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Sectoral Policy Group: Agriculture

Structural Change Reversed
A Comparative Analysis Pre- and Post-2015

by

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Group Convenor: Siraj Hussain

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Structural Change Reversed
A Comparative Analysis Pre- and Post-2015

Santosh Mehrotra

Since the well-known research of Simon Kuznets (Nobel Prize Winner in Economics), the structural transformation of all economies is characterised by two simultaneous phenomena. The first is that there is a structural shift in terms of the contribution of the three main sectors—agriculture, industry, and services—to the gross domestic product in favour of non-farm sectors; the second involves total employment in the economy—with a shift away from agriculture towards the other two main sectors of economic activity—first towards industry, followed by services.

This paper is motivated by some major developments that have occurred in the macro-economy in India, and their implications for the labour market. It is an attempt to understand these significant changes to the labour market in agriculture in particular, which accounted for around two-fifths of India's total workforce of 520 million in 2021.

This paper is organised in three sections. Section 1 shows that structural transformation, which had been relatively slow for a significant part of the last century, gathered momentum during the first decade of the current century. It has been rather stalled for the last six years and has been reversed by poor economic policies and management. Section 2 examines how workers in agriculture have had to respond to the changed economic conditions and non-farm labour market trends. The changes have only served to increase rural distress. In other words, far from farmers' income having doubled between 2015 and 2022, as the Union government had attempted, the quality of work in agriculture has worsened, wages have fallen, and women (and men) who had exited agriculture have been forced to rejoin it. This is a form of disguised unemployment, with workers surviving merely on account of safety nets like Mahatma Gandhi National Rural Employment Guarantee Act, 2005 (MGNREGA) or cash transfer (PM Kisan) or Public Distribution System (PDS) rations (Pradhan Mantri Garib Kalyan Yojna [PMGKY] was free during the pandemic). Section 3 examines the reasons for the emergence of these worsening labour market conditions. The concluding section summarises the findings.

I

Structural change stalled, then reversed

The pace of structural change in India's economy has been slow since 1950, certainly slower than desired (as compared to China for example) since 1980. Between 1950–51 and 1980–81 (during India's low rate of growth of 3.5 per cent), the contribution of agriculture to India's GDP fell slowly (from 54 to 38 per cent). At the same time, the rise of industry was reflected in its share rising from 14 per cent in 1950–51 to 23 per cent in 1980–81 (Planning Commission, Government of India 2013).

The contribution of manufacturing to GDP began to grow with the import-substituting industrialisation strategy adopted during the first, second and third Five Year Plans (1950–51 to 1965–66); it rose from 14.5 per cent in 1960 to 17.5 per cent in 1980.

The share of services in GDP was 30 per cent in 1950—51, and had only risen to 33 per cent in 1970–71, or to 38 per cent in 1980–81. Thereafter, it rose slowly to 43 per cent in 1990–91, and surged to 50 per cent and 57 per cent by 2000–2001 and 2010–11, respectively; it increased even further to 60 per cent by 2013–14.[1]

1 All these data are taken from various issues of India's Five-Year Plan documents of the Planning Commission.

However, the main marker of proper structural change in an economy is the rising share of manufacturing in output, as seen in East Asia. The share of manufacturing in India, unfortunately, kept falling from 17.5 per cent in 1980 to 15.7 per cent in 1990. Although it picked up after the economic reforms of 1991, rising to 17.7 per cent of GDP in 1996, it fell again to 15.7 per cent by 2000–2001, recovering only after 2004. It remained between 16 and 17 per cent between 2004 and 2012, stabilising at that level. However, after the catastrophic demonetisation and the consequent destruction of the unorganised sector and manufacturing in the Micro, Small and Medium Enterprises (MSME), there was a gradual decline in the share of manufacturing from the stable 16–17 per cent of GDP between 1992 and 2014. It fell yearly to 13 per cent in 2020, barely recovering to 14 per cent in 2021 and 13 per cent in 2022, the lowest in the preceding 60 years. [2]

