (De Palo 2018, 2). Article 5.2 of the Mediation Directive allows Member States, without making it obligatory for them, to make mediation mandatory provided the parties' rights to access justice were not infringed (De Palo 2018, 2). The Court of Justice of the European Union in *Menini and another* v. *Banco Popolare Società Cooperativa* (Case C-75/16) concluded that national legislation imposing mandatory mediation as a pre-condition to litigation

is not precluded by the EU ADR legislative framework, provided that the parties are not prevented from exercising their rights of access to the judicial system (Morek 2018).

However, the common refrain in the EU is that even though the Mediation Directive has helped further the development of mediation as a dispute resolution mechanism in Europe, its impact has been limited. To study why this is the case, the European Parliament, in 2013, commissioned a study to examine the implementation of the Mediation Directive (De Palo 2018, 3).

The Rebooting Study found that mediation was being used in fewer than 1% of cases in the EU (De Palo et al. 2014, 162) and in 46% of EU Member States, fewer than 500 mediations took place every year (6). The study linked this to the retention of a voluntary approach to mediation in almost all of the 28 Member States (Linklaters Europe 2020). Through a thorough comparative analysis of the legal frameworks of the 28 Member States, the Rebooting Study found that only a certain degree of compulsion to mediate can generate a significant number of mediations.

It went on to argue that other pro-mediation regulatory features such as strong confidentiality protection, frequent invitations by judges to mediate and a solid mediator accreditation system, have failed to generate any major effect on the occurrence of mediations (De Palo et al. 2014, 7). It finally recommended the opt-out model of mandatory mediation (De Palo and Canessa 2014-2015, 721). While the recommendations of this study are yet to find legislative sanction across the EU, a few jurisdictions within the EU have implemented some form of mandatory mediation.

Italy

The Italian experiment with mandatory mediation is being hailed as a success across the world. However, it has not been an easy journey for Italy. Between 1990 and 2016, Italy experimented with five different models of mediation ranging between voluntary and mandatory mediation, until it adopted its current 'opt-out' model in 2013 (Elsaman 2020, 61-62). Mediation entered a new phase in Italy after the enactment of Law No. 60/2009 that authorised the government to regulate mediation in civil and commercial disputes (62). To implement this law, the Italian Government passed a special decree (the Legislative Decree No. 28/2010), introducing the concept of mandatory mediation prior to initiating court proceedings in civil and commercial matters (Mojasevic 2015, 101).

However, the model introduced with Decree No. 28/2010 was repudiated in 2012 by Italy's Constitutional Court, which held as unconstitutional the provisions that hindered parties' access to a court prior to the mediation process (Conte 2014). The Constitutional Court found that the legislature had unconstitutionally exceeded its power of delegation (De Hoom 2014, 24) and ruled that mandatory mediation must have its legal basis in the national legislation (Mojasevic 2015, 103). Following this ruling, the rate of mediations plummeted from 200,000 to around 2000 per year (De Palo and Canessa 2014-2015, 722).

To curb this drastic fall in the number of mediations, including voluntary mediations, in September 2013, Italy reintroduced the mandatory requirement by an Act of Parliament (De Palo and Canessa 2014-2015, 722). Consequently, the Decree of 2010 was significantly modified by adopting a new decree (Legislative Decree No. 69/2013) on "Urgent Measures on economy stimulation" (Mojasevic 2015, 103).

The most important amendments introduced were reducing the requirement of mandatory mediation to fewer types of claims and making it compulsory for lawyers to participate in the mediation process (Elsaman 2020, 63). To remove the hostility and distrust from lawyers, the amended law provided that the agreement reached by the parties in mediation would be enforceable, provided that it contained the

signature of the parties' lawyers (in addition to the parties' own signatures) to attest and certify compliance of the agreement with mandatory rules and public policy (Conte 2014). The Italian model of mandatory mediation places an obligation on lawyers to inform their clients, in writing, about the possibility to mediate their dispute while the mediators have the authority to draft settlement proposals (Elsaman 2020, 62).

Under the new law, parties must participate at the first meeting with the mediator (De Palo and Canessa 2014-2015, 723). The meeting is inexpensive, there are material penalties for non-attendance, and there is no compulsion to pursue mediation after this initial meeting. If the parties choose to proceed with mediation, the government provides tax credits for the first €500 of fees (Mulder 2016). However, at the first meeting, either party can decide to stop the mediation immediately, by paying only a nominal fee for the attended session (De Palo and Canessa 2014-2015, 723). In this easy opt-out model, the first meeting is already part of a formal mediation process (De Palo 2018, 5).

