

---

# UNIT 34 THE DE-INDUSTRIALIZATION DEBATE

---

## Structure

- 34.1 Introduction
- 34.2 Early Nationalist Views and Their Critics
- 34.3 The 1968 Debate on De-industrialization
- 34.4 De-industrialization in Gangetic Bihar
- 34.5 Regional Variations in the Process of De-industrialization
  - 34.5.1 De-industrialization in South India
  - 34.5.2 De-industrialization in Western and Central India
- 34.6 De-industrialization and the Impact on Employment
- 34.7 Recent Writings on De-industrialization
- 34.8 Case Studies
  - 34.8.1 The Case of Brassware
  - 34.8.2 Leather and Leatherwork
- 34.9 Summary
- 34.10 Glossary
- 34.11 Exercises
- 34.12 Suggested Readings

---

## 34.1 INTRODUCTION

---

One of the key issues taken up by the nineteenth century nationalist intelligentsia was the question of de-industrialization of India in the colonial period. The British cotton textile industry was blamed for the flood of British goods into India, which led to the decline of traditional artisanal production and the decline in the earnings and employment of spinners and weavers, specially the former. Nationalist leaders from Dadabhai Naoroji to Tilak to Mahatma Gandhi have emphasised the destructive consequences of the inflow of British manufactured goods into the country. According to the nationalists India was subordinated to the needs of the British economy, transformed into an importer of manufactured products and an exporter of agricultural commodities. While Britain was experiencing an Industrial Revolution India was reduced to an agricultural adjunct of the British economy. This decline in artisanal production was not compensated for by the growth of manufacturing in the modern sense. The miserable conditions of the weavers, the greater dependence on agriculture and decline in living standards of the general population, and the greater incidence of famines in India in the 19th century were attributed to the inflow of British manufactured goods into the country specially after 1813 when the charter of the East India Company was amended. With the development of the railways in India in the second half of the 19th century the process of the destruction of artisanal production was speeded up because of the availability of cheap transportation for bulk goods. If India had been an independent country it would have made an effort to protect its traditional industry but this was not feasible under colonial rule. The British colonial rulers followed a policy of free trade, which enabled the products of the Lancashire cotton industry to enter the Indian market without the payment of customs duties. The cumulative effect of these policies was to destroy traditional industry and to restrict the opportunities for the growth of modern large-scale industry in India.

---

## 34.2 EARLY NATIONALIST VIEWS AND THEIR CRITICS

---

K.S.Shelvankar in *The Problem of India* (London 1940) and R.P. Dutt in *India Today* (Bombay, 1947) called the half century after 1875 the period of de-industrialization and peasantization. So did Colin Clark in *Conditions of Economic Progress*. Although the classic nationalist account of the impact of colonial rule in India by R.C.Dutt, *The Economic History of India in the Victorian Age, 1837-1900* (London, 1906), appeared very early in the twentieth century it dealt with the adverse consequences of British manufactured goods for India's hand manufactures. However, authors like L.C. A. Knowles and Vera Anstey contested the nationalist argument even in the colonial period itself. A substantial critique of the nationalist argument came from an analysis of the data on occupations from the decennial Censuses from 1881 to 1931. Later, in the 1950s, Daniel and Alice Thorner argued that a case for the decline of employment in the secondary sector during the period covered by the census data was not tenable. Essentially Thorner's argument was that there was not much change in the proportion of the population that was engaged in industrial occupations at least in the period covered by the census data, from 1881 to 1931. The case for de-industrialization in India arose from an erroneous reading of the evidence contained in the Census data. In an agricultural economy the classification of occupations is not an easy task because of the absence of clear-cut separation of work within the household. Besides the basis of classifying the population into different occupations itself changed from the early to the late Census reports.

The major source of the problem was the over-estimation of the number and proportion of the population engaged in industrial occupations in the Census of 1881 on the basis of a misreading of the categories used in that report. Thorner argued that it would be more appropriate to consider the Census categories of 'Manufacture and Trade' in one band, of 'Agriculture and General Labour' in another band, and to separate the data for male and female workers. The proportion of males in 'Manufacture -cum-Trade' to the total of all working males fell from 18% to 15% between 1881 and 1931. If the detailed data for all Provinces and four States is used to estimate the percentage for 1881 it is 16%. This reduces the extent of decline from 3% to just 1% over the 1881-1931 period. The proportion of males in 'Agriculture-cum-General Labour' changed by barely two percent between 1881 and 1931. The proportion was 74% in 1881 and 1901, 75% in 1911 and 76% in 1921 and 1931. In Thorner's view the whole case for de-industrialization rested on the "relatively dubious figures for the females but, above all, on acceptance of the meretricious 1881 data." [Thorner, "De-industrialization" in India: 1881-1931," in Daniel and Alice Thorner, *Land and Labour in India*, Bombay, 1974, p. 77. For details see Tables 1-4.] Excluding the 1881 data therefore Thorner estimated that the proportion of women in 'Manufacture-cum Trade' declined from 17% in 1901 to 14% in 1931. During the same time period the proportion of women in 'Agriculture-cum General Labour' rose from 77% to 78%. Therefore he concludes that de-industrialization on any significant scale could only have happened in the period between 1815 and 1880. However, Thorner was intrigued by the fact that the industrial structure of the economy remained "practically stationary during a half century when India's population rose by nearly one hundred million."

**Table 1**  
**Working force distribution by industry, 1881-1931: INDIA,**  
**including Burma and Pakistan**

Male Workers [Absolute numbers]	1881 [All India] Four States]	1881 [All Provinces and Four States]	1901	1911	1921	1931
Working Force	80,675	71,330	93,607	97,333	95,734	100,179
Agriculture, Forestry and Fishing	52,029	46,944	64,148	70,244	69,646	72,197
General Labour	7,248	5,663	5,397	2,689	2,894	3,753
Manufacture, Mining and Construction	12,959	7,686	9,924	9,589	8,926	9,111
Trade	1,870	3,813	5,044	5,430	5,505	5,659
Transport and Other Services	6,569	7,224	9,094	9,383	8,763	9,459

**Source: Daniel Thorner, ‘“De-industrialization” in India: 1881-1931,’ in *Land and Labour in India* based on the *Census of India Reports* from 1881 to 1931, pp. 78-79**

**Table 2**  
**Working force distribution by industry, 1881-1931: INDIA,**  
**including Burma and Pakistan**

Male Workers [in percentages.]	1881 [All India]	1881 [All Provinces and Four States]	1901	1911	1921	1931
Working Force	100	100	100	100	100	100
Agriculture, Forestry and Fishing	65	66	68	72	73	72
General Labour	9	8	6	3	3	4
Manufacture, Mining and Construction	16	11	11	10	9	9
Trade	2	5	5	5	6	6
Transport and Other Services	8	10	10	10	9	9

**Source: Daniel Thorner, ‘“De-industrialization” in India: 1881-1931,’ in *Land and Labour in India* based on the *Census of India Reports* from 1881 to 1931, pp. 78-79**

**Table 3**  
**Working force distribution by industry, 1881-1931: INDIA,**  
**including Burma and Pakistan**

Female Workers [Absolute numbers]	1881 [All India]	1881 [All Provinces and Four States]	1901	1911	1921	1931
Working Force	34,446	n.a	41,913	45,683	43,844	40,020
Agriculture, Forestry and Fishing	19,642	n.a	28,442	33,357	32,570	28,027
General Labour	5,244	n.a	3,841	1,991	2,257	3,123
Manufacture, Mining and Construction	8,183	n.a	5,187	5,056	4,219	3,757
Trade	411	n.a	2,121	2,626	2,445	2,093
Transport and Other Services	967	n.a	2,321	2,654	2,353	3,020

**Source: Daniel Thorner, ‘“De-industrialization” in India: 1881-1931,’ in *Land and Labour in India* based on the *Census of India Reports* from 1881 to 1931, pp. 80-81**

**Table 4**  
**Working force distribution by industry, 1881-1931: INDIA,**  
**including Burma and Pakistan**

Female Workers [in percentages.]	1881 [All India]	1881 [All Provinces and Four States]	1901	1911	1921	1931
Working Force	100	n.a	100	100	100	100
Agriculture, Forestry and Fishing	57	n.a	68	73	74	70
General Labour	15	n.a	9	4	5	8
Manufacture, Mining and Construction	24	n.a	12	11	10	9
Trade	1	n.a	5	6	6	5
Transport & Other Services	3	n.a	6	6	5	8

Source: Daniel Thorner, ‘“De-industrialization” in India: 1881-1931,’ in *Land and Labour in India* based on the *Census of India Reports* from 1881 to 1931, p. 80.

