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Inequality in Colonial India

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Abstract:

A view popular in Indian economic history scholarship claims that the institutional and commercial policy of British India made the rich Indians richer and the poor poorer during colonial rule. The paper shows that the evidence to support the conjecture is weak. Missing data on peasant income makes it hard to generalize on aggregate trends in inequality. But the evidence does question the role of state policy behind trends in inequality. An alternative account starts from the distinction between land-dependent and trade-dependent occupations. The open economy of the nineteenth century affected these two spheres differently. Low and stagnant land-productivity limited the average return that accrued to land-dependent occupations. Occupations directly or indirectly dependent on trading could escape the constraint partially.

In the last few years, interest has grown in the history of within-country inequality, mainly in the wake of Thomas Piketty's recent work. Contributors to the Great Divergence debate, though in the main concerned with between-country inequality, have occasionally explored and conceptualized the relationship between the two types of inequality (Saito 2012; Williamson 2013). Where colonial India is concerned, these attempts have so far used a subset of the data available for making an informed assessment of trends in inequality. This paper tries to broaden and diversify the evidence.

What difference would that make? For over fifty years, one paradigm has dominated historians' views on how inequality changed in colonial India, which

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suggests that the open economy policy that the British Empire in South Asia firmly adhered to, and institutional reforms undertaken by the state, increased economic inequality. There has so far not been a convincing test of the predictions of the paradigm. A more substantial database permits us to test the prediction. Limitations of data do not permit suggesting a different trend from the one predicted by the received view. The data does suggest that openness affected the economy in a definite way, but not in the way the received view claims it did.

The paper starts with a fuller description of the received view, and then surveys the available evidence in five subsequent sections.

1. The inequality paradigm

According to the received view, the rich became richer and the poor poorer in colonial India (roughly 1858-1947). The rich belonged in two sets. One of these were owners of assets like land and money capital. And the second one consisted of European colonialists working for the government as civil or military officers. Two mechanisms were at work behind the rise in inequality. One of these was engineered by the policy of openness and property reforms. Openness transformed India from an exporter of manufactures (like textiles) into an exporter of agricultural goods. The government empowered land-owners and invested in canals and railways to ensure that landholders were encouraged to produce more for the market. Revenue pressures added to the motivation. Artisans lost because import of manufactures destroyed their livelihood, a process known as “de-industrialization”. The peasants ought to have gained from agricultural export but did not because they lacked capital or tenurial security to resist the exploitation of landlords and moneylenders. And the number of agricultural labourers – the poorest occupational class – increased because many artisans and peasants joined their rank.

In Paul Baran's colourful language, the British "ruined India's village economy .. destroyed the Indian artisan .. broke down whatever beginnings there were of an indigenous industrial development and promoted .. sharks of all descriptions" (Baran 1956: 149). The modern version of the historiography follows this classical statement with more focus on inequality. British policy "enormously increased the economic power of the landlord, the trader and the moneylender over the primary producer .. [peasant, artisan, landless labourers]" (Bagchi 1982: 20).

This view finds support in several subsidiary scholarships on economic change in colonial India. For example, the Marxist historiography of agrarian class structure states that "[w]hile the conditions of the poorer peasantry and rural proletariat became more and more critical [in the late nineteenth century], the extending production of commercial crops laid the basis for extensive landlord and rich peasant agriculture" (Habib 2002: 331; the thesis draws on the work of Patnaik 1983; and Patel 1952). Sociologists and social historians suggest that these new patterns of inequality driven by economic policy and capitalism were reinforced by governance policy. Precolonial India was already an unequal society owing to the caste system. These scholars argue that colonial rule involved compromises and alliances with the higher castes. In this way, "colonial governance" that made friends with the upper castes, "reinforced" patterns of inequality that emerged from the development of capitalism (Saberwal 1979b; 1979a; several historians have written on the implicit alliance).

The second mechanism was exploitation on a world scale. Increase in "the intensity of these internal method of exploitation" joined the "export-led exploitation" of the colonial societies by the European colonists, leading to "retardation" of the former (Bagchi 1982: 34; also, the concept of "colonial mode of production" introduced by Alavi 1975). The second process was partially market-based, if we believe with the global Marxists that international trade in the nineteenth century involved an "unequal exchange". But the second process also had a political driver, the payment of salaries and pensions to government

officers on a rate far higher than Indian average incomes. Indian nationalists called these a “drain” on Indian savings. The idea behind the term was that payments of salaries above the real value of the services the earners rendered left India short of investment funds. It would also increase inequality by making government officers progressively richer than the rest of the population. The inequality process was driven by politics rather than openness.

The belief that openness and colonial policy increased inequality is so entrenched in Indian history that it has never been seriously tested. It is difficult to test the hypothesis directly with Gini coefficients, mainly because there is not enough detailed data to measure income distribution within peasant agriculture.