In Italy, in commercial and civil cases, mediation has been made mandatory in about 8% of the cases and remains voluntary in the remaining 92% of the cases (European Parliament 2016). The categories of cases include civil and commercial disputes arising out of property rights, division of property, inheritance law, family agreements, lease, loan, rent, compensation arising from medical liability, damages resulting from defamation through the press or other publicized means, banking and insurance contracts, and financial contracts (Usluel 2020, 461). Under this system, Italy is experiencing upwards of 150,000 mediations a year (De Palo and Canessa 2014-2015, 723).

In 2015, the total of the new civil and commercial cases filed in first instance courts was 1,748,384, where 8% of these new cases filed (139,870 cases) were subject to the required attempt to mediate and the remaining 92% (1,608,513 cases) were subject to voluntary mediation. In the same year, there were 19,624,714 mediations, 81.6% due to the required attempt (160,137 required mediations) with an average success rate of 44% and 8.3% voluntary mediations (16,288 voluntary mediations) with an average success rate of 60% (European Parliament 2016). From 2011 to 2018, a total of 130,438 agreements were reached in mediation proceedings. In 2018 alone, 20,965 settlements were arrived at. According to data, if all parties were present and they decided to continue with mediation beyond the first meeting, the success rate in 2018 was 45% (Matteucci 2019). In the disputes subjected to the initial required mediation session, the decrease of new judicial proceedings in court is about 16% (D'Urso 2017).

From this data, the Italian experience substantiates the claim that introducing an easy opt-out model of mandatory mediation is likely to substantially increase the number of both mandatory and voluntary mediations. Significantly, it is also going to reduce the burden on the judiciary - something that the Indian judicial system desperately needs.

United States of America (US)

There is a strong public policy in the US favouring methods of ADR, including mediation (Linklaters U.S. 2020). Although widely known for its propensity for litigation, the U.S. has one of the world's most advanced and successful systems for settlement of disputes outside the formal legal system through mechanisms of mediation and arbitration (McManus 2011). Although there is no country-wide uniform policy on mediation, many courts and federal agencies in the United States have adopted mandatory mediation programmes after realising that purely voluntary programmes were receiving little usage (Welsh 2011). A very important reason for the adoption of such mediation programmes is the public policy of reducing the caseload of the courts and the substantial costs associated with the expansion of the court

system (Ginkel 2005). Currently, mediation has gradually become the primary ADR model used by the courts in the U.S. (Saul 2012).

Australia

Australia's model of mandatory mediation differs from Italy's because it is a federal country where different states have their own models. Nonetheless, mandatory mediation is commonly used in Australia's civil justice system and the fields where mandatory mediation is employed are continually expanding (Waye 2016, 215). Unlike the opposition from the legal profession in Italy, Australia witnessed the judiciary and the legal profession embrace mandatory mediation to deal with the huge pendency of cases (Rooney 2015).

The mediation movement in Australia began in the 1980s. By the mid-1990s, legislation was introduced mandating ADR processes for farm debt, franchising, residential tenancies, retail tenancies, small businesses and building disputes among others, in the various states and territories of Australia (Rooney 2015). Presently, mandatory ADR is prescribed in the provisions of the Native Title Act, 1993 (Cth), the Administrative Appeals Tribunal Act, 1975 (Cth), and the Civil Procedure Act, 2005 (NSW) (Howarth 2017).

Apart from legislation by the states, the Civil Dispute Resolution Act, 2011 (Cth), requires applicants, who institute civil proceedings in the Federal Court of Australia or the Federal Circuit Court of Australia, to file a statement explaining the genuine steps they took to resolve their dispute or the reasons why no such steps were taken with an application initiating the proceedings (McNamara 2020). Section 4 of this Act provides a non-exhaustive list of examples of genuine steps, including considering whether the dispute could be resolved by a process facilitated by another person, including an alternative dispute resolution process. Although the legislation does not expressly require pre-action mediation, it is believed that it will inevitably be one of the most common mechanisms for demonstrating that genuine steps have been taken to resolve a civil dispute (Bergin 2012).

Because of its federal polity, Australia also has a complex and highly fragmented civil justice system due to which, country wide statistics for disputes submitted to and settled through mandatory mediation are unavailable (Waye 2016, 215). Australian research reveals that settlement rates and degrees of satisfaction are similar, whether participation be voluntary or compelled. For example, retail tenancy disputes, that are required by statute to be mediated before they can be heard, have a settlement rate of over 80% (Limbury 2018).

The above discussion shows that there is no one correct way to implement mandatory mediation. While a country like Italy has made legislative changes at the national level to incorporate mandatory mediation, in countries like Australia, the process has been more decentralised. From this discussion, it is also clear that the Australian model is more complex than the Italian one as different states have passed individual legislation according to the subject matter of the mediation. Also, in Australian legislation, the focus is not just on mandatory mediation but other forms of dispute resolution as well. Thus, which model is best suited for a country depends on a number of domestic factors that need to be taken into consideration. Before India implements mandatory mediation, certain considerations unique to India must be borne in mind.