### **34.3 THE 1968 DEBATE ON DE-INDUSTRIALIZATION**

In an essay criticizing the lack of theoretical rigour in the writings of the nationalists Morris David Morris argued that the case for the decline of the traditional industries of India rested on the evidence for the rising imports of British manufactured goods into the country. According to Morris there was not much direct evidence of the decline of India’s traditional industries and the nationalists had ignored the possibility of a rightward shift in the demand curve for cloth in India. If we assume that there was an expansion in the domestic market for textiles in India because of the increase in the population of the country and the increase in the purchasing power of the people based on an increase in the per capita income then despite an increase in imports of manufactured goods into the country there would be little or no decline in traditional artisanal production. The argument was that by ignoring the expansion in the size of the market for textiles in India the nationalists had exaggerated the negative consequences of the increase in British exports to India.

This article by Morris produced a strong response from scholars like Bipan Chandra, Tapan Raychaudhury and Toru Matsui in *The Indian Economic and Social History Review (IESHR)* of 1968. First of all these authors argued Morris had ignored a large body of evidence about the decline in traditional handicrafts and the economic position of the weavers which was easily available and scattered in a wide variety of sources ranging from government and famine reports to eye-witness accounts. The increase in the imports, which entered the Indian market, was so dramatic that the decline of artisanal production was inevitable. Secondly they argued that the domestic market could well have grown a little because of an increase in the population, but there was very little evidence to suggest that there was an increase in the per capita income of the country during the 19th century. In fact all the evidence pointed towards either a decline in the per capita income or stagnation. The technological changes in the cotton textile industry of Britain over the course of the 19th century led to a steady lowering of the cost of production, which enabled Lancashire products to flood the country. Although Morris had argued that the reduction in the price of imported yarn into India would have helped the weavers to produce better cloth at lower cost this was not of great help to the Indian weavers.

In his rejoinder Bipan Chandra argued that the ratio of yarn imports to those of woven goods was very low. Between the years 1849 and 1889 the import of cloth increased by 25.5 millions sterling, which was a twelve and a half times increase while that of yarn increased by only 1.8 millions sterling, which was a four times increase. Besides the productivity of the British weaver was rising while that of the Indian weaver remained stationary. Furthermore, the export price of woven cotton goods from Britain was falling far more rapidly than that of yarn. The average export price per pound of yarn fell from 29 pence in 1819-21 to 15.3 pence in 1829-31 to 12 pence in 1844-46 to 11.7 pence in 1859-61 to 12.8 pence in 1880-82. During the corresponding period the average export price per pound of cloth fell from 70.3 pence to 40.6 pence to 22.5 pence to 20.5 pence to 19.4 pence. [Figures from Tables in Bipan Chandra, 'Re-interpretation of Nineteenth Century Indian Economic History', *IESHR*, 1968, pp 55-56.] Besides the spinners in any case suffered a decline in employment and income precisely because of the imports of the cheaper foreign yarn.

What is interesting is that though Bipan Chandra argued that the work of Thorner only showed that census data were "too unreliable to prove or disprove" the case for de-industrialization he also asserted that "the Indian weaver could hold his own to a limited extent only after 1918 as a result of technological change, i.e. mechanization." [Bipan Chandra, pp. 61 and 58.] Some of the recent work on the handloom industry develops this argument much further than the nationalists might like, but even they were willing to consider this point in 1968. Tapan Raychaudhuri is critical of Morris but he does acknowledge that the argument about the destruction of Indian handicrafts by British manufactured goods imported into India has a long history and pedigree. D.R. Gadgil in *Industrial Evolution of India in Recent Times* in 1924 first asserted that the village weaver remained largely untouched by European competition. He also referred to the complex factors that led to the decline in handicrafts. As for Raychaudhuri himself he prefers the viewpoint of Morris that there was no net decline in handicrafts. In his 1936 monograph, *Urban Handicrafts of the Bombay Deccan*, N. M. Joshi argued that there were different trajectories of the industries in the handicrafts sector, some declined, some evolved and underwent mutations while some new ones emerged using factory made tools. A standard economic textbook of the early 1950s by Jathar and Beri quoted statistics to show "the steady growth in the production of hand-woven textiles in the twentieth century." As far as Raychaudhuri is concerned the survival of handicrafts into the mid twentieth century is not in doubt. What he wanted to emphasize is the "stagnation of skills and hence of productivity in the secondary sector of production." [Tapan Raychaudhuri, "A Re-interpretation of Nineteenth Century Indian Economic History?", *IESHR*, pp. 93-94.] The main argument is that the potentialities for growth available to countries coming to industrialization late were frustrated because of the constraints produced by colonial rule.

#### **34.4 DE-INDUSTRIALIZATION IN GANGETIC BIHAR**

The evidence from the Census did not support an argument about de-industrialization but by comparing the evidence provided in the Buchanan-Hamilton survey between 1809-13 and the Census of 1901 A. K. Bagchi was able to conclude that the percentage of the population in Bihar dependent on secondary industries declined from 18.6% to 8.5%. [See Tables 5 and 6.] This evidence about the decline of artisanal production in Gangetic Bihar in the 19th century was a modern nationalist restatement of the de-industrialization of the country during colonial rule. The argument did not depend on the use of the census data in the manner that Thorner had debunked. However, Vicziany challenged this position of

Bagchi on several grounds. It was argued that Montgomery Martin had put the data collected by Buchanan together in the form of tables in 1838 and therefore there was a need to go back to the original records in the India Office Library in London. Even Buchanan’s own survey could not be very reliable since he covered more than 25,000 miles, averaging over 10 miles a day and was dependent on local informants who may have fed him wrong information because they were fearful of taxes or Company intervention.

**Table 5**  
**Industrial population in selected Bihar districts around 1809-1813**

District	Absolute Number of the population dependent on industry		Percentages of the industrial to total population	
	Assumption (a)	Assumption (b)	Assumption (a)	Assumption (b)
Patna-Gaya	985,947	655,551	29.3	19.5
Bhagalpur	454,965	286,080	22.5	14.2
Purniya	874,860	587,860	30.1	20.2
Shahabad	446,775	287,285	31.5	20.2
Total	2,762,457	1,806,776	28.5	18.6

**Source:** Bagchi, ‘De-industrialization in Gangetic Bihar,’ in *Essays in Honour of S.C. Sarkar, 1976. Table 3, pp. 509.* Assumption (a) is that every spinner supports one person besides himself/ herself and assumption (b) is that every spinner only supports himself/ herself.