However, at least five specific implications of the paradigm can be identified and these are testable: (a) Openness helped capitalists; (b) Openness caused “de-industrialization;” (c) Peasants lost due to indebtedness in peasant property zones (known as ryotwari); (d) Peasants lost due to tenurial insecurity in landlord property zones (known as zamindari); and (e) An “extractive” state helped itself to tax-payer’s money.

Individually, these five propositions do not stand up to evidence very well, unless drastically qualified. For example, trade openness clearly helped rich peasants in Punjab or deltaic South India; handicrafts survived foreign competition on a large scale; moneylender power in ryotwari zone was regulated by the state so much that the professional bankers practically disappeared from agricultural lending; in zamindari areas, substantial tenants did not suffer tenurial insecurity nor a loss of political power; and the direct beneficiaries of overpayments by the state formed too small a set to matter to overall inequality measures (see Roy 2012 for discussion on these hypotheses). Despite these reasons to be sceptical of the paradigm, a coherent alternative does not exist.

What would alternatives to the orthodox story look like? Insofar as these are likely to stress market forces more than political power, the alternatives would be variants of a Kuznets process. There are two alternatives, in one, openness

favoured agriculture more than industry; and in the second one, openness favoured capital more than labour. Williamson (2013) argues that the nineteenth century trade boom was driven by a large fall in the prices of manufactured goods produced in Western Europe, and a rise in the demand for primary commodities available in the tropics. So large was the rise in demand and so large the technological leap that they jointly led to a long-term increase in the terms of trade, or the price of tropical exports as a ratio of the price of its imports. W. Arthur Lewis among others considered that the rise in the terms of trade was one of the drivers of tropical development. Williamson agrees, but adds to the picture the negative de-industrializing effects of relative price changes. The hypothesis predicts a relative fall in industrial incomes and a rise in agricultural incomes, with corresponding effects on domestic inequality.

Against the prediction, we have the fact that India, in fact, industrialized. The largest cotton textile and steel industries of the tropics emerged in India. There is no puzzle here. If economic historians read more business history, they would observe that agricultural exports created the purchasing-power to buy foreign machines. Specialization in primary products export, therefore, was not a tragedy, nor a constraint upon industrialization, but an enabling condition for late industrialization. That was the Indian story. In fact, the paper shows that agricultural incomes were depressed and non-agricultural incomes rising in the period in question.

In the second alternative, openness should favour relatively more business enterprise connected with trade, and all other activities that trade enabled or needed, such as insurance, legal services, transport, manufacturing, and higher and technical education. It did not necessarily favour peasants, even when agricultural trade was growing. The returns to landholding did not respond as much as the return to trade, for land yield was relatively small in India, and unchanging in the long run. Foreign demand for agricultural commodities induced expansion in cultivation, but not a substantial yield growth. Capital, on the other hand, was relatively expensive in India despite the growth of corporate

banks, and capital-intensive businesses generated higher return than cultivation. We should then expect increasing inequality between merchants-bankers-industrialists on the one hand, and peasants-landlords-agricultural-labourers on the other. Does it also mean the rich became richer? The answer depends on what happened to the colonial administrative-military elite. The rest of the paper will develop elements of this second alternative.

2. Atkinson

I first look at the dataset compiled by the statistician F.J. Atkinson for 1875 and 1895 (Atkinson 1902). Atkinson did not measure inequality, but national income, and followed a standard method, multiplying working population from the censuses by estimates of earning from other sources. The exercise covered about 90 per cent of the work-force. The raw data had many occupational classes, I consolidate these into a few, and derive income-shares.

One needs caution when using the source. Atkinson, like other contributors to the national income literature, needed to combine a variety of sources produced by different agencies and none explicitly produced for national income estimation. For example, he used agricultural production statistics to estimate agricultural income, the government publication *Prices and Wages Statistics of India* as benchmark to estimate wages of several skilled and unskilled manual labourers, average salary figures to estimate incomes earned in government service, and tax returns to estimate incomes earned by skilled professionals. The use of tax returns for some incomes vastly overestimates those incomes. But the problem applies to a small section of the work-force. A more serious problem with the dataset is that peasant incomes cannot be disaggregated by land-holding size. Consequently, all such data make it impossible to capture inequality within agriculture.

Table 1, which reworks Atkinson's figures into broad classes, suggests three conclusions. First, there was no significant change in the income-shares of

manual-labour-based occupations like agriculture, labour, handicrafts. Second, there was a rise in the earnings of the middle classes, including capitalists and skilled professionals (Atkinson did not calculate undistributed business profits). And third, the power of the state to reward its officers was considerable, but the share of state officers was too small to contribute to increase in aggregate inequality. On this evidence, the robustness of the five testable propositions set out before can be questioned, and four out of the five would appear to be either overstatements or wrong (Table 2).