This dramatic fall in manufacturing's contribution to output is also reflected in employment in the manufacturing sector. While it had risen from 10.5 per cent of total employment over 1999–2000 to 12.8 per cent in 2012, it fell to 11.5 per cent by 2019, falling further thereafter. Worse still, there was an absolute fall in total manufacturing employment from 2016 to 2019, for the first time ever in India's post-1991 history. All said and done, the positive trajectory of structural change that was underway till 2014 has been aborted and even reversed. The 'Make in India' campaign does not seem to have helped much.[3]

Another phenomenon in the last two years is truly astounding. One dimension of structural change is that not only is there a relative fall in agriculture in the total workforce, but as non-farm work grows, there should have been an absolute fall in the numbers in agriculture, consistent with a

2 https://data.worldbank.org/indicator/NV.IND.MANF.ZS?locations=IN

3 Whether the Performance Linked Incentive Scheme in 12 sectors helps to increase the share of manufacturing in GDP or employment remains to be seen: it was announced as recently as November 2020.

Lewisian transition. Economic development is normally accompanied by the growing dominance of non-traditional activities, urbanisation and large-scale rural-to-urban migration.

However, from 1950 onwards, for half a century, the pace of structural change was so slow until 2004–05 that while the share of total employment in agriculture was consistently falling, the absolute number of workers was still rising. As the rate of population growth is higher in rural compared to urban areas, with health and education services being grossly poor in most states, the reliance upon land as a source of livelihood of this growing rural population did not diminish till 2004.

As a consequence, the extent of contracted productivity in agriculture can be gauged from the fact that after over two decades of development, in 1972–73, the share of agricultural employment in the total workforce was still 74 per cent, while that workforce contributed 44 per cent to India's GDP. So slow was the pace of non-farm job generation that while the contribution to the GDP of agriculture fell to 25 per cent (from 44 per cent) by 2001, the share of employment in agriculture was still 60 per cent in 2000.

However, for the first time in India's post-independence history, the GDP growth rate picked up after 2003–04 to 8 per cent per annum (p.a.), a rate maintained till 2013–14 on average. At the same time, non-farm jobs (which between 1993–94 and 1999–2000 were growing at just over 3 million p.a.) began to grow at the rate of 7.5 million p.a. (Mehrotra et al. 2014). Hence, 5.5 million workers on average were pulled out of agriculture into non-farm work each year, resulting in a massive cumulative 37 million fewer workers being dependent upon agriculture in 2012, compared to 2004. For the first time ever, the absolute number of farm workers fell in India—as seen during rapid structural transformations.

The resulting tightening of the rural labour market, as surplus labour in agriculture decreased, led to rising real wages in rural areas over the same period. These had been stagnant from 1996 to 2004. Rising rural wages resulted in urban wages also rising in a ratchet effect, contributed by non-farm job growth. The rise in real wages led to rising personal consumption, which caused a fall in the number of the poor.

While the share of population below a consistent poverty line had fallen since 1973–74 from 55 per cent in 1973 to 27 per cent in 2004, never in India's post-independence history had the absolute number of poor fallen between 1973 and 2004. However, because of the rise in jobs and real wages, consumption expenditure rose and the absolute number of poor fell between 2004 and 2012 by nearly 140 million—for the first time ever, an unprecedented achievement.

However, as non-farm job growth fell post-2013 (to only 2.9 million p.a. till 2019), the rate of exit from agriculture also fell (Mehrotra, 2020). GDP growth fell sharply from 2016 for each quarter until the COVID–19 pandemic broke out in January 2020. The ill-planned, sudden and strict national lockdown caused massive reverse migration on a historically unprecedented scale. In 2019, the number of workers in agriculture was 188 million; in the middle of 2020, that number had risen by 45 million (the government claims that only 10 million people migrated back). For anyone believing that in 2021 migration had reversed back to cities, away from agriculture, the National Statistical Office (NSO) data throws up a surprise; in 2021, 7 million additional people were working in agriculture compared to 2020.