Mandatory mediation in India

It is crucial to ensure that mediation in India does not go down the same road as arbitration in its initial years. For this, based on the lessons drawn from the arbitration experience, certain provisions need to be incorporated within any law on mediation. The first would be to provide adequate safeguards against frivolous and motivated challenges to mediation agreements in courts.

Making the profession of mediation more lucrative is crucial for mediation to achieve its full potential as a dispute resolution mechanism. This will ensure that the best talent is attracted towards this profession and the quality of services provided improves substantially. Therefore, any attempts to cap fees charged for mediation need to be thought through carefully. Ideally, overregulation in the form of price caps should be avoided. However, if implemented, it is imperative to link it to the monetary value of the dispute and not decide in an arbitrary manner.

Any attempt at making mediation mandatory would fail unless there is an adequate number of skilled mediators available to meet the demand that would be generated. This is why upskilling lawyers to become mediators is the need of the hour. Further, it is crucial that restrictions are not placed on who could become a mediator. Rather, apart from certain basic qualifications, regulation should only require mandatory training for mediators. This could ensure that people across professions opt to become trained mediators, bringing the subject matter expertise that is required for different kinds of disputes.

Further, in the era of the Fourth Industrial Revolution, integration of technology in the process of mediation is imperative. Online dispute resolution (ODR) holds a lot of potential especially for cross-border disputes and disputes where parties are geographically separated, and any policy should therefore sufficiently provide for utilisation of this potential. It is extremely important to support and encourage optimal use of technology in making mandatory mediation feasible and convenient for parties.

Another challenge that mandatory mediation could face is from the legal community itself, which may perceive mediation as a threat and not an opportunity. This was witnessed in Italy when mediation was first made mandatory. To avoid a similar backlash, it is important to co-opt lawyers as important stakeholders in this process. This can be done by allowing lawyers to be present during mediation and encouraging lawyers to take up mediation as a profession. Bearing these considerations in mind, the authors suggest the following mandatory mediation model for India.

Mandatory mediation model for India

The process of introducing mandatory mediation should be well-thought out and no hasty decisions should be taken which might lead to unnecessary vilification of this process. We recommend that India should adopt a modified version of Italy's opt-out model of mandatory mediation. We should learn from some of the hurdles that Italy faced when introducing mandatory mediation, so that similar teething troubles are not witnessed in India.

India should also learn from the experience in Romania, which adopted the opt-in model of mandatory mediation and required parties to attend an information session on mediation prior to initiating certain kinds of civil cases (Rühl et al. 2015, 310). In the opt-in model, the parties interested in mediation, after the mandatory information session, must start a separate process to actually mediate (De Palo et al. 2014, 8). The Romanian law also contained a provision expressly requiring the court to dismiss a case when the parties had not attended a mediation information meeting (Rühl et al. 2015, 310). In 2014, the Romanian Constitutional Court ruled both these provisions unconstitutional because they were drafted in such a manner that they imposed an unreasonable burden on litigants and violated the

citizens' right to access to justice (310-311). Thus, caution should be observed while passing any law which makes mediation mandatory, to ensure that it does not hinder access to justice for people. Else it could fall foul of the constitutional guarantees that Indian citizens enjoy.

India should also learn from the things Italy did right. In 2013, it introduced mandatory meditation with a four year sunset clause, after which the law had to be reviewed. A similar approach can be adopted in India wherein mandatory mediation would start with a small pilot programme and then gradually be modified to correct for demonstrated defects that are discovered (Sander 2007, 16). An evidence-based approach towards mandatory mediation would help impart more legitimacy to any effort to make mediation mandatory.

In Italy, in civil and commercial matters, the Legislative Decree No. 28/2010 considers the mediation attempt as 'voluntary' for all disputes, but as a condition for admissibility of judicial action, and therefore 'mandatory' for disputes relating to co-ownership of land, property rights, division of assets, hereditary succession, family agreements, leasing, loans, commercial leases, medical and paramedical liability, defamation, insurance, banking and financial agreements (Bruni 2019, 6). For India, categories of disputes where the opt-out mandatory mediation model could be introduced include commercial, labour, family, consumer and tenancy disputes, as well as cases of negligence. Since the Consumer Protection Act, 2018 already provides for mediation, consumer disputes can be used as a test case for mandatory mediation in the country. This is because such disputes often involve simple questions of law and facts and are likely to be less time consuming than other kinds of disputes.

Caution must be observed to ensure that the attempt at mandatory mediation does not end up becoming a token gesture and parties to a dispute make a serious attempt to mediate. This is why, as against Italy's one mandatory session, India should give careful consideration to having more than one mandatory mediation session to truly derive value from this process. Since awareness about the benefits of mediation is poor in India, this would give the parties a fair opportunity to understand the value that could accrue to them by resolving their disputes through mediation.