These conclusions rest on twenty years' data. Can we do better? We do have data on the bottom-end and the top-end of the distribution, covering a longer time-span.

3. The bottom-end

O'Rourke and Williamson (1999) use a short-hand indicator of inequality, the ratio between the real wage rate and average income. Since agricultural workers were the poorest class in the society, the ratio measures whether the poor became poorer, relatively speaking. If we use the agricultural wage rate, the trend in the ratio for as long as we can measure it seems to move up and down, but not decisively downward (Figure 1). The trend will influence inequality depending on the proportion of population working as labourers. Observe that in Table 1, that proportion fell. In the early twentieth century, that proportion may have increased somewhat.

Now, this ratio measures relative poverty, what happened to absolute poverty? In 1875, a family of four would have needed Rs. 100 a year to purchase the consumption basket required to be above the official poverty line defined in 1973.¹ The average income of a rural labour family was between one-third and

¹ The Indian Rupee was approximately 12 to a pound Sterling in 1875. It depreciated in the 1890s, recovered to about 15 in the early-1920s, and then appreciated and held steady at 13.3 between 1927 and 1947.

one-half the norm (assuming 180-260 days of work per year, and one earner per family). The distance between average income and the poverty line did not change significantly in colonial India, or the poorest did not become poorer, but more people joined their ranks.

To what extent had relative wages and wage-share owed to de-industrialization, or the crowding in of unemployed artisans? The prediction that there was such crowding in does not stand to scrutiny. For, artisan wages and agricultural wages did not converge. The wage-gap between the two types of workers widened (Table 3). Neither did artisans become labourers on an extensive scale, nor did the labourers escape low and stagnant wages by becoming artisans or something else. Direct evidence of people moving from industry to agriculture is indeed rare. Few highly skilled craftsmen started cultivating land on a noticeable scale. The Table also shows that the wage trend of skilled artisans and manufacturing workers moved similarly. The problem of wage-earners was *a problem of agriculture*, not one of handicrafts nor one of the proletariat as such.

The proximate cause of entrenched rural poverty was agricultural productivity. In 1927, the Royal Commission on Agriculture in India confirmed what then was a prevailing view among scientists and economists, that land yields had remained stagnant through the expansion in cultivation, and that Indian yields were significantly smaller than yields of similar crops in East Asia, North Africa, Europe and North America. The Commission did not conduct a serious statistical survey of the question. In the 1960s when agricultural production and yield data were reconstructed by George Blyn, confirmation of diminishing returns was found from major crops grown in much of India, especially in Eastern India, where population density was the highest. Moni Mukherjee's calculation of total factor productivity growth for 1900-46 confirmed further the small contribution of yield to agricultural income growth in the early-twentieth century (Mukherjee 1973). Not surprisingly, wages were low and responded weakly to agricultural expansion; even though there is considerable evidence of migration and mobility

of workers between agricultural regions and between conventional cultivation and plantations.

Because there were these movements, the agricultural labour market was not subject to complete inertia. Many pre-war wages were set by custom and not by negotiation, and therefore responded poorly to the rise in food prices in the last quarter of the nineteenth century. The force of tradition, however, weakened in the interwar period. Agricultural wages became more flexible than before. Rural labourers who worked under conventional farm-servant arrangements fell in numbers, and migration to new land frontiers increased. If agricultural wages were still broadly stable, the stability owed to limited gains in the productivity of land (see Roy 2016 for a fuller account of changes in the rural labour market).

4. The top end

A somewhat similar indirect measure (similar to that shown in Figure 1) looks at the other end of the class structure, at the topmost income earners, who paid income taxes. That set formed a tiny part of the society. Their income share fell, if not steadily, between 1885 and 1925, and rose during the late-interwar years when average income growth slowed (Alvaredo, Bergeron, Cassan 2017; Chancel and Piketty 2018).

Who were these top earners? What, if anything, do these trends tell us about colonial power to reward itself? As Atkinson's data shows, in 1875, the top earners were mainly European officers of the army and the administration. In 1940, the top earners were mainly capitalists (bankers, traders, industrialists). Thus the 1875-1940 trend suggests a fall in the income share of officers and rise in the share of capitalists – fall in European share and rise in the Indian share. In short, the trend reflects the reduced power of colonialism to reward itself.

That is not to deny that the power was considerable throughout. Army and civil administration officers numbered 6400 in 1872, and European soldiers 64,000.