The trajectory of structural transformation from 2004 to 2012 had not only been stalled but reversed.

II

How are workers coping?

The number of workers in agriculture was 188 million, or 42.5 per cent of the total workforce, in 2018–19; it had been dropping regularly since 2004–05 (49 per cent). Thanks to the reverse migration due to the sudden lockdown, that share rose to 45.6 per cent, and then rose again to 46.5 per cent of the total workforce in 2020–21. Table 1 shows the absolute number of agricultural workers by type of employment.

Table 1: Agriculture: Number of Workers by Type of Employment

Sector and Type of Employment		Number of Workers (in million)				
		2011–12	2017–18	2018–19	2019–20	2020–21
Agriculture & Allied	Own Account Workers	77.4	89.1	83.8	95.3	98.0
	Employers	3.1	3.2	3.4	4.3	4.4
	Unpaid Family Workers	65.0	49.7	47.0	67.9	73.8
	Regular Salaried	1.6	2.1	1.9	3.8	3.6
	Casual Labour	76.3	49.0	44.7	53.8	50.7

Not only was the share of workers in agriculture regularly dropping since 2004–05, more importantly, as noted earlier, for the first time in India's post-independence economic history, the *absolute* number of workers in agriculture began dropping after 2004–05, as was anticipated by Arthur Lewis (1954), in the shift from traditional to non-traditional sectors. That process continued for 15 years, all the way to 2019. However, the absolute number of workers in agriculture rose dramatically—not only in 2020 but also continued to rise in 2021. With such a sharp increase in the burden on agriculture, what are agricultural workers doing? Table 1 presents that information in absolute numbers (millions). In 2011–12, 34.7 per cent of farm workers were own-account workers; that share jumped to 42.5 per cent by 2020–21. These are mostly erstwhile cultivators who owned land and have had to return to farming in large numbers—even though farming is not their first preference. A majority of them had migrated to other states or to cities to work mainly in construction, where wages are higher. However, the stoppage of work during lockdowns, and the slow rise in construction work thereafter, has not been such as to pull workers back to cities. This suggests, we hypothesise, that the farmland earlier lying fallow when the males in the household migrated for non-farm work has now been brought back into cultivation.

This is also the reason why there is a very sharp increase among unpaid family labour from 47 million to 68 million between 2018–19 and 2019–20, and a further rise in 2020–21—especially, but not only, among women (see Table 1). This has been a particularly rural phenomenon, but also to a lesser extent an urban phenomenon (as the recent NSO's Periodic Labour Force Survey [PLFS] has reported). Rural distress increased as the economy slowed after 2016, particularly due to the impact of COVID–19 and lockdown, and barely recovered in 2021–22 to a level where per capita income was below the 2019–20 level.

Women who had been leaving agriculture before 2017 in large numbers (an important reason for the falling participation of the female labour force in rural areas), began to join the workforce in 2018—but mainly as unpaid family labour. Thus, at a time of falling GDP since 2016, the PLFS had been showing a rise in Labour Force Participation Rate (LFPR) and Worker Population Ratio (WPR) overall, and a fall in the unemployment rate.[4] This might seem inexplicable at a time of slowing GDP growth, but the puzzle is resolved by disaggregating the workforce by type of employment. One discovers that while the share of regular wage work and casual wage work is falling, correspondingly self-employment is increasing. Within self-

4 Thus, in 2017–18 the NSO's PLFS showed that the LFPR and WPR had fallen since 2011–12, and unemployment had reached a 45-year high since the NSO began doing labour force surveys on a consistent basis. However, PLFS Annual Reports after 2017 for each four-year period show a rising trend.

employment, the greatest increase is accounted for by unpaid family labour, which is the worst form of employment. This increase in unpaid family labour gives the impression that employment is increasing, unemployment is falling, and at the same time, the LFPR and WPR are increasing. But this conclusion is misleading. The LFPR and WPR should indeed rise, and unemployment should fall, if the economy is booming and creating jobs, and hence workers are being pulled into the labour market. But if employment appears to increase at a time when the economy is slowing (or even contracting as in 2019–20), exports are falling, as is investment to GDP ratio, then questions should be raised about why employment is increasing.