**Table 6**  
**Population dependent on industry in 1901 in selected Bihar districts**

District	Total Population	Industrial Population		Percentage of Industrial to total Population	
		Unadjusted	Adjusted	Unadjusted	Adjusted
Patna	1,624,985	279,093	179,695	17.1	11.1
Gaya	2,059,933	287,732	187,016	14.0	9.1
Shahabad	1,962,696	346,400	228,051	17.7	11.6
Monghyr	2,068,804	281,325	155,439	13.6	7.5
Bhagalpur	2,088,953	222,796	115,618	10.7	5.5
Purnea	1,874,794	220,506	121,933	11.8	6.5
Total	11,680,165	1,638,662	987,752	14.3	8.5

**Source:** Bagchi, ‘De-industrialization in Gangetic Bihar,’ in *Essays in Honour of S.C. Sarkar, 1976. Table 4, pp. 512.* Unadjusted figures are raw census figures. The adjusted figures are calculations by the author.

The principal objection was that Bagchi had over-estimated the number of people engaged in industrial employment in the early 19th century and therefore he was able to make a convincing case for de-industrialization in Gangetic Bihar. Vicziany contended that Buchanan’s estimate of the spinners was weak and many of the people classified as spinners could not have supported themselves on the basis of spinning. As is very evident some of the objections against Bagchi’s use of data are a matter of interpretation. According to Bagchi the spinners in the early 19th century earned enough to support themselves. Besides in his view it was sufficient to demonstrate that spinning was the principal means of livelihood for such groups of people, not that it supported them fully. On the other hand the view of Vicziany was that spinners earned meagre sums and that

it would be more appropriate to characterize such groups as part-time spinners. For Bagchi the fact that households were engaged in a multiplicity of economic activities was evidence of prior de-industrialization.

As Sumit Guha has pointed out the calculation of employment in the traditional artisanal sector will depend on the estimates of labour requirements of handspinning to a considerable extent. Bagchi has estimated secondary sector employment on the basis of a ratio of 20 spinners to one weaver in Gangetic Bihar in 1809-13. For his part Twomey follows Om Prakash in assuming that 2.5 spinners are required to supply one weaver with yarn. If Twomey had used Bagchi's ratio then he would have estimated the decline in employment during the period 1850 and 1880 at 23 million instead of 3.55 million FTJE (Full Time Job Equivalent). The term FTJE refers to the work done by a number of part-time spinners and weavers that would be equal to the work done by a spinner or weaver if he had been employed fulltime. If Bagchi had used Twomey's ratio in his revised calculation then the secondary sector employment would be a modest 12.9% of the population instead of 21% in 1809-13. The decline in employment from 12.9% to 10.5% in 1901 would not be a very significant decline. Sumit Guha for his part has estimated that it would require the output of six spinning FTJE to meet the needs of yarn for one weaving FTJE. As a consequence of this revised ratio of spinners to weavers the loss in employment in the handicraft sector should be estimated at about 7.7 million FTJE. Although Guha revises the estimates given by Twomey upwards he also argues that the ratios of 20 to 1 or even 15 to 1 assumed by Bagchi are very high and unrealistic.

Although Krishnamurthy broadly agrees that there was decline in the number of people engaged in industrial activities in the 19th century he has drawn attention to the specific aspects of this process. In a 1985 *IESHR* article he argued that Bagchi estimated the number of people engaged in artisan activity in 1809-13, other than in spinning, by multiplying the number of people reported as 'artisans' by an assumed family size. This procedure overstates the dependence on industry in the case of the artisan families. However, this procedure does not take into account the industrial activity of other artisan families of Gangetic Bihar. For most women spinning does not appear to have been a major source of livelihood. It would be closer to the truth to classify women workers in the data for 1809-13 as workers engaged in rice processing than in spinning. On the whole, however, there was a significant decline in the major industries like cotton and silk. By and large there was a shift towards producing coarse cloth, which required coarse handspun yarn. Patna, Gaya and Shahabad became important centres of coarse cloth, like *motia* or *gazi*, which was even sold in the North-West Provinces. Maldehi – a fabric produced by mixing cotton and silk was extensively produced in Bihar, as was *tusar* silk. Some of the minor industries were not badly affected. The carpet industry did reasonably well and the *Karga darris* of Patna flourished. The leather industry did suffer a decline because of the increase in the use of foreign-manufactured shoes but the use of Indian leather for making water buckets, bellows, oil and molasses jars survived. The position of the leather workers suffered a decline partly because of the export of hides and the gradual decline and disappearance of customary payments at harvest time. Common pottery too survived in the 19th century.

---

### **34.5 REGIONAL VARIATIONS IN THE PROCESS OF DE-INDUSTRIALIZATION**

---

As a result of several detailed studies of the nature of traditional industries in the colonial period the discussion of de-industrialization has become more complex and nuanced.

By now most scholars have come to accept that there was not much evidence for de-industrialization in the 20th century. In fact some authors like Tirthankar Roy have even argued for an increase in the share of handicraft and handloom production in the domestic market for textiles. However he sees a decline in employment in cotton, silk and wool weaving in the years between 1911 and 1931 based on the Census data. Employment also declined among potters and braziers and those who pounded rice and extracted oil. There was little change in the wood, metal and leather industries. [See Table 7.]

**Table 7**  
**Male workers in industry**

Industry Group	1911 (millions)	1931 (millions)
Textiles	2.685	2.531
Cotton	1.921	1.761
Silk	0.078	0.057
Wool	0.103	0.064
Metals	0.658	0.660
Brassware	0.101	0.084
Leather	0.247	0.257
Wood	1.312	1.306
Ceramics	0.768	0.728
Pottery	0.652	0.601
Food	0.806	0.706
Rice-pounding	0.128	0.103
Dress and Toilet	2.676	2.566
Building	0.752	0.528

**Source:** Tirthankar Roy, *Traditional Industry in Economy of Colonial India*, Cambridge, p. 17. Based on the *Census of India, 1911 and 1931*.

The picture for the 19th century too does not appear as dismal and stark as it looked to the nationalists of that time. Part of this can be explained in terms of the greater awareness of regional variations. The flood of British manufactured goods which entered the country in the 19th century specially effected the economy of eastern India which was the worst affected of the regions of India. The change in the fortunes of Bengal artisanal production was quite dramatic. From a region, which supplied the British East India Company with the largest quantities of its textile products for sale in the European markets during the century before the battle of Plassey (1757) it was subjected to colonial exploitation after the British acquired the Diwani of Bengal, Bihar and Orissa. This region became the worst victim of British manufactured imports into the country during the 19th century though the reversal in the fortunes of the weavers and artisans of eastern India began soon after the battle of Plassey. While some historians like Tapan Raychaudhuri and Sushil Chaudhuri regard the decline in the fortunes of Bengal as largely a post-Plassey phenomenon others have seen a greater continuity in the economy of 18th century Bengal.

It has been argued in more recent articles that the inflow of manufactured goods into the Madras Presidency was on a lesser scale than in Bengal Presidency and that textile exports from Bengal fell more substantially and more quickly than in Madras in the 19th

century. In the case of western India the inflow of manufactured imports was delayed because of the poor development of transport facilities in the region. In 1881 in Rajasthan there were barely 400 miles of railways and manufactured imports could not reach the people living in the inaccessible areas until after World War I (1914-1918). By 1931 over 2900 miles of track had been laid and the local artisans began to face competition from manufactured imports. Not only did competition from manufactured imports come late in the case of Rajasthan the principal competition it faced also came from Indian mills rather than from imported textiles. The same structure of railway rates that favoured the movement of manufactured imports from the ports into the hinterland and of raw material from the interior to the ports also helped the Indian mills based in Bombay to transport their products cheaply to Rajasthan. It also enabled Rajasthan to move its raw cotton for sale to other parts of India at a lower cost.