Since India has already experimented with mandatory mediation with the 2018 amendment to the Commercial Courts Act, 2015, it is important to initiate a detailed study on how the mandatory mediation process has fared and the reasons why it has been unable to achieve its objective. This information can be extremely useful when an attempt is made to institutionalise mandatory mediation in the country. Also, correcting the bottlenecks that this process uncovers could help increase people's faith in mediation as a workable dispute resolution mechanism.

Another element that is important for mandatory mediation to succeed in India is the parties' freedom to choose their mediator. Making mediation mandatory and compelling parties to have their disputes mediated by people who would be assigned to their case by the concerned Court-Annexed Mediation Centre would hinder the growth of quality professionals in this field. It could also erode the parties' trust in the process. Further, any law making mediation mandatory for certain categories of disputes should contain a procedure for exemption from mandatory mediation under certain circumstances.

In *M.R. Krishna Murthi* v. *The New India Assurance Co. Ltd. and Ors.* (MANU/SC/0321/2019), the Supreme Court asked the government to consider the feasibility of enacting the Indian Mediation Act to take care of various aspects of mediation in general. There is an urgent need for an umbrella legislation regulating mediation in the country. This can either be in the form of a stand-alone legislation or through suitable inclusions in the Arbitration and Conciliation Act, 1996. In either case, mandatory mediation should be introduced in a phased manner, starting with a limited number of case categories, as described above.

Conclusion

In this paper we have examined the need for integrating mediation as one of the chief components of the dispute resolution framework in the country. We have looked at the present framework governing mediation and the shortcomings therein. We have explained the concept of mandatory mediation and how it can help us deal with some of the problems associated with voluntary mediation. We have also tried to address certain concerns that have been expressed regarding mandatory mediation. After looking at the experience of some other countries with mandatory mediation, we have suggested the steps India needs to take in order to successfully introduce mandatory mediation. Finally, we have suggested a mandatory mediation model suitable for India.

While mandatory mediation holds tremendous potential, it must not be perceived as a panacea for an ailing and overcrowded court system. Other reform measures to improve the overall legal health of our society must continue in parallel. However, as already witnessed in a few jurisdictions, it can play a significant role in lessening the courts' burden even while providing an effective means to resolve disputes.

Mandatory mediation requires something of a reordering of our view of the legal system. Courts should not be looked upon as the forum of first resort to dispute resolution, but rather as one of last resort when all else fails. By requiring parties to mediate first, communication lines are kept open or re-established, so that the parties themselves can guide their own destinies rather than place them in the hands of a stranger (Hutchinson 1996, 94).

In essence, it represents a paradigm shift in the way we resolve conflicts (Saposnek 1992, 502). Embracing it requires a recognition of the societal costs of adversarial dispute resolution and the need to mainstream an alternative.

References

Bergin, P. A. 2012, "The Right Balance Between Trial and Mediation: Visions, Experiences and Proposals - A Look Beyond the EU - Australia." Accessed November 25, 2020. http://www.austlii.edu.au/au/journals/NSWJSchol/2012/38.pdf.

Bruni, Alessandro. 2019. "Italy." Accessed February 8, 2021. http://www.concilia.it/mediation_2019.pdf.

Civil Procedure Alternative Dispute Resolution and Mediation Rules, 2003. Accessed November 07, 2020. http://chdslsa.gov.in/right_menu/rules_regulationslsa/pdf_files/cpadrm-rules-2003.pdf.

Civil Procedure Alternative Dispute Resolution Rules, 2006 (Bombay High Court). Accessed November 17, 2020. https://www.mediate.com/Prachi/docs/adr_rules.pdf.

Cohen, Lester. 1991. "Mandatory mediation: A rose by any other name." *Mediation Quarterly* 9, no. 1 (Fall): 33-46.

Conte, Giuseppe. 2014. "The Italian Way of Mediation." Accessed November 19, 2020. https://elibrary.law.psu.edu/cgi/viewcontent.cgi?article=1059&context=arbitrationlawreview.

Cutolo, Daniele and Mark Alexander Shalaby. 2010. "Mandatory Mediation and the Right to Court Proceedings." *Dispute Resolution International* 4, no. 1 (May): 131-144.

D'Urso, Leonardo. 2017. "Italy's Mediation Law: An Overview." Accessed November 24, 2020. https://imimediation.org/2017/06/22/italys-mediation-law-an-overview/.

De Hoom, Machteld W. 2014. "Making Mediation Work in Europe: What's Needed Is a New Balance between Mediation and Court Proceedings." *Dispute Resolution Magazine* 20, no. 2 (Winter): 23-26.