The numbers are not large in an adult male workforce of 6.2 million (1872). But these people received extraordinarily high salaries. The salary of the highest ranking civil or military officer was 200 times the per capita income, and about ten times the average salary of administrative office workers in 1872. Foreign soldiers were paid three times the salary of Indian soldiers on average. The combined salary of the Europeans in public administration and the military formed 1.3 per cent of the income of all adult male workers in 1872, and 1.5 per cent in 1895. The proportions were not small, and the salary (rank) differentiation outraged Indian publicists.

It is not altogether clear where these high salaries came from and whether these unambiguously meant the exercise of colonial power. The salary differential reported above was not very different from that in the pre-British regimes. Divekar (1989) suggests an inherited ratio of about 400:1 in the newly acquired Maratha territories c. 1820. If we exclude the European army chief in the Maratha territories, the differential falls to about 300:1. In short, the perception that the Europeans in the top administration represented a distinct skill set was shared between the British and the Indian ruling classes. Rather than representing an extractive state that rewarded its officers above the real value of their services, perceptions on the value was less controversial, high salaries reflected the opportunity cost of the individuals joining these positions in India.

There is surprisingly little presence of zamindars or rentier landlords in these accounts. Given their numbers and income-shares, they would not matter to any all-India trend of inequality and hardly ever show up in either earning data or occupational data. The “middle classes” – merchants, bankers, professionals, and industrialists – were a different story.

5. The middle

Atkinson suggests that the middle classes saw a rise in income share, a combination of a stable population-share and a large rise in average real

earning, between 1875 and 1895. Who were these rising classes, then, and why did they see rising income? The four charts presented together below (Figures 2-5) help us answer that question. The common message is that in colonial India industry and services grew much faster than agriculture, and that there was significant technological and institutional modernization in industry and services. Capitalists and professionals tied to the commercial economy gained. Access to overseas trade was an escape route from land-dependence. Based on this evidence, it is necessary to distinguish between land-dependent and capital-dependent occupations. Inequality increased between land-based and land-dependent occupations and urban industry and services. The benchmark of most market-based earnings was agricultural yield, which was small and unchanging: peasants, artisans, labourer did not see significant change. Trade-dependent occupations provided an escape route, for those who could join these. Most labourers and peasants could not.

There were three main sources of productivity gain. One of these was the handicraft industry in general, and handloom weaving of cloth especially. Between 1900 and 1930, the volume of handloom cloth production about doubled, even as the number of looms did not change. A substantial section of the handloom weaving industry in these years adapted successfully to serving urban consumers, especially, middle-class women consumers.

The second source was the factory industry. Productivity per worker in factories was about four times that of a worker in the handicraft industries in 1900, though the gap narrowed to two-and-a-half times towards the end of the period. A rise in the proportion of factory in industrial employment, therefore, added to productivity gain on average. Employment in factories in British India increased from less than one per cent of industrial employment in 1860 to 11 per cent in 1938.

A third source of productivity gain was modern transportation, especially railways. As John Hurd has shown, the railways reduced the average cost of

carriage of goods by over 90 per cent compared with the pre-railway and alternative modes of transportation used in long-distance overland trade, such as bullock caravans, carts, and boats. The cargo carried by the railways increased from about 3 million tons to 120 million between 1871 and 1929. While improving the productivity of trade, the railways also improved its own productivity. Between 1865 and 1930, employment in India's railway system, then one of the largest in the world, increased from 34,000 to 790,000 (Hurd 1983). In other words, cargo carried per person employed increased from 88 to 151 tons. It is not surprising then that the group I have called the middle class, experienced a rise in productivity and income.

What about the peasants?

6. The peasants

Peasants came in two general types, land-owners, and tenants of landowners. The default story is that both types were exploited by the capitalists, moneylenders in the former case, and landlord or zamindars in the latter case. But the peasants also owned a capital, land, which surely increased in value; and not all tenants were insecure. What, then, was the correct picture? Did they get worse off? Were they worse off because of exploitation? I answer the first question with a conditional positive, and the second question with a negative.

It may seem rash to generalize on aggregate inequality without more information on peasant incomes. The pieces of information that we now have suggest a surprising similarity in peasant standards of living across regions. In the interwar period, a set of cost of cultivation surveys were carried out, which suggest an income per acre, which can be converted into average family income if we know average land-holding. The method yields low income levels. It is possible that either non-farm incomes of farm households were underestimated, or intensity of land-use was. We can cross-check by using expenditure or income

derived from a separate set of family budget surveys. The latter raise the numbers, but not by much.

These figures come from central and northern Bihar, located in the highly fertile but densely populated Indo-Gangetic Basin, semi-arid Madras Presidency, and from the Canal Colonies of the Punjab, often held up by the administrators as an example of the beneficial effects of colonial agricultural policy. In the semi-arid areas, the average land-holding was larger than in the Basin, but fertility of soil was smaller and the prospect of raising highly profitable commercial crops more limited. (The rest of this section draws on Chowdhary 1935-6; Sahay 1936-7; Slater 1918; Thomas and Ramakrishnan, eds. 1940; Narain 1929).