### 34.5.1 De-industrialization in South India

In a study of handlooms in the Madras Presidency in the 19th century. Konrad Specker has argued that the volumes of Lancashire goods, which entered Madras in the 19th century, were less than in Bengal but in both regions there were changes in the composition of foreign trade marked by a growing share of agricultural exports. There were, however, some differences in the fortunes of handlooms in the two regions. In 1845 the Madras Board of Revenue concluded on the basis of an enquiry that the number of looms as well as of weavers had increased in most areas over the preceding 25-year period. In 1871 the Board of Revenue said that the number of looms had increased since the second half of the 1850's by about 20-25%. In examining the nature of the handloom sector one has to take into consideration the "massive yearly fluctuations" in the individual districts, which were the product of short periods of crisis. The short-term crises were produced by famines and epidemics, which led to the death, migration or impoverishment of weavers. The weavers were adversely affected both by the rise in the price of the yarn they used and a fall in their purchasing power and that of their consumers. When the harvests were better and agricultural conditions improved the number of looms would quickly go up. This indicated the extent to which the traditional textile sector was dependent on the fortunes of agricultural production and the consequent expansion and contraction of the domestic market.

When the commercial settlements of the East India Company were shut down a decline in textile exports from Madras Presidency set in on a significant scale in the 1830s. With the withdrawal of the East India Company investments there was a general shift towards the production of coarse variety of cloth instead of the finer cloths produced earlier. There was a significant decline in the production of fine quality cloth and the number of looms increased precisely because more coarse cloth was being produced. The fall in the quality of English textile exports to India in the first half of the 19th century forced the traditional textile sector to produce greater quantities of coarse quality cloth than they might otherwise have done. In the northern districts of the Coromandel Coast, where Company demand earlier had stimulated the production of fine cloth, the closure of their establishments led to the stagnation or decline of looms. In the southern districts looms either stagnated or increased. Increased production of coarse varieties of cloth led to the relocation of the textile industry towards the southern part of the Presidency. By shifting into the coarser varieties of cloth and by producing items suited to local tastes and demand the traditional sector was able to withstand competition. The Madras Board of Revenue, which had estimated that there were 280,000 looms in 1870-71, concluded that there were 300,000 looms in the Presidency in 1889. [See Table 8]

**Table 8**  
**Number of looms in the Madras presidency, 1856/57-1860/61 and 1869/70**

District	1856/57- 1860/61		[Average] of looms	Number 1869-70		Difference	
	Urban	Rural	Total	Urban	Rural	Total	-(Minus) + (Plus)
Ganjam	757	3,735	4,492	1,227	6,080	7,307	2,815
Vizagapatnam				234	33,770	34,004	
Godavery	919	10,456	11,375	762	14,676	15,438	4,063
Kistna	4,081	10,640	14,721	4,321	15,319	19,640	4,919
Nellore	762	12,327	13,089	836	13,893	14,729	1,640
Cuddapha	258	19,173	19,431	256	18,450	18,706	725
Bellary	4,975	12,099	17,074	9,077	14,216	23,293	6,219
Kurnool	446	7,536	7,982	759	13,706	14,465	6,483
Chingleput	2,612	5,596	8,208	2,800	6,181	8,981	773
North Arcot	7,948	12,123	20,071	4,886	10,151	15,037	5,034
South Arcot			12,882	3,414	6,079	9,493	3,389
Tanjore	6,479	10,266	16,745	5,421	9,221	14,642	2,103
Trichonopoly	330	4,722	5,052	534	6,204	6,738	1,686
Madura				3,808	9,745	13,553	
Tinnevelly	7,460	6,579	14,039	9,463	14,586	24,049	10,010
Coimbatore	1,801	10,349	12,150	1,562	11,651	13,213	1,063
Salem	6,840	8,228	15,068	9,614	9,367	18,981	3,913
South Canara				69	1,978	2,047	
Malabar	75	4,882	4,957	162	4,742	4,904	53
Total.			204,623	59,205	220,015	279,220	

**Source: Konrad Specker, 'Madras Handlooms in the Nineteenth Century,' in Tirthankar Roy (ed), *Cloth and Commerce: Textiles in Colonial India*, Delhi, 1996, Table 6.7, p. 192.**

The income of the weavers declined with the increasing shift towards the production of coarse cloth because the raw material costs determined the final sale price more in the case of coarse rather than fine cloth. Consequently more weavers had to live off smaller money incomes. According to Specker the incomes of weavers declined since the increase in the number of weavers and looms was not accompanied by a corresponding rise in production. The prevailing low prices of grain, however, ensured that their real wages did not fall too much. The increased production for the local market exposed the producers of coarse cloth to greater risk in periods of famine. During the famine of 1877 the weavers had to pay high prices for the grain that they had to buy for consumption because they did not produce it themselves. In addition the fall in the purchasing power of the peasantry forced the weavers to sell their products at a loss, the losses often as much as 30%. The share of imports in the total yarn used in Madras Presidency was 37% in 1870 and rose to 55% in 1890. A lot of the yarn was imported from Bombay. The use of imported yarn was restricted to the areas around Madras partly because of transport costs. In the 1870's the bulk of the imported yarn was "in the lower ranks of the middle-quality range." Machine-made yarn was considered better for the middle quality range. Given raw material and labour supply conditions in India traditional yarn of the roughest kind was considered more suitable. Guledgud (24 kilometers from Badami,

Karnataka) weavers used both European and traditional yarn for their products. While the European yarn had the advantage of strength and purity the indigenous yarn was more suitable for dyeing. On the whole English yarn was preferred for the warp and Indian yarn for the weft.

Specker concludes that in quantitative terms there was no 'destruction' of the traditional textile industry. Despite local variations the number of looms tended to rise from 1820 to 1870. Despite a growing shift towards coarse cloth and problems of oversupply and 'socio-economic strain' several products were able to expand production based on their specific advantages like those produced by the weavers of Kornadu and of Guledgud. Unlike many other experts earlier who believed that the competitive position of the Indian weavers was strengthened by the use of the cheaper and superior imported yarn for Specker this was not very significant. Firstly, the cheaper machine-made imported yarn was available in significant quantities only after the shift to coarse cloth production in India had already taken place. Secondly, indigenous yarn of the coarsest and the finest qualities "proved to be more economic and/or superior in quality than imported yarn."

While Specker and C.J. Baker argued that the traditional handicraft production could not survive the competition from Lancashire imports in the 19th century and had to shift into the coarse cloth market the recent evidence for the 20th century points towards a relative increase in the share of the unorganized sector in the 1930s. One of the factors, which helped the handloom industry to expand its output, was the change in the traditional clothing habits of the people of Madras Presidency. The report of the 1942 Fact Finding Committee was that the competition between the Indian mills and the handloom weavers was most serious in the medium counts between 21s to 50s during the 1930s and 1940s. In the Tamil districts of the Madras Presidency handlooms survived competition by changing their products in four types of ways : (i) The weavers began to produce fine coloured cloths with high-count yarns or silk and less often with gold threads or *jari* for the upper end of the market. (ii) Artificial silk yarn was also used to weave coloured cloth for the less well-off consumers in India and abroad for use on ceremonial occasions. (iii) Coloured cloth was exported abroad and low count yarns were used to weave coarse cloth for the lower class consumers. (iv) In Madurai and Salem weavers survived by producing silk sarees, silk *angavastrams* or cotton ones with silk borders. Weavers engaged in the production of coarse cloth *duppattis* in the 1880s shifted by the 1930s into producing *angavastrams* of superior quality. In Tanjore, Kumbakonam (40 kilometer from Thanjavur), and Kornadu only silk weaving existed. Saurashtra Brahmins and Devanga Chettis in Tanjore worked only with pure silk. In Ramnad district, among others, the weavers shifted from producing rough cotton sarees to producing cloth from artificial silk and mercerized yarn.