De Palo, Giuseppe. 2018. "A Ten-Year-Long "EU Mediation Paradox" When an EU Directive Needs To Be More ...Directive." Accessed November 14, 2020. https://www.europarl.europa.eu/RegData/etudes/BRIE/2018/608847/IPOL_BRI(2018)608847_EN.pdf.

De Palo, Giuseppe and Romina Canessa. 2014-2015. "Sleeping - Comatose - Only Mandatory Consideration of Mediation Can Awake Sleeping Beauty in the European Union." *Cardozo Journal of Conflict Resolution* 16, no. 3: 713-730.

De Palo, Giuseppe, Leonardo D'Urso, Mary Trevor, Bryan Branon, Romina Canessa, Beverly Cawyer, and L. Reagan Florence. 2014. "'Rebooting' the Mediation Directive: Assessing the Limited Impact of Its Implementation and Proposing Legislative and Non-Legislative Measures to Increase the Number of Mediations in the EU." Accessed November 20, 2020. https://www.europarl.europa.eu/RegData/etudes/etudes/join/2014/493042/IPOL-JURI_ET(2014)493042_EN.pdf.

Elsaman, Mahmoud. 2020. "Introducing Mandatory Mediation to Egypt's Administrative Courts: Two Feasible Approaches." *Courts & Justice Law Journal* 2, no. 1 (Winter): 55-75.

European Parliament. 2016. "The Implementation of the Mediation Directive Workshop: Compilation of In-depth Analyses." Accessed November 22, 2020. https://www.europarl.europa.eu/RegData/etudes/IDAN/2016/571395/IPOL_IDA%282016%295713 95_EN.pdf.

Ginkel, Eric van. 2005. "Mediation under National Law: United States of America." Accessed February 7, 2021. https://www.mediate.com/globalbusiness/docs/Mediation%20and%20the%20Law%20-%20United%20States.pdf.

Gupta, Juhi. 2018. "Bridge over Troubled Water: The Case for Private Commercial Mediation in India." *American Journal of Mediation* 11: 59-88.

Hanks, Melissa. 2012. "Perspectives on Mandatory Mediation." *University of New South Wales Law Journal* 35, no. 3: 929-952. http://classic.austlii.edu.au/au/journals/UNSWLawJl/2012/39.html.

Howarth, Shelby Higgs and Catherine Caruana. 2017. "Appendix A: Mandatory Mediation in Family Law – A Review of the Literature." Accessed November 17, 2020. https://csrm.cass.anu.edu.au/sites/default/files/docs/CSRM_60ICERT_APPENDIX_A.pdf.

Hutchinson, Campbell C. 1996. "The Case for Mandatory Mediation." *Loyola Law Review* 42, no. 1 (Spring): 85-96.

Law Commission of India. 2011. "Report No. 238 on Amendment of Section 89 of the Code of Civil Procedure, 1908 and Allied Provisions." Accessed November 8, 2020. https://lawcommissionofindia.nic.in/reports/report238.pdf.

Limbury, Alan. 2018. "Compulsory Mediation – The Australian Experience." Accessed November 24, 2020. http://mediationblog.kluwerarbitration.com/2018/10/22/compulsory-mediation-australian-experience/.

Linklaters. 2020. "Commercial Mediation in the U.S." Accessed February 8, 2021. https://www.linklaters.com/en/insights/publications/commercial-mediation-a-global-review/commercial-mediation-a-global-review/us.

Linklaters. 2020. "The European Mediation Directive." Accessed November 22, 2020. https://www.linklaters.com/en/insights/publications/commercial-mediation-a-global-review/commercial-mediation-a-global-review/eu-commercial-mediation.

Matteucci, Giovanni. 2019. "Mediation and Judiciary in Italy." Accessed November 25, 2020. https://www.gemme-mediation.eu/2019/10/22/mediation-and-judiciary-in-italy-2019/.

McManus, Michael and Brianna Silverstein. 2011. "Brief History of Alternative Dispute Resolution in the United States." Accessed February 7, 2021. https://www.cadmusjournal.org/article/issue-3/brief-history-alternative-dispute-resolution-united-states.

McNamara, Philip. 2020. "The Rise of Mandatory Mediation in Australia - Insights for Litigators." Accessed November 20, 2020. http://images.info.lexisnexis.com.au/Web/LexisNexisAustralia/%7B005461ac-703b-4b2f-a313-8d52fb9a6386%7D_FINAL-Q4_Bar_ADR_Jan_2020.pdf.

Mediation and Conciliation Project Committee, Supreme Court of India. n.d. "Mediation Training Manual of India." Accessed November 15, 2020. https://www.mediate.com/pdf/MT%20MANUAL%20OF%20INDIA.pdf.

Mediation and Conciliation Rules, 2004 (Delhi High Court). Accessed November 17, 2020. http://delhihighcourt.nic.in/writereaddata/upload/Notification/NotificationFile_QEP90BUB.pdf.