In 1938, cost of cultivation of one acre of rice land near Gaya in central Bihar was Rs. 14.4; rent was Rs. 13.2; sale of crops yielded Rs. 54. The rate of return was 100 per cent on working capital outlay, and on sales 47 per cent. Near Muzaffarpur in North Bihar, cost of cultivation of an acre of rice land was Rs. 32.25; rent Rs. 13.5; and yield Rs. 72. Rate of return on working capital was 57 per cent, and on sales 36 per cent. The average holding per family in the survey village near Muzaffarpur was 0.55 acres. This gives us only Rs. 14.4 annual net income per family, less than what a labourer would earn. However, if the family owned the land, had to buy only material cost (seeds) and could supply all labour from within the family, it could earn Rs. 39.75 as annual agricultural income. A standard rule of thumb used in sources on rural household surveys was to assume that direct cultivation supplied a little less than half of family income. On that assumption, a peasant family on average would earn Rs. 80. This was only slightly above the income that agricultural labourers earned on average, and less than the per capita income of India.

Did agriculture pay better in South India? Cost of cultivation in a 10-acre South Indian farm producing paddy and cotton among other crops was Rs. 7.7 per acre. Yield from cultivation was Rs. 15.6, land revenue was Rs. 1.29, leaving Rs. 6.51 as net income, amounting to a return of about 28 per cent on capital outlay and

43 per cent on sale of product. In another large (30 acre) paddy farm, cost of cultivation was Rs. 10.74 per acre, Rs. 22.02 sale of crops, and net income was Rs. 11.28. Return on cost was 105 per cent, and on sale 51 per cent. In most of the villages surveyed in the source, the average land-holding per family was less than one acre, not very different from Bihar. For a one-acre family, the net annual income from land in South India came to Rs. 6.5-11.3.² This was about half the amount earned in Bihar for a similar-sized farm. South Indian peasants in some regions earned a substantial additional income from tree crops. But it would still leave the peasant small-holding family with an income of about Rs. 20 per year from land alone. If the family supplied all labour from within the family, the income would rise to about Rs. 30. The sources cited use the rule of thumb that direct cultivation provided 30-40 per cent of family income (agriculture included tree crops). With that assumption, family income could amount to Rs. 75-100. The figure is closer to the income figures reported. The average peasant family in this scenario had direct control over a tiny plot of cultivable land; all members worked on the land, it hired out labour in the off-seasons, and possibly sent one or two members to the city from which a remittance income was also derived.

Family budget surveys yield somewhat more optimistic results. Income data report higher figures, the average being Rs. 244 in South India for a family of four, or a per capita income of Rs. 61. This is not out of line with the range of incomes reported for Bihar, from Rs. 20 for a labourer to Rs. 91 for a cultivating landlord. In South India, however, non-farm incomes appear to have been substantial, including income from handloom weaving, palmyra jaggery, arecanut and soapnut, livestock, and trade.

The economist Brij Narain (Narain 1929) estimated the earning of the Punjab peasant about 1925. He considered available estimates of peasant incomes in the

² Slater (1918) reports higher profits per acre in the same villages: Rs. 50-70 per acre in wet lands, and Rs. 10-20 in dry land. These figures implied higher rates of return as well. Cost of living index in 1917 was 114 (1938 = 100). Average land-holding size was probably larger in 1918 than in 1938.

Canal Colonies of the Punjab. The average land-holding in Punjab was higher than in Bihar, and peasant incomes reported in family budget surveys were also higher. But, as before, the cost-of-cultivation estimates of income turned out to be too low. Having found these data unsatisfactory, Brij Narain re-estimated incomes by calculating the value of provincial agricultural output in 1925-6, deducting from the figure land revenue, water rates, well irrigation charges, seed cost, and charges on account of “plough bullocks and implements”. The estimate did not consider labour cost, and therefore could only yield an average for peasants and workers taken together. The per capita income was Rs. 64 per year. Adjusted for change in cost of living between 1925 and 1938, the equivalent figure for 1938 would be Rs. 40. There were, in 1925, 9.9 million persons belonging in peasant families and 0.9 million persons in labour families in Punjab. Assuming peasant incomes were double that of the labourers on average, the per capita earning becomes Rs. 42 and Rs. 21 respectively. These numbers lie close to the range reported in Table 4, and yet, coming from the richest province in British India, they seem oddly low. Probably, Brij Narain overestimated the cost of “plough bullocks and implements”. If it was hiring cost, the income should remain within agriculture. One peasant’s charge would be another’s income. If it meant depreciation, it is not credible that depreciation would cost as much as the amount allocated to this one item. If we ignore the item, average incomes rise to Rs. 60 and Rs. 30 respectively, above the Indian average but not substantially so.