The increasing use of cheaper and more attractive Japanese mercerized yarn not only displaced Indian mill-made yarn but also helped the handloom sector survive competition from Indian mills. In several districts as coarse cloth production was affected by Indian mill production the weavers shifted to the production of *kailis* or *lungis* and Madras handkerchiefs that had been manufactured on a much smaller scale earlier. Madras handkerchiefs were exported primarily to West, East and South Africa where they were used as clothing as well as curtains and cushion covers. The *lungis* were widely used in the South-East Asian countries and in Ceylon. While Indians settled in these countries had a taste for the products from Madras the *lungis* were also popular with the consumers in parts of Africa and South-East Asia. Yanagisawa has estimated that the share of the coarse varieties of cloth for the domestic market was probably less than one-third of total production in terms of value in the Tamil areas. Changes arising from transformation of clothing habits also had an effect on the evolution of the handloom industry. While the

decline in the use of turbans and *angavastrams* and the growing adoption of shirts, shorts and hosiery helped the mill-made goods to make inroads into the local markets there were other sartorial changes, which favoured the handloom industry. The growing demand for saris in north India, increasing use of blouses in south India, increasing non-Brahman demand for cloth formerly used only by the Brahmans, and the rising demand for artificial silk sarees by the poor classes were the factors which created the demand for the products of the handloom industry in Madras Presidency.

### **34.5.2 De-industrialization in Western and Central India**

The Madras Presidency may have escaped the consequences of expanding British manufactured exports to India, but not so the Central Provinces or Western India. By about 1840 for India as a whole and somewhat later for the Central Provinces British imports to India became a significant economic factor. In terms of the volume of exports in 1839 and in value in 1843 India became the principal market for British textile exports. By the end of the 19th century Indian textile imports averaged more than two billion yards a year and were valued at nearly 20 million pounds annually. India absorbed more than 40% of the total cloth exports of Britain by the end of the century. Indian mill production also began to increase significantly in the 1870's. In the light of these factors a decline in handloom production was only to be expected. Although it met the entire domestic demand for cloth at the beginning of the 19th century the handloom sector was able to retain only a quarter share of the domestic market by the end of the century. The handloom weavers of the Central Provinces were able to retain nearly 40% of the domestic market until the beginning of the 20th century and therefore were more successful than their counterparts in other regions. Harnetty argues that de-industrialization did take place in the 19th century even though it was only partial.

The downward trend in the 20th century was checked partly by the diffusion of superior technology and partly by government effort to reverse the process of decline in handloom production. On the whole the position of the weavers deteriorated over the course of the 20th century. The introduction of the fly-shuttle slowed down the decline in the handloom weavers' share in the total production and consumption of cloth but the earnings of the weavers did not rise. The Fact-Finding Committee of the Central Provinces reported that the number of looms in the province declined by 25% between 1932 and 1940. Despite the decline in the number of looms and the population supported by them the output of cloth between these two dates remained unchanged or rose somewhat. This was made possible by the increase in output per capita since by 1940 half the handloom weavers in the Province had adopted the fly-shuttle. This was a significant transformation in the technology of production because in 1919 less than 2000 fly-shuttles were in use in the whole province. The average per capita income of a weaver's family was estimated at around Rs 93 a year or about four annas a day in 1939-40. Therefore, Harnetty has argued that though the gains in productivity enabled the handloom sector to increase its output even with a decline in the number of weavers, the per capita income of the weavers remained at the levels they had been at the end of the 19th century.

There was a change in the nature of handloom production in the long run not only in terms of technology but also of location. The handloom weavers who survived were concentrated in just a few urban centres like Nagpur, Umrer, Pauni and Burhanpur. There was a change in the composition of the weaver community both in terms of their skill levels and their caste backgrounds. Weavers like Koshtis and Momins who were the groups with higher skills and caste status continued in their old occupations and normally did not accept employment in the cotton mills. Village artisans with lesser skills, engaged in coarse weaving, as a part-time occupation together with work of a menial

kind could not continue in their traditional occupation, turning to factory work or agricultural employment. *Saris* and *dhotis* were some of the traditional garments produced by the handloom weavers, but the range of their products had greatly shrunk because of changing fashions and competition. Although the use of machine-spun yarn enabled the handloom industry to survive it also increased their dependence on middlemen. A system of advancing credit to the weavers developed in the Central Provinces in the late 1860's as a result of the decline in hand spinning and the dependence of weavers on mill yarn, specially in the urban areas. This increased their dependence on middlemen both reducing their profits and subjecting them to the vagaries of the market.

Though the fly-shuttle was an important factor in the ability of the weavers to withstand competition the innovation was not readily accepted in the early stages. In his efforts to popularize the fly-shuttle Chatterton discovered that the weavers of coastal Andhra districts, the Guntur and Krishna districts, were more responsive than those of large centres like Conjeevaram, Madurai, and Salem. In part this could be attributed to the greater rigidity of the caste system in the Tamil urban centres. According to Harnetty the rigidity and prejudices produced by caste could also partly explain the slower acceptance of the fly-shuttle by the *Koshtis*, a ritually pure caste of weavers established in the trade for long in the Central Provinces. On the other hand the *Padmasalis* who were Hindu immigrants from the Muslim state of Hyderabad had fewer prejudices much like the *Momins* who were Muslim immigrants from the Ganges valley. The diffusion of the fly-shuttle and the spread of the cooperative movement in the late colonial period helped the handloom sector of the Central Province to cope with the competition from the domestic and foreign mill sector.

---

## 34.6 DE-INDUSTRIALIZATION AND THE IMPACT ON EMPLOYMENT

---

In a brief article on the subject of employment in the textile industry of India in the 19th century Michael Twomey argued that the most severe employment effects of 'de-industrialization' took place between the years 1790-1830 and the years 1850-1880, the decline in the later period being much more significant. On the basis of his calculations Twomey concludes that employment in this period declines in Bengal by 244,000 FTJE and for the rest of the country by 56,000 FTJE. The full time job equivalents are calculated by including data on the number of weavers with that on spinners, the latter being mostly part-time workers, in terms of full-time employment. Since the value of Calcutta's exports fell from 14 to 1 million rupees or by 95% and that of the rest of the country fell from 11 to 8 million rupees or by 30% during the period 1790-1830 the greatest decline of employment was naturally in the eastern province of Bengal. Although the decline in textile exports constituted about two-thirds of Indian textile exports the drop was not a significant proportion of total production. The regional bias in the decline in employment is obvious and there were some options for weavers to take up silk weaving and using imported cotton yarn. The period 1830-1850 separates the period of declining Indian exports from that of declining handicraft production. There was not much decline of handicraft production since cloth imports constituted about 1 yard per person by 1850, which would have constituted about 10% of Indian production.

The real decline in employment took place in the post-1850 period when Indian production fell to less than 40% of Indian consumption. Therefore the greatest decline in handloom production took place in the 1850-1880 period when the cloth imports in India increased by 1500 million yards or 6 yards per person. Total consumption is estimated at about 11 yards per capita for this period. Twomey estimates that textile employment declined in

this period by 3.6 million FTJE's, though the loss could vary between 2 to 6 million FTJE's depending on the different methods used for estimation. The loss of 3.6 million full time jobs would have amounted to almost 1.5% of the 1850 population of 250 million. This is twice the absolute number estimated by Feuerwerker as the loss in employment in China during 1870-1910 due to imports of yarn from India and later Japan. Although handicraft textile employment fell in absolute terms throughout the 19th century, during the period 1800-1850 the growth of population did counteract the influence of the decline in textile exports. On this point Twomey supports the argument of Morris. By 1930 per capita imports had declined to 5 yards per capita from the level of 8 yards before World War I and the fate of Indian handlooms depended increasingly on competition with Indian mills rather than foreign mills.