Morek, Rafal. 2018. "To compel or not to compel: Is mandatory mediation becoming "popular"?" Accessed November 23, 2020. http://mediationblog.kluwerarbitration.com/2018/11/19/to-compel-or-not-to-compel-is-mandatory-mediation-becoming-popular/.

Mulder, Claire. 2016. "Commercial Mediation: The United States and Europe The view through practitioners' eyes." Accessed November 25, 2020. https://www.reulingschutte.nl/wp-content/uploads/2016/02/Commercial-Mediation-The-United-States-and-Europe.-The-view-through-practitioners-eyes.pdf.

Narain, Rashika and Abhinav Sankaranarayanan. 2018. "Formulating a Model Legislative Framework for Mediation in India." *NUJS Law Review* 11, no. 1 (January-March): 75-120.

National Judicial Data Grid. https://njdg.ecourts.gov.in/njdgnew/?p=main/pend_dashboard. Accessed November 12, 2020.

NITI Aayog. 2020. "Designing the Future of Dispute Resolution: The ODR Policy Plan for India." Accessed December 10, 2020. https://niti.gov.in/sites/default/files/2020-10/Draft-ODR-Report-NITI-Aayog-Committee.pdf.

Nolan-Haley, Jacqueline M. 2012. "Is Europe Headed down the Primrose Path with Mandatory Mediation." *North Carolina Journal of International Law and Commercial Regulation* 37, no. 4 (Summer): 981-1012.

Official Journal of the European Union. 2008. "Directive 2008/52/EC of the European Parliament and of the Council of 21 May 2008 on Certain Aspects of Mediation in Civil and Commercial Matters, 2008." Accessed November 20, 2020. https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32008L0052.

Quek, Dorcas. 2010. "Mandatory Mediation: An Oxymoron - Examining the Feasibility of

Implementing a Court-Mandated Mediation Program." *Cardozo Journal of Conflict Resolution* 11, no. 2 (Spring): 479-510. https://cardozojcr.com/vol11no2/479-510.pdf.

Rooney, Greg. 2015. "The Australian Experience of Legislated Pre-Action ADR Requirements: Specificities, Acceptation, and Keys to Success." Accessed November 24, 2020. https://www.mediate.com/products/docs/6th_Symposium_of_the_Institut_de_m%C3%A9diation_et_d'arbitrage_du_Qu%C3%A9bec.pdf.

Rühl, Giesela, Jan von Hein, Pierre Callé, Michael P. Clancy, Christiane Wendehorst, Kurt Lechner, Eva Põtter et al. 2015. "Cross-border activities in the EU - Making life easier for citizens." Accessed December 13, 2020. https://www.adrcenterfordevelopment.com/wp-content/uploads/2018/06/IPOL_STU2015510003_EN_short-version.pdf.

Sander, Frank E. A. 2007. "Another View of Mandatory Mediation." *Dispute Resolution Magazine* 13, no. 2 (Winter): 16-16.

Saposnek, Donald T. 1992. "Clarifying Perspectives on Mandatory Mediation." *Family and Conciliation Courts Review* 30, no. 4 (October): 490-506.

Saul, Judith. 2012. "The Legal and Cultural Roots of Mediation in the United States." Accessed February 7, 2021. https://ssrn.com/abstract=2125440.

Susskind, Richard. 2019. *Online Courts and the Future of Justice*. Oxford: Oxford University Press.
United Nations Commission on International Trade Law. n.d. "United Nations Convention on International Settlement Agreements Resulting from Mediation (New York, 2018) (the 'Singapore Convention on Mediation')." Accessed November 10, 2020. https://uncitral.un.org/en/texts/mediation/conventions/international_settlement_agreements.

Usluel, Asli E. Gurbuz. 2020. "Mandatory or Voluntary Mediation? Recent Turkish Mediation Legislation and a Comparative Analysis with the EU's Mediation Framework." *Journal of Dispute Resolution* 2020, no. 2 (Spring): 445-466.

Vettori, Stella. 2015. "Mandatory Mediation: An Obstacle to Access to Justice." *African Human Rights Law Journal* 15, no. 2: 355-377.

Vidhi Centre for Legal Policy. 2016. "Strengthening Mediation in India - A Report on Court-Connected Mediations." Accessed November 9, 2020. https://vidhilegalpolicy.in/wp-content/uploads/2019/05/26122016_StrengtheningMediationinIndia_FinalReport.pdf.

Vidhi Centre for Legal Policy. 2020. "ODR - The Future of Dispute Resolution in India." Accessed November 3, 2020. https://vidhilegalpolicy.in/wp-content/uploads/2020/07/200727_The-future-of-dispute-resolution-in-India_Final-Version.pdf.

Waye, Vicki. 2016. "Mandatory Mediation in Australia's Civil Justice System." *Common Law World Review* 45, no. 2-3 (June-September): 214-235.