What is important is that the Centre for Monitoring Indian Economy (CMIE), which regularly collects employment data, shows that since 2016, the LFPR and WPR have been falling, while the unemployment rate has increased. The explanation for why the PLFS claims that the LFPR and WPR are increasing (and unemployment decreasing) and CMIE data indicates the exact opposite is straightforward—the CMIE does not consider 'unpaid family labour' as employment at all. [5]

III

Can trends in work conditions in agriculture be explained?

Table 1 shows a falling trend in the number of casual wage workers between 2012 and 2018. Over the same years, we notice a rise in the number of own-account workers in agriculture, who are obviously cultivators. Two types of explanations can be offered about these simultaneous but diverging trends in respect of casual wage work and self-employment (own-account workers,

5 This is also the reason why, according to the CMIE, the total workforce of India, in absolute terms, is much smaller if the PLFS definition of employment is used. Similarly, female LFPR is also much smaller by CMIE's definition than by the PLFS's definition of employment. The CMIE does not count unpaid family labour as employment, while the NSO's PLFS does include it under the definition of employment.

one of the three types of self-employment, the other two being unpaid family labour and employers who are self-employed).

First, erstwhile wage labour which was landless is likely to have leased in land to cultivate *in situ*. In other words, given that non-farm work, especially in construction in urban or rural areas, was slowing GDP due to slowing growth after demonetisation and the hurried introduction of Goods and Services Tax (GST), casual labour would have preferred to stay in rural areas and leased in land from middle, large or absentee farmers to cultivate. This may have caused a reduction in casual labour and a simultaneous increase in own-account workers (as cultivators).

Second, it is likely that young people, who pursued higher education in the first 15 years of this century, may have been forced to take up agriculture, given that non-farm work was not rising at the pace at which young people were being added to the working age population. Instead of remaining unemployed, they became engaged in agriculture on the existing family farm or by leasing in land from better-endowed farmers.

However, we also need to understand why own-account work in agriculture continued to rise during COVID–19.

Understanding trends in farm work during COVID–19

In rural areas, there were already two kinds of people looking for work when the reverse migration began in April 2020. First, there were the youth who had recently completed higher education over the preceding two decades; each year at least 5 to 6 million get added to the labour force searching for work, across rural and urban areas. About two-thirds of this young population was in rural areas. Included in this category of youth were girls, who had started completing not only elementary but even secondary education, as girls' transition from grade eight to nine (i.e., from elementary to secondary school) was being incentivised in most states (through scholarships or bicycles to facilitate their mobility) since the mid-1990s. As a result, secondary school enrolment had shot up in India between 2010 (when it was 58 per cent of the relevant age cohort) and 2015 (when it stood at over 80 per cent); this happened with gender parity. Gender parity at the secondary level was an unusual achievement for India, given that countries at our level of per capita income have not achieved secondary enrolment with gender parity. However, for these educated youth, working in agriculture was hardly an aspiration; in fact, it was the opposite of what they desired.

Second, there was a stock of already unemployed population in rural areas when reverse migration began in mid-2020. The number of unemployed had risen from 10 million in 2011–12 to 30 million by 2019 (Mehrotra and Parada, 2021). Again, a significant (perhaps two-thirds, equivalent to the share of rural in India's total population) majority of this 30 million unemployed was searching for work (and had not dropped out of the labour force, thus becoming discouraged workers).