In *The Cambridge Economic History of India*, Vol. II it has been argued that between 1881 and 1911 the share of agriculture, inclusive of general labour and of activities related to agriculture, did not change at all rising merely from 72.4% to 74.5% of the workforce. Though the share of manufacturing fell from 10.6% to 9.1% in this period part of this decline can be attributed to the fact that all manufacturers-cum-sellers in 1881 were included under 'manufacturing' whereas in the Census data of 1911 this inclusive category was dropped. Instead people were classified as either manufacturer or seller depending on which economic activity was predominant. There was a decline of the workforce engaged in both the activities of manufacture and trade and commerce from 15.5% to 14.6% in this period. This analysis of the workforce applied only to the male population. According to Krishnamurthy during the period 1901-1951 while employment in factories in the manufacturing sector rose from 0.6 to 2.9 million employment in small-scale enterprises declined from 12.6 to 11.4 million. According to the national income estimates made by Heston the real output of small-scale industry rose by 14% between 1900-1/1904-5 and 1942-3/1946-7. In the traditional industries there was some decline in employment from 2.4 million to 2.2 million between 1911 and 1951 in the case of cotton spinning and weaving. Since handloom output in undivided India increased from 965 million to 1068 million yards in the period between 1902-3/1912-13 and 1930-1/1937-8 Krishnamurthy concluded from this that the output per worker in this period must have risen.

The substantial decline in the employment of leather workers was a consequence of the rise of tanneries and shoe factories that progressively replaced the local leather workers. There were also declines in earthenware and earthen pottery, oil-pressing and foodgrain processing. Production of handloom textiles, *bidi* and *gur* production did not decline. Taking the entire manufacturing sector into account the share of handicrafts in total employment did not decline if the statistics for male workers alone are considered. If the evidence for both male and female workers is considered there is a decline from 9.6% to 8.7% between the years 1911 and 1951. This cannot be regarded as de-industrialization because there was a "significant relative and absolute increase in the output of the manufacturing sector." Even for the period 1881-1911 the term de-industrialization is regarded as inappropriate since the decline in industrial employment was accompanied by increases in relative and absolute industrial output.

---

### **34.7 RECENT WRITINGS ON DE-INDUSTRIALIZATION**

---

The interpretation of the reasons for the survival of handicraft production has in recent times been influenced by the writings of Tirthankar Roy, Douglas Haynes, and Yanagasawa. For a long time the literature was dominated by the theory that the only reason why traditional handicrafts survived was by shifting to coarse cloth production, by catering to the needs of the poorest sections of the population in

sheltered local markets. Within this constraint the traditional producers tried to innovate, adopted the use of cheaper imported yarn and tried to produce goods acceptable to indigenous, and especially local, tastes and preferences. More recent writers take a more optimistic view of the situation of the traditional artisan sector. Roy has identified four basic processes at work that influenced the growth of the handloom sector. First producers diversified into those sectors where they did not have to compete against mill products. Secondly, the inequality among the weavers began to grow over time and many weavers actually flourished. Thirdly, there was a growing concentration of weaving in the urban centres where the methods of production were more advanced than in the rural areas. Finally there were changes in techniques which influenced the handloom sector for example by the shift from cotton to man-made fibres and the adoption of techniques that had a tendency to reduce the role of labour, specially family labour, in yarn processing.

According to Roy handloom factories emerged in southern and western India during the 20th century and big weaving towns like Sholapur, Salem and Nagpur had '*karkhanas*' which by the mid-20th century had a capacity of between 10,000 and 20,000 looms each concentrated in these towns. Weavers during the 1920s and 1930s were increasingly coming under the influence of a large trader or producer. Mass production and trade developed more in the south because the preference for handlooms in this region was more pronounced and the dresses and costumes were less subject to changes in fashion. Factory towns developed in the south based on the migrants from the arid and famine-prone zones in which they were located. These factory towns were characterized by sharp inequalities among weavers specially because the migrant weavers of the lower castes had "unequal access to markets and resources." In north and east India where weaving was predominantly a rural activity the trader-cum-moneylender acquired greater control over the weaver-producers. Mass production was also made possible by a market-sharing pattern that developed. The mills produced piece-goods or cloth that had to be stitched while the handlooms produced finished products, specially draped cloths. The handlooms produced coarse and fine cotton as well as pure and waste silks. Their loom woven designs, primarily bordered garments were popular. The mills produced more medium-count cotton and printed cloth. In the inter-war period when viscose fibers were first used handlooms benefited more than the composite mills. The small-scale power loom sector, which emerged in the mid-thirties "was an outgrowth of the handloom elite."

While cloth output fell by 40% between 1850 and 1880 and loomage may have declined as well, Roy asserts that in the first twenty-five years of the 20th century handloom production rose by 30% in both India and China. The number of looms and weavers grew in Egypt, Syria and Java for short periods of time between the late-19th century and the mid-20th century. In India weaving was relatively detached from the land and the weavers were apparently the "only prominent craftsmen excluded from the *jajmani* system of product sharing." [Tirthankar Roy, *Artisans and Industrialization: Indian Weaving in the Twentieth Century*, Delhi, 1993, p.14 footnote 5.] The handloom industry was able to survive because of the "persistence of decorative and complex weaving" which is not related to expensive products or luxury goods. However, during the period of expansion in the 20th century it was based more on real incomes rather than relative prices. Direct competition with the mill sector was not a major factor affecting the growth of handlooms. In fact growth was based on a polarization between producers in these two sectors. Roy has asserted on the basis of his calculations that though the share of handlooms in the home market were subject to considerable fluctuations the upswings seemed to get progressively higher. The share of handlooms in the domestic market rose between

**Craft Production, Technological Change and Industrialization**

the years 1900-4 and 1935-39 from 27.6% to 31.6% while the share of imports during the same period dropped from 57.4% to 11.8% and that of Indian mills rose from 15% to 56.6%. [See, Table 9.] The fall in handloom market share to 24.4% in the years 1915-19 could be because of a raw material crisis. The fall in market share in the late 1920s after an upswing in the early 1920s could in part be the consequence of protective tariffs that were heavy on yarn and specially “on the superior quality yarn, which the handlooms preferred.” Once the domestic capacity for producing superior yarns increased the handloom share in the domestic market recovered. As weavers who used above-40s counts and those who used better yarns were adversely affected by tariffs and nationalist agitations in the 1930s the towns of Dacca and Santipur in Bengal actually experienced an increase in unemployment.

**Table 9**

**Shares in the home market (in percentages)**

Years	Cotton Mills	Handlooms	Import	Total	(M. Lbs)
1900-4	15.0	27.6	57.4	100	751.3
1905-9	19.1	29.6	51.8	100	875.9
1910-14	21.7	27.7	50.7	100	1108.6
1915-19	37.7	24.4	37.9	100	874.0
1920-24	37.3	30.4	32.3	100	975.8
1925-29	39.4	27.5	33.1	100	1160.7
1930-34	51.5	31.7	16.8	100	1158.8
1935-39	56.6	31.6	11.8	100	1325.1

**Source:** Tirthankar Roy, *Artisans and Industrialization: Indian Weaving in the Twentieth Century*, Delhi, 1993. Annual averages of cloth produced in yarn equivalent. Based on statistics published in Reports of Bombay Millowners Association, pp. 28.