Welsh, Nancy A. 2011. "Mandatory Mediation and Its Variations." Accessed February 8, 2021. https://scholarship.law.tamu.edu/facscholar/974.

Notes

1. Title inspired from National ADR Advisory Council Report titled "The Resolve to Resolve – Embracing ADR to Improve Access to Justice in the Federal Jurisdiction: A Report to the Attorney-General". Accessed November 15, 2020. https://apo.org.au/sites/default/files/resource-files/2009-09/apo-nid67039.pdf.

2. According to the Ease of Doing Business - Economic Profile of India. Accessed November 06, 2020. https://www.doingbusiness.org/content/dam/doingBusiness/country/i/india/IND.pdf

3. Frank E. A. Sander's Address Before the National Conference on the Causes of Popular

4. Code of Civil Procedure (Amendment) Act 1999 with effect from July 01, 2002. For a history of how mediation has grown in India, refer to Xavier, Anil. 2006. "Mediation: Its Origin and Growth in India." *Hamline Journal of Public Law & Policy* 27, no. 2 (Spring): 275-282.

5. Rule 1A, Order 10, Code of Civil Procedure, 1908: Direction of the Court to opt for any one mode of alternative dispute resolution. After recording the admissions and denials, the court shall direct the parties to the suit to opt either mode of the settlement outside the court as specified in sub-section (1) of section 89. On the option of the parties, the court shall fix the date of appearance before such forum or authority as may be opted by the parties.

6. The Legal Services Management System of the National Legal Services Authority tracks the mediation infrastructure in the country along with the number of cases settled through mediation. However, no data is available on the number of referrals by courts. This is why, a study conducted by Gujarat National Law University, Gandhinagar recommends that the National Judicial Data Grid (NJDG) should maintain separate data on Section 89 referral and regularly audit the success and failure of referred cases. Refer to A., Marisport, Ambati Nageswara Rao and Heena Goswami. 2019. "Project Report on Resolving pending cases through Alternative Dispute Resolution under Section 89 of Civil Procedure Code: A Case Study." Accessed November 12, 2020. https://doj.gov.in/sites/default/files/GNLU.pdf.

7. Rule 4, Consumer Protection (Mediation) Rules, 2020: These include matters relating to proceedings in respect of medical negligence resulting in grievous injury or death; matters which relate to defaults or offences for which applications for compounding of offences have been made by one or more parties; cases involving serious and specific allegations of fraud, fabrication of documents, forgery, impersonation, coercion; cases relating to prosecution for criminal and non-compoundable offences; and cases which involve public interest or the interest of numerous persons who are not parties before the Commission.

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A Gentle Book by a Gentleman

Book Review of *Backstage: The Story Behind India's High Growth Years* by Montek Singh Ahluwalia

Narayan Ramachandran*

Backstage is a gentle book, written by a genteel man against the backdrop of a country that went through radical change. In this book, Montek Singh Ahluwalia, widely addressed as Montek, combines a ringside view of India's economic progress with a soft narrative touch.

In the first two parts of the book, Montek sets up the story including his own birth at the eleventh hour before India's midnight independence. He traces the initial sparks of reform to Prime Minister Rajiv Gandhi, who became India's youngest Prime Minister in 1985 with an overwhelming majority. To Montek, Rajiv's idea of "preparing India for the 21st century" was the first real vision statement for the country made after India's early obsession with keeping it together after independence. Jawaharlal Nehru, India's first Prime Minister, and Rajiv's grandfather, had navigated the course for a "post-colonial economy with a public-sector led process of modernization". Montek writes that the desire to change from that vision came with Rajiv's youth and professional training. When that newer vision combined with a Balance of Payments crisis in 1991, reform was born under new leadership.

Montek's even-handed prose offers only the mildest of critiques for Rajiv's political blunders including the decision to enact an infamous ordinance in the case of Shah Bano, the subsequent decision to allow Hindus into the Babri Masjid complex, and the fallout from the Bofors scandal. As a Sikh himself, Montek steers clear of even mentioning Rajiv's justification of the pogrom against Sikhs that followed Prime Minister Indira Gandhi's assassination. In his own words, the book attempts to tell the story of reform in India through a lens of the "political-economy". While Montek recounts the backdrop of the politics and the actors, the book is too bland to really do justice to the word "politics".

The story really only comes alive in 1990 with Montek's continuing involvement in the Prime Minister's Office (PMO) even when there was a change in leadership to the minority National Front government led by Prime Minister V.P. Singh. Again, there is only passing reference to the V.P. Singh government's momentous decision to implement the reservation system recommended by the Mandal Commission. Montek does not connect the political dots between Rajiv's blunders, the introduction of reservations and the decision by then BJP President L.K. Advani to intensify the Ram Mandir campaign. V.P. Singh's government was truly a wide-tent accommodating the old socialist thinking and the more modern market-oriented thinking represented by Montek and others.