To the first flow and the second stock of unemployed was suddenly added the large additional flow of millions of reverse migrants due to the lockdown. While their exact number cannot be assessed accurately, the fact remains that agriculture saw an absolute increase in total workers in agriculture of 45 million between 2019–20 and 2020–21, and another 7 million in 2021.

The result was a dramatic increase in own-account workers, unpaid family workers (who are likely to have been working with these own-account cultivators), plus casual wage workers. The reverse migrants are likely to have consisted of both erstwhile landless labourers who had departed to search for greener pastures, as well as small and marginal farmers, who had earlier been eking out a meagre existence in farming before migrating to other parts of the country, including other states or cities in their own state.

Massive reverse migration took place during the two years, 2020 and 2021. These reverse migrants who came back to their homes, mostly in the northern and eastern states of India, were accommodated *(a)* as cultivators (as own-account workers), who were now accompanied in the field by their unpaid family labour; and *(b)* as casual wage labour, most of whom would be landless labour returning home to their village, or small/marginal farmers who in the lean season of cultivation would work as casual labour to enhance their earnings.

Wages stagnate or fall in rural areas with surplus labour increasing

There is evidence that wages stagnated or fell after 2017–18, which is hardly surprising given that non-farm work was growing much slower than before, while at the same time unemployment was rising. The numbers looking for work were rising for a variety of reasons: *(a)* the share of the working-age population was rising; and *(b)* those who completed their education (to whatever level their incomes permitted) started looking for work.

It is clear, then, that wages in rural areas of both casual and regular workers stagnated, or fell (see Figure 1).

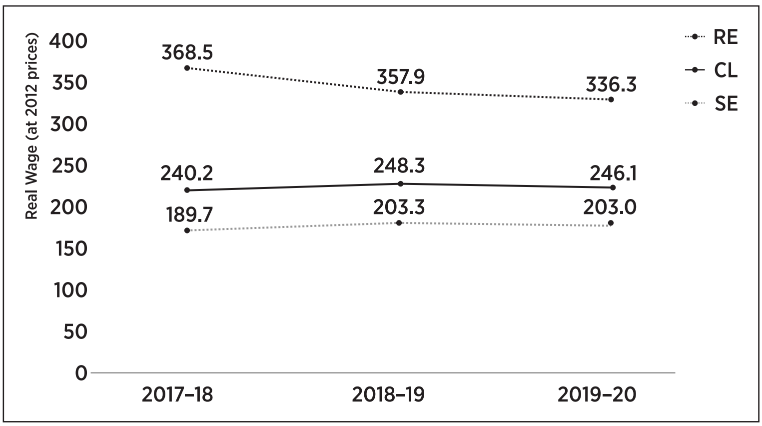

Figure 1: Real Wages of Workers in Rural India: Regular, Casual and Self-Employed

If the number of those in the labour market rises, while demand for labour stagnates in both rural and urban areas (recall the highest-ever unemployment rate in 2017–18 in 45 years), then the fall or stagnation of wages can be easily understood.

If, in this situation of pre-existing surplus labour, is added a mass of potential workers who had migrated to other cities or states earlier in search of work due to the sudden unplanned lockdown and complete stoppage by the administrative fiat of all economic activity across the country, including all means of transportation being brought to a standstill, the consequences can be surmised. It is inevitable that wages fall when reverse migration to villages of a limited number of migrant source states takes place suddenly. In fact, since open market work in rural areas was not available, even though the lockdown did not affect agriculture or rural areas as much, public works continued, especially under MGNREGA. In fact, MGNREGA works received a sharp impetus, as the government prudently increased fiscal allocations to it in 2020–21 and 2021–22. Since MGNREGA is a demand-driven scheme, it generated a greater demand for work than could be met; funds fell short over the entire two-year period of COVID.