The level of wages in the handloom sector and the mill sector were surprisingly close. According to Roy’s estimate the weaver’s piece-rate per yard converted to a monthly wage about 10% below the mill average rate. The typical weaver was however employed for only two-thirds of a year. Moreover the gap in the earnings of the small weaver families and the *karkhanas* using hired workers widened during the inter-war period. The output increase in the inter-war period has to be attributed to technical change primarily because the total number of looms remained more or less constant around 1.9 to 2 million looms during this twenty-year period. The proportion of pit looms with fly-shuttle attachments rose from 5% in 1920 to 35% in 1940. Since better looms substituted for surplus family labour the improvement in the productivity of looms was based on widening differentials in the incomes of different categories of weavers. According to the official statistics the informal or handloom sector stagnated or declined in the decade of the depression in the 1930’s, but Tirthankar Roy on the basis of his own reconstruction of the data concludes that during this decade while the shares of physical outputs remained constant the value of the products of the handloom sector actually rose. The share of the handloom sector in the total value of products rises in the 1930’s partly because of the growth in the production of non-cotton production, mainly products intermediate between fine cotton and pure silk. Essentially the value of the output of the handloom sector rose because of the diversification towards costlier and superior products. [See Table 10 and 11 on ‘Quantity and Value of Handloom Output’, in Tirthankar Roy, *Artisans and Industrialization: Indian Weaving in the Twentieth Century*, Delhi, 1993, p. 61.]

**Table 10**  
**Market shares, 1931-32 to 1937-38**

Years	Mill	Import	Powerloom	Quantity (in percentages)	
				Handloom	All
1931-32	51.4	15.2	—	33.2	100
1932-33	47.0	19.7	0.4	32.9	100
1933-34	51.7	14.9	0.8	32.6	100
1934-35	53.2	16.4	1.0	29.6	100
1935-36	50.6	16.3	1.3	31.8	100
1936-37	54.9	13.6	1.6	29.8	100
1937-38	56.9	10.5	1.9	30.7	100

**Source:** Tirthankar Roy, *Artisans and Industrialization: Indian Weaving in the Twentieth Century*, Delhi, 1993, Table 10, p. 62.

**Table 11**  
**Market shares, 1931-32 to 1937-38**

Years	Mill	Import	Powerloom	Value (in percentages)	
				Handloom	All
1931-32	35.1	16.5	—	48.4	100
1932-33	31.5	17.9	1.2	49.4	100
1933-34	35.5	13.3	3.0	48.3	100
1934-35	36.3	15.0	3.4	45.3	100
1935-36	36.3	13.1	3.2	47.4	100
1936-37	39.1	11.5	4.3	45.1	100
1937-38	36.9	9.2	5.3	48.6	100

**Source:** Tirthankar Roy, *Artisans and Industrialization: Indian Weaving in the Twentieth Century*, Delhi, 1993, Table 10, p. 62.

The classification of handlooms by fineness of yarn reveals that between the years 1906 and 1940 they were supplying a smaller proportion of coarse cloth by the latter date. This was a break from the trend in the nineteenth century when handlooms did well in coarse goods and fairly well in medium and fine cloth. In the years between 1906-1940 coarse-medium and medium cloth handloom production gained but the mills gained much more from the decline in British imports. This was because the Indian mills produced coarse and medium count yarns. Observes Roy, “Import-substitution in cloth by the mills favoured these classes, whereas import-substitution by handlooms favoured the finer classes.” [See Table 12.]

**Table 12**  
**Segmentation of handlooms by fineness of cotton yarn**

Yarn Counts	Handloom share in total yarn consumption (percentage)		Share of yarn group in handloom production, 1906 (percentage)	Market size 1940 (billion lbs yarn consumption)	Share of yarn group 1940 (percentage)
	1906	1937-40			
1s-20s	41	28	55	0.71	55
21s-30s	6	24	9	0.30	19
31s-40s	26	33	27	0.15	14
41s+	23	49	9	0.09	12

**Source:** Tirthankar Roy, *Traditional Industry in the Economy of Colonial India*, Cambridge, 1999, Table 3.2, p. 78.

In a recent publication titled *Traditional Industry in the Economy of Colonial India*, Tirthankar Roy has argued that the destructive side of colonial rule for the industries of India has been emphasized by the dominant viewpoint. His book, on the other hand, deals with the “creative impact” of colonial rule and asserts that there are certain similarities in the effects of long-distance trade on the artisans of India as well as those of Britain and Europe. Dissenting from the dominant view in Marxist and nationalist accounts of the destructive impact of colonial domination Roy argues that the evidence does not support such a view. The experience of textiles is ambiguous. While competitive imports effected some handloom weaving in the case of non-competing cloth production the experience of long distance trade was more positive and creative. Secondly, the evidence on employment is regarded as ambiguous because it does not take into account the changes in technology and organization within artisan production. Finally the dominant view is inconsistent with the long-term character of industrialization in India since the informal sector has remained important long after independence. Even in 1991 about 71% of industrial employment was outside registered factories; in 1911 the proportion was 95%. On the basis of the changing interpretation of the Industrial Revolution and proto-industrialization the progress of industrialization is not regarded as a process of replacing tools with machinery, of old with new technology but of numerous hybrid ways of using labor in artisanal production under new conditions of production and exchange.

Although the author disagrees with the Marxist view of colonialism and of development and highlights the creative responses of traditional industry to long-distance trade he does recognize the limits of his re-interpretation. India did industrialize in the sense of replacing domestic labour with wage labour and improving industrial organization, but the process of change was weak. India did not experience “significant structural change or economic development.” [Roy, *Traditional Industry*, p. 57.] The rise in agricultural productivity and rise in domestic demand, which could have stimulated the growth of Indian industries, was absent. Industrialization was also slowed down because of a sustained high population growth rate and the limited availability of institutional credit for the financing of fixed investments. Roy deals at great length with the creative transformation of traditional industry but acknowledges that it did not lead to a rise in average incomes or a new paradigm for technology finance or management. The problem was that this industrialization was constrained by “informal training, informal credit, and plenty of low quality labour.” In so far as social factors based on caste restricted entry into and exit from traditional occupations this factor too contributed to India’s economic backwardness.

The transformation of traditional industries in India in the colonial period has been well documented in the work of Roy and Haynes. There was a shift from production for local use to a process of production for a wider market, from local to long distance trade, a change in consumer and producer behavior associated with the growth of long-distance trade, and of institutional and other changes associated with these developments. Trade led to a reduction in the local production of several inputs like cotton yarn, jari and dyes and the growth of imports. The use of imported sheets in metals and blocks in glassware increased. As a consequence of production for the market, handlooms for instance, gravitated towards the towns where input trade was concentrated. Purely economic factors were more important in the growth of craft towns in the colonial period. Towns like Sholapur, Salem, Ludhiana and Surat served primarily non-local markets. The methods of sale of products shifted from spot to contractual arrangements. There was a decline in the quality of output as production was increasing for distant and anonymous consumers. In order to cope with the problems arising from commercialization, craft towns either tried to improve quality control or simplify products for the mass market. Surat *jari*, Mirzapur carpets and Moradabad brass were craft-town products, which adapted to the mass market. There was a greater primacy of the craft in the process of

production and despite the growing importance of trade and finance in the 20th century it was easier for the producer to become a financier or merchant. There were two types of production units, which existed. One was the hierarchical team of male Muslim artisans, which “crystallized around master-apprentice lineages”, and the other was the hierarchical team of parents and children in rural or semi-rural crafts or among Hindu artisans. Under the first type of unit, where the division of labour was more elaborate than under the second, many of the most refined products were produced in the *karkhanas*. Moradabad brass, Benares *zari* and brocade, Lucknow *zardozi*, Agra, Amritsar and Srinagar ] carpets were some of the quality products which were produced by the Muslim artisans.

There is a case for a decline in employment, but the loss in employment cannot be attributed to the rise in imports alone. The numbers of potters and braziers also declined, as did those of rice pounders and builders. A range of quasi-services placed in the category of ‘dress and toilet’ was also adversely affected. Roy argues that the decline in these industries, which did not face competition from British goods, has to be regarded as “an effect of an as yet poorly understood macroeconomic transition.” If British policy had an effect on this process of transition it was an indirect one. Although Indian handicrafts did decline somewhat the process of industrialization does involve the replacement of skilled workers by machinery. Moreover the real income per worker in industry increased at a compound rate of growth of about 1.7% per year during the period 1900-1947. Real income per capita grew by 0.7% during the same period. All this makes possible “a non-Marxist interpretation of the decline in handicrafts.” National income data is used to prove that during the colonial period there was an increase in productivity. Real income in ‘small-scale industry’ increased by 72% between 1901 and 1947 even though employment declined. Average income in this sector increased by about 1.1% per annum; the average rate for ‘large scale industry’ was lower at about 0.9% per annum.