Montek's note to the Prime Minister, intended originally as a reform document if Rajiv Gandhi were re-elected, formed the basis for a change in direction of economic policy thinking both at the PMO and the Planning Commission. The note "emphasized the need to articulate a medium-term strategy in which

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the different but interconnected reforms are identified, and the extent of change needed in each clearly stated". This note called the "M Document", since no one accepted responsibility at that time, was prepared by Montek with help from other like-minded reformers. The five pillars in the document were 1) Reversal of the deteriorating fiscal position by reining in government expenditure particularly on defence and subsidies; 2) Reforming the public sector to engender efficiency; 3) Industrial decontrol and freedom from extreme throttling of the sector; 4) Trade liberalization with a gradual phase out of licenses and a reduction in import tariffs; and a 5) More positive approach to foreign direct investment (FDI).

While signalling a departure from the economic thinking of the first four decades after independence, these reform suggestions were gradual in nature and had already been filtered for "do ability" in the Indian context of the time. All that changed with the collapse in the Balance of Payments (BoP) in the second half of 1990, that became an acute crisis when oil prices spiked in October/November 1990 following Saddam Hussein's invasion of Kuwait. The political scene in those months was chaotic with the V.P. Singh government giving way to the Chandrasekhar government, followed by another election and Rajiv Gandhi's unfortunate and untimely assassination. The political chaos deepened the economic predicament with a balance of only $1.1 billion in forex reserves, enough only to cover 2 weeks of imports. Within a short few months, successive governments had to sell gold, pledge gold and negotiate liquidity support from the Bank of England and the Bank of Japan. The new Congress Coalition led by Prime Minister P.V. Narasimha Rao appointed Manmohan Singh as finance minister, and P. Chidambaram as commerce minister. This Sikh duo of Manmohan and Montek along with others at the Reserve Bank of India, PMO and ministries of finance and commerce engineered a near-textbook way out of the BoP crisis, devaluing the rupee, providing liquidity support and followed it up with trade and industrial liberalization.

Montek was clearly engaged in policy and with policy makers during this critical time and that intensity flows through in his description of the trade reforms, financial sector reforms and tax rationalization. It is in this third part of the book that the economic arguments are made and Montek has done them well as would befit an economist trained in the American school of economic practice of that time. While he skirts political webs, he does introduce several administrators like Amarnath Verma, Rakesh Mohan, N.K. Singh, S. Venkitaraman, C. Rangarajan, Y.V. Reddy and others who played their part in India's liberalization reforms.

After a sojourn to the IMF during the Vajpayee years, Montek returned to the Planning commission when the Congress led by Sonia Gandhi came back to power in 2004. Manmohan Singh was appointed Prime Minister to skirt the issue of Sonia Gandhi's nation of origin. This proved fortunate for Montek, as he was recalled to the Planning Commission as its deputy Chairman. Even though Montek remained in the policy making circles of the successive UPA governments formed in 2004 and 2009, he was less involved in direct policy making than in the earlier period. Part four of the book therefore offers a ringside view, without the interactivity that would characterize an active player. Montek played the role of an economic ambassador, listening to the outside world and relaying issues and concerns to Manmohan Singh's government. While he does not address it explicitly, his ability to influence even economic and tax issues like the retrospective taxation of Vodafone, became progressively weak. As Prime Minister, Manmohan Singh himself had expressed frustration from "two power centres" within the government.

The book closes with an epilogue on the six years of the Narendra Modi led NDA government. Montek describes it as "beginning with a bang and ending with a whimper". While he is careful to balance the language, the tone of the epilogue reveals Montek's sympathies lie with the Congress party. Probably no surprise, given that his career was intertwined with the party's fortunes. One gleans his fondness for

Manmohan Singh, who was a major driver of that good fortune. While we can also decipher that Montek's economics views include a degree of fiscal conservatism, government investment over spending and market-orientation, he states them with such softness that we are left to wonder.

Despite its extreme moderation, this book is a useful read because, so few books have been written about India's contemporary political economy. Taken together with Sanjay Baru's much punchier Accidental Prime Minister and Gurcharan Das's well-researched book India Unbound, Montek's book Backstage offers a clearer picture of an important time. It fills in the gaps on some of the characters involved. Montek's penchant for comprehensive rather than piece-meal reform is a good takeaway for a younger generation of economic policy makers. For lessons to be drawn and radical progress to be made, India will need its former policy makers – from all sides of the political aisle -- to write sharper critiques.

Backstage: The Story Behind India's High Growth Years **by Montek Singh Ahluwalia, Rupa Publications India, 2020. Pages 464. Rs. 344 (Hardcover); Kindle Edition: Rs. 297.35.**

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