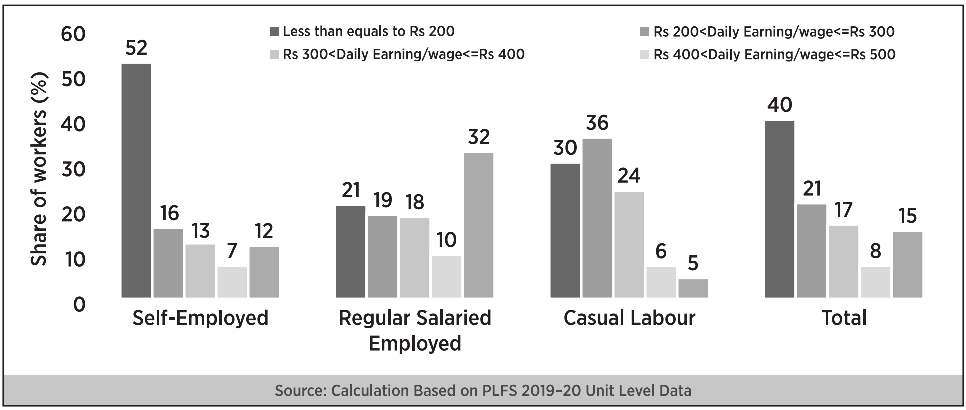

Figure 2: Share of Workers by Type of Employment Earning Less than ₹200, ₹200–300, ₹300–400, ₹400–500 and > ₹500 per day, 2019–20

We find, tragically, that the share of workers in the first year of COVID who were earning below poverty line wages (i.e., less than ₹200 per day) is extremely high. As Figure 2 shows, among the self-employed, who constitute 46 per cent of India's total workforce, over half earn less than those earning poverty line wages of ₹200. If we add those among the self-employed who earn less than ₹300 then the two together add up to two-thirds of all the self-employed. The situation is not much different for casual wage workers, who accounted for just over a quarter of India's total workforce in 2020. What is most disturbing is that even among the regular salaried, those earning less than ₹300 per day accounted for two-fifths of the salaried (Mehrotra and Parida, forthcoming).

Conclusion

In this paper, we have attempted to spell out the state of India's agricultural workforce over the last decade or so. We have found deeply disturbing trends. First, structural change in the Indian economy in terms of both output and employment has not only stalled but reversed. In other words, structural transformation, which had been gathering momentum in the Indian economy since the early part of this century, suffered a structural retrogression. Second, employment in agriculture has also suffered a qualitative worsening, with self-employment increasing; even worse, within self-employment it is the worst form of self-employment that has increased sharply—unpaid family labour. Third, women in India, who already had among the lowest labour force participation rates in the world, had seen a fall in their LFPR. There has been a limited increase in their LFPR since 2017, but under conditions of economic distress, driven largely by contributing unpaid family labour to their family farm; so, instead of progress, women have re-entered agriculture. Finally, on account of the increase in workers in agriculture, concentrated especially in a few northern and eastern states, real wages have fallen, creating conditions of increasing poverty. Youth, including the better-educated, have had to enter the workforce in agriculture, certainly against their will, as a stop-gap arrangement while they search for non-farm work.