Where does the discussion leave us? If we are pessimists, the cost of cultivation data presents us with the depressing result that cultivation did not pay, and that north India and south India made no difference. Poverty was pervasive and almost equally shared; inequality among the peasantry was negligible. “People cling to land for at least it gives them subsistence wages if nothing else” (Chowdhary 1935-6).³ If we are optimists, we may say that the profits of

³ A survey of Sahibabad-Daulatpur village near Delhi in 1929 found that the cost of cultivation of 100 bighas or 33 acres of land was Rs. 3375, whereas the return was Rs. 3498, giving a return per acre of Rs. 1.23 per year. The price of 100 bighas of land at this time was Rs. 11,500. If this amount were kept in a bank deposit, it would fetch Rs. 720 per year; India (1930), p. 316.

cultivation were systematically underestimated. Still, the estimates would lie close to each other.⁴

Tables 4 and 5 combine these results. The Tables show three things. First, the income spread within agriculture was relatively small. Second, relatively speaking, peasants became better-off than labourers. And third, notwithstanding the evidence from Table 1 that the peasants' income-share was stable, in the long run, peasants became worse-off in relation to the rest of the economy. The ratio of per capita incomes went against the peasants in the long run, but their share in the work-force increased (from about 50 per cent in 1872 to 55-60 in 1951), and so did their per head income in the prewar decades. Therefore, the finding from Atkinson that peasant income-share increased in 1875-1895 seems possible.

These are all pro-intuitive results. Peasants gained in the pre-war period via extension of cultivation. When the land frontier available for extension was exhausted, in the interwar period their fortunes fell in absolute terms (see also Mukherjee 1973 on near-zero contribution of the land input to agricultural income in 1900-47). Throughout, other types of income registered faster increases.

There is an interesting corollary to the finding that regional estimates of peasant income move in such a narrow band as shown. We can treat the peasant income from any region as representative of the average. If peasant incomes moved within a narrow range, or the distribution did not change, we can also use Atkinson's data to estimate Gini coefficients. Land-holding is only one predictor of income inequality within peasant agriculture, and not a good nor a sufficient predictor, since in semi-arid areas access to water mattered more than land-holding in deciding income prospects, and much of India is semi-arid

⁴ We do not know how well subsistence and marketed components were valued in direct income estimates. In household surveys, the actual receipt was asked of the peasant. In short, the implicit price was the post-harvest price. In national income estimates, the price used to convert rural produce into income was the annual average wholesale price. The latter would be necessarily higher than the former, and necessarily overestimate income.

notwithstanding two monsoons. We do not have good data on levels of access to water. One study of land-holding inequality in South India (Kumar 1975) suggests that overall asset inequality did not change significantly in the colonial times.

Assuming income was equally distributed among the peasantry, the overall Gini coefficient implied by Atkinson's 1875 table would be 0.1-0.14, depending on assumptions about work intensity. If distribution of peasant income was relatively egalitarian but not perfectly equal, we would get closer to the range observed in the first post-independence National Sample Survey estimates of inequality in the Indian Union, 0.2-0.3, though other contemporary estimates were a little higher (Ojha and Bhatt 1964). It is unlikely that the ratio was much lower before 1875. In short, were reliable Gini coefficients available, it is very unlikely that these would show a *rise* in inequality in the long run.

7. Regional inequality

The analysis so far suggested that land-dependent occupations saw a small rise in incomes; that their incomes moved in a narrow band, and were uniformly low. Trade, manufacturing, crafts, and skilled services saw larger rise in income and productivity. They represented an escape route from the hard constraint imposed on land-dependent incomes by low productivity of land. An indirect confirmation of the hypothesis could come from regional inequality measures, the prediction being that port-based regional economies were better-off than land-based economies, so that we should expect a divergence to occur.

Historians have long acknowledged the need to study regional inequality to be able to qualify any general statement about economic transformation in India. A review of the field observes that, "social and agricultural regions both smaller and larger than provinces have increasingly seemed appropriate units to scholars" (Bayly 1985: 584). Another overview notes that "South Asia possessed a .. series of regional economies" (Washbrook 2001: 373). There are few measures

available of inequality between regions, let alone measures over time. Regional domestic product before 1950 is unavailable. The attempt to construct regional incomes is somewhat promising for the British Indian provinces (Caruana-Galizia 2013), and reports convergence between 1885 and 1911. But the units are large, and exclude the princely states, many of which did not collect data usable for the purpose.

There are, however, a few works that measure one-time inequality across regions and then try to explain it. One set of works attempts to explain *present-day* inequality with causes that appeared centuries before. One article attributes present-day inequality to colonial institutional intervention, showing that in those districts of British India where the colonial rulers had delivered property rights to non-cultivating landlords or zamindars (in 1793), rather than to the cultivating peasant, agricultural productivity was higher and investments lower in the post-independence period (Banerjee and Iyer 2005). The underlying argument is that in the landlord areas, conflicts and lack of cooperation between the elite and the peasants became more likely and made lobbying for resources in the post-independence period less successful. A similar work (correlating present-day pattern on historic causes) finds that the directly ruled colonial regions ended up worse off than the princely states in the supply of public goods (Iyer 2010). The new scholarship has spawned several attempts at extensions, and one critique of the dataset used (Kapur and Kim 2010; Chaudhary 2010; Iversen et al 2013).

The empirical methodology involves regressing present-day “outcomes” upon “causes” that were active hundreds of years before. The method has been questioned on the point that it entails overlooking processes of change occurring in the time in between. One of these processes is what the historians of landlordism call “the decline of the Bengal zamindars” (Panda 2000). Their power to extract rent and manipulate politics was severely circumscribed by the British state from the late-nineteenth century via tenancy laws. That they had

any sort of agency left in the twentieth century to influence differential development of regions rings untrue.

Arguing along these lines, another paper suggests that in the colonial period, which favoured commodity trade based in the port cities, also favoured regions (like Bengal) with more market access, that is, whose economy had been dependent on the port city and trade. However, by 1930, and especially 1950, trade had weakened and was removed as a driver of economic change, leading to a rapid decline of commerce and industry in Bengal. The fact that Bengal was also a landlord region is incidental and not central to regional differentiation (Roy 2014). The finding is consistent with the prediction of divergence, if the main driver of economic inequality was the difference between trade-dependence and land-dependence; and the paper reports some evidence to suggest that there was divergence in the late nineteenth century. But we need more robust findings on convergence or divergence in regional inequality.

Conclusion

In the most accepted view on inequality in colonial India, inequality increased between the propertied and the property-less because of capitalist exploitation and colonial institutional intervention, and between the colonists and the indigenes because of unequal political power.

The paper rejects the thesis. A core propertied group, rentier-landlords, are invisible in the evidence on income classes because they formed a tiny proportion of the population, and their fortunes were falling. Propertied classes would also include the land-owning peasants, who experienced a rise in income followed by a fall. Inequality between Europeans affiliated to the government and ordinary Indians was large but not rising. In fact, the army that employed many top-earning Europeans did not see rise in income-share. Officer corps overall was too small to matter to aggregate trends. Top income earners of the 1875 generation did not do too well. The extractive power of the state is overstated.

The paper presents a different account of inequality, which settles on the distinction between land-dependent and trade-dependent occupations. The open economy affected them differently. Low and stagnant land-productivity combined with barriers to mobility between occupations ensured that while agriculture expanded in scale, it did not deliver rising productivity and income per head. All other occupations directly or indirectly dependent on trading could escape the land-yield constraint in varying degrees. Colonial economic policies were good for business, and had a weak effect on agriculture.

To sum up, there was the emergence of a middle-class that gained from the open trading economy. There was no other pattern of much significance.

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Table 1. Income shares of some principal occupational types 1875 and 1895

	Share in income		Source of shift
	1875	1895	
Labourers ¹	18.3	14.2	Stable real wage – fall in % of workers
Artisans ²	10.0	9.4	Stable real wage - fall in % of workers
Peasants	62.2	66.0	Rise in % of workers and rise in real earning
Middle Classes ³	7.7	8.8	Stable % of workers - large rise in real earnings
Army	0.8	0.7	Stable % of workers – large rise in real earnings (of officers)
Officers	0.9	1.0	

1 Agricultural labourers, manual labourers, domestic workers, masons and helpers, servants in commercial houses, transportation workers. 2. Bakers, brewers, grocers, textile workers, textile traders, carpenters. 3. Doctors, lawyers, bankers, moneylenders, railways clerks, clerks in commercial firms, merchants, contractors.

Table 2. Propositions on inequality and how these stand up to Table 1

Proposition on inequality	Implications drawn from Table 2
Openness helped capitalists	True
Openness caused de-industrialization	Not in the late-nineteenth century
Peasants in ryotwari areas lost due to indebtedness	False
Peasants in zamindari areas lost due to tenurial insecurity	False
An extractive state helped itself to tax-payer's money	Possibly, but did not matter much

Table 3. Real wages of skilled artisans and agricultural labourers (1900=100)

	Urban artisans ^a	Agricultural labourers	Mill workers ^b
1875	114.2	136.3	
1895	108.9	128.8	
1900	100.0	100.0	100.0
1916	103.7	107.1	114.7
1920	103.2	74.1	130.1
1925	181.3	129.7	180.6
1937	157.6	107.1	237.4

Notes: a. These wages usually refer to the average daily earnings of three categories of general purpose artisans: blacksmiths, carpenters, and masons. b. Bombay cotton mill workers average monthly wage. Source: Atkinson (1902), Sivasubramonian (2010), Roy (2005), industrial wages compiled by K. Mukerji, and reported in Roy (2012).