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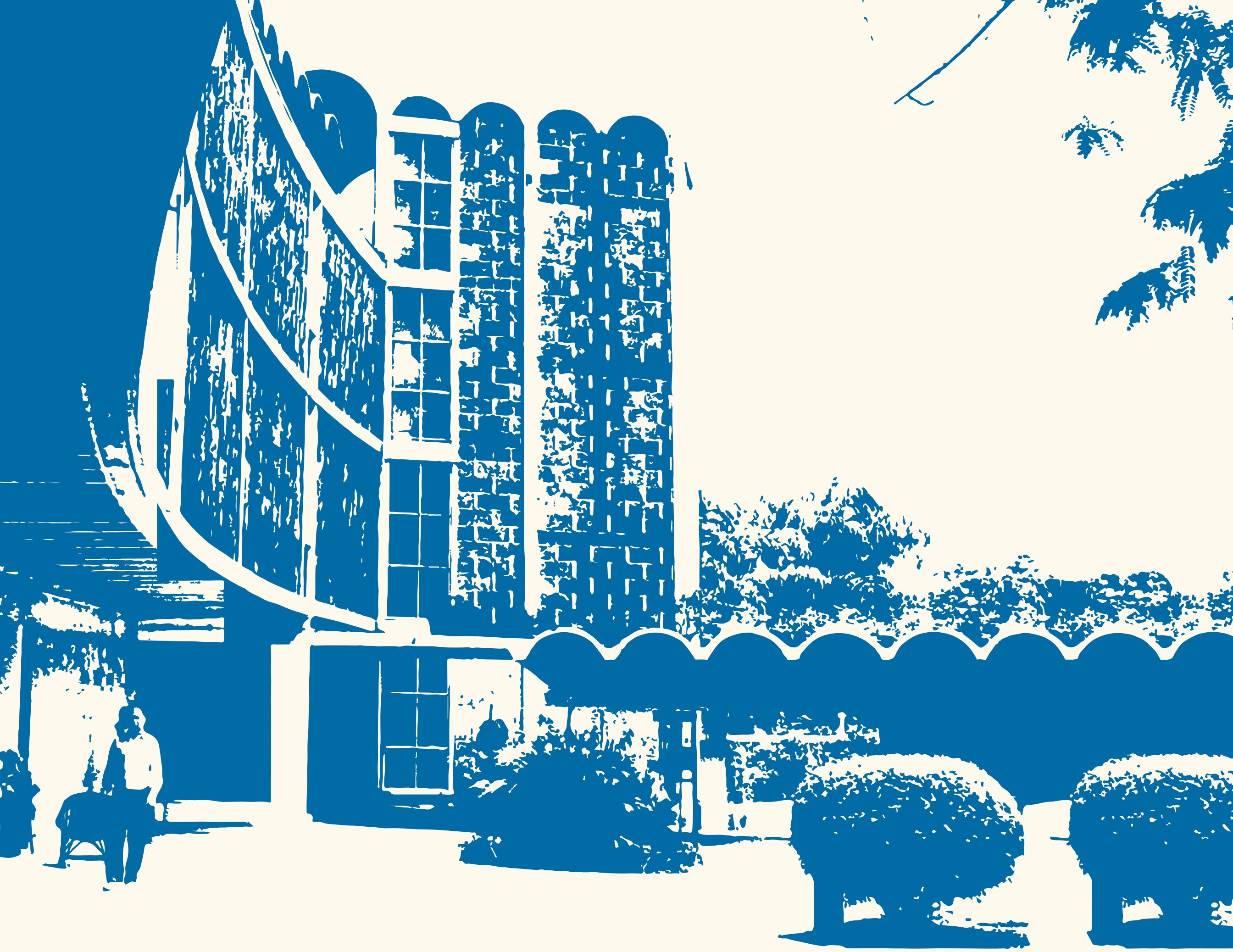
Santosh Mehrotra, a human development economist, is a visiting professor at the Centre for Development Studies, University of Bath, and adjunct faculty at the Public Health Foundation of India. After an M.A. in Economics from New School for Social Research, New York, and PhD (Economics) from Cambridge University (1985), Mehrotra spent 15 years with the UN (1991–2006), heading UNICEF's global research programme on social policy for developing countries at the Innocenti Research Centre, Florence, and as chief economist of the global Human Development Report, New York. He returned to India to head the Rural Development Division and Development Policy Division of the Planning Commission (2006–09) and was lead author of several chapters of the 11th & 12th Five Year Plans of India. He was also the Director General (2009–14) of the National Institute of Labour Economics Research, Planning Commission, in the rank of Secretary to the Government of India. He currently advises NITI Aayog, the Ministry of Labour and the Ministry of Skill Development. He has published 13 books, including three with Cambridge University Press and four with Oxford University Press.



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