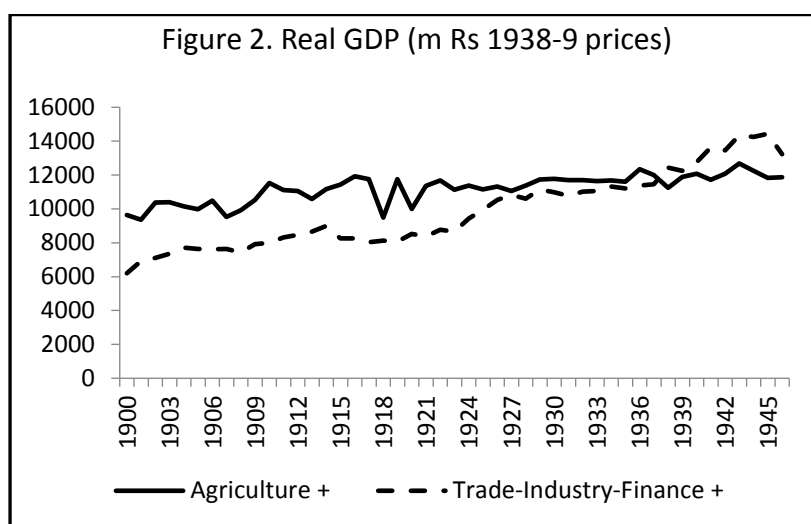
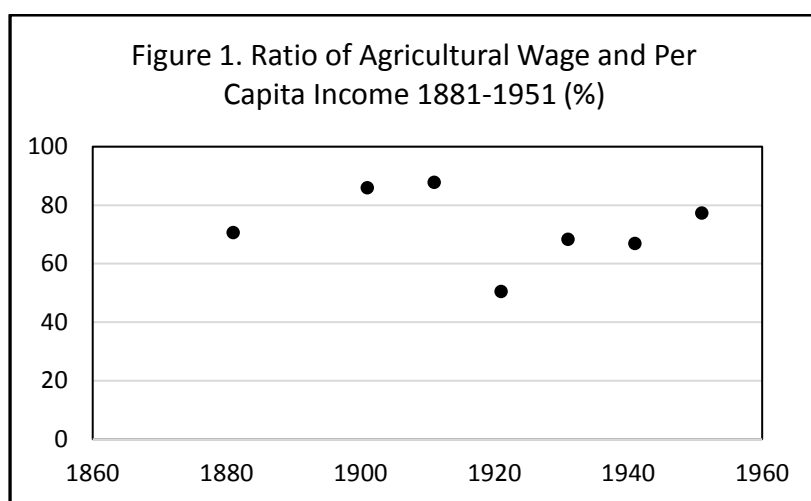
Table 4. Estimates of Rural Per Capita Income and Expenditure, 1938

	Bihar	South India	Punjab	Per capita income in agriculture: India	Per capita consumption expenditure: India
Income by cost of cultivation	20	20-25		41	69
Income by production method			45 (range 30-60)		
Income by direct reporting	55 (range 20-91)	61			
Consumption expenditure	50 (range 20-80)	45 (range 35-56)			

Sources: Sahay (1936-7). The enquiry divided the population of the village into three classes, which corresponded to substantial cultivators and government employees, small peasants, and labourers. The first group earned an average income more than four times that of the labourers. The labourers' per capita annual income, Rs. 20, was close to other contemporary estimates from Bihar. The first and the second classes earned Rs. 91 and Rs. 29 per head respectively. Since the second and the third groups are so closely situated in income, comparison between the first and the third groups makes more sense. Thomas and Ramakrishnan, eds. (1940) surveyed five village clusters. I take three of these, which had similar levels of average income. Also Desai (1948), and Sivasubramonian (2000).

Table 5. Relative situation of peasants

	1875	1921	1938
Ratio of the per capita incomes of peasants and agricultural labourers	2-3:1	3-4:1	4-5:1 (South India)
Ratio of peasant income to per capita income	4.0	1.9	1.4
Real income of peasants, per capita (1875 = 100)	100	198	122



Sources: In Figures 2-5, all income and employment data come from Sivasubramonian (2000); and trade data from *Statistical Abstracts*, various years.