The traditional handicrafts did not survive primarily by accepting lower incomes and “becoming an industry of the poor for the poor.” In actual fact while some weavers and artisanal producers suffered declines in both income and employment there were other segments of these industries which improvised and succeeded by improvements in technology and organization. The steady decline in the numbers of low-productivity workers is misinterpreted as evidence for a general decline in handicraft production. There were technological changes which facilitated increases in productivity: the use of the fly-shuttle, innovations in plating and polishing in brassware, use of power in the plating of wires in jari production, vegetable dyes and the warping mill in the case of textiles. There was also the growth of urban centres precisely because of urbanization in the crafts. Urbanization in 19th century India was closely related to craftsmen movements. However, in India the “productive role of artisans did not connect strongly with rapid economic development” as in the case of Europe and East Asia.

---

## 34.8 CASE STUDIES

---

Let us look at the evidence on the evolution of industries like brassware and leather.

### 34.8.1 The Case of Brassware

The Brassware industries were not threatened significantly by foreign competition. The use of imported brass sheets led to reduction in production costs. The use of brass sheets eliminated the older practice of melting scrap in crude furnaces. Mass production of utensils was facilitated by the use of sheets of a standard quality. The increased scale and variety of metals used at the end of the 19th century was a consequence of the diversification of consumption. Cheap transportation provided by the railways helped

the brass industry to expand from the late 19th century to the early years of the 20th century. During the inter-war period as well the demand for brass-wares may have expanded. Indian artisans copied the light durable goods that the Europeans had brought for their own use because the better-off Indians wished to imitate the Europeans. A form of import-substitution by artisans was the production of cast metal goods such as lamps, locks and scissors, hollow glass-ware and printed textiles. The number of workers in brass and bronze grew from 125,000 in 1891 to 145,000 in 1901, declining to 106,000 in 1921. In 1931 the number of workers were estimated at 120,000 and for a thirty-year period thereafter the numbers hovered around a hundred thousand workers. The concentration of workers in 'factories' was higher than in the other crafts. Brass-wares developed quickly in part because they were a substitute for earthenware, but they faced competition from alternatives like aluminum, china and enamelled iron. Brass products were threatened by galvanized iron in the case of heavy and large vessels, by enameled iron in products for poorer households and by porcelain for fashionable goods. Change in crafts unaffected by imports was effected by an "industrial contest within." Larger towns, which were in a position to benefit by economies of scale, creation of brand images and quality control were able to grow faster than the smaller artisan colonies in both ornamental and utilitarian products. In Bengal and Bombay there was a collapse of small-town manufacture in utility products. In western India some of the smaller centres began to shift towards bronze, which was mostly in demand in the rural areas. In the Punjab after the British conquest the village brass and coppersmiths slowly disappeared and metal work became concentrated in the towns of Jalandhar, Batala and Gurgaon.

In the United Provinces during the inter-war period some metalworker colonies disappeared, particularly in copper and bronze. On the other hand towns like Farrukhabad, Mirzapur and Moradabad flourished. The growth of Moradabad was greatly facilitated by the railway links that not only provided cheap transportation for bulk goods but also godowns and storage space. Moradabad had an enormous range of products which combined utility and aesthetics in varying degrees catering to the new urban groups and the middle classes. Brass-wares too, like the other Indian crafts, benefited by the creation of a mass market utilizing skills that could not be matched by machinery. The industry not only produced arabesque (floral and geometrical motifs) engravings on goods for the better-off but tinned wares for the poor. Tinplating copper was a skill that contributed to the early fame of Moradabad. Certain technological changes -like power-driven technologies in polishing and electroplating, use of dies and presses and of power-operated forges, the greater use of wheel-operated instead of hand-operated bellows, the switch-over from clay to graphite in moulding-also helped the brass-ware manufacturers to survive. The increased scale of the karkhana and its gradual upgradation combined with import-substitution in raw materials also helped the artisans to survive under changing circumstances. Mass-production based on new products and better designs and import-substitution in the form of producing billets from scrap in rolling mills accounted for the dynamism of the industry much more than the technological changes which were adopted very slowly. Brasswares survived by differentiating products and "applying craftsmanship" on utilitarian goods.

### **34.8.2 Leather and Leatherwork**

The great transformation in the nature of the leather industry in India began in the 1870s with the increase in exports of hides from the country. By 1890 the trade had reached a figure of Rs 60 million while the domestic rural-urban trade was estimated at Rs 8 million. Leather exports amounted to anything from 5% to 9% of total private merchandise exports from 1890 onwards. The composition of exports changed from cured to tanned goods and eventually to processed leather. The trade in hides was

stimulated by a variety of factors. The famines of 1876-8 and 1896-8 brought cattle to the market in large numbers. The Germans who had mastered the science of mineral dyeing and the Americans who had developed techniques of chrome tanning were major importers of Indian hides during the late 19th century. The railways also brought the hides and skins-producing zones in touch with the port cities where a lot of the hides were being tanned. The railways were a major reason for the growing urbanization of the industry. Once the slaughterhouses began to grow the number of tanneries in urban areas grew. By the early 1920s nearly a quarter of the 20 million hides produced every year came from the slaughterhouse. Now the tanneries could bypass the middlemen and deal directly with the butchers and the merchants who collected dry cattle from the villages. The breaking of the links between tanning and the rural economy is one of the reasons why the proportion of traditional leather castes engaged in the craft declined over time. The number of those employed in the leather industry did not decline during 1901-1931 in northern India but castes associated with leather declined in tanning. In the south, by contrast, the proportions of castes associated with leather were low throughout this period because several labouring castes, chiefly the Paraiyans, entered the leather industry. There were several processes at work. Many leatherworkers were giving up their craft to become agricultural workers or to join 'clean' occupations. Many became specialist tanners. Those who specialized in leather had three options, according to Roy, "to become subcontractors of hide merchants; to become workers in tanneries; and to become traders themselves." [*Traditional Industry*, p. 169].

As a result of the changes taking place the Chamar in the Punjab who lost traditional rights to fallen cattle was able to become a subcontractor in the new configuration because he was the only one who could flay and cure the hide locally. Also in the newly established tanneries in the urban areas only the Chamars were willing to work in the tanning sections. The traditional leather castes moved not only into tanneries in the urban centres but to a variety of occupations. In western India the Mahars moved into the cotton mills, railways and gin factories. From Chhattisgarh they moved into the tea gardens in Assam, and into a variety of industrial occupations in Bengal. The Malas and Madigas of southern Andhra went to the gins and presses. The migration of the rural tanner was also an outcome of the tendency of the cattle owners to sell their hides or cattle to the slaughterhouse or its contractors. The decline of many traditional uses of leather also weakened the links of the rural tanner to the village. Rural tanning in Gujarat, Khandesh and Marathwada declined because a centralized system of water distribution made the older irrigation water-bag irrelevant. Besides the peasants preferred the chrome-tanned leather for irrigation purposes, which the rural tanner did not produce. There was a small but significant minority of Chamars who became successful traders and entrepreneurs. Chamars owned tanneries in Lucknow as early as the 1880s; they were successful traders in the small towns of Bombay Presidency and in and around Kanpur, Raipur and Mysore. However in the largest tanneries of the country the Chamars were mostly industrial workers.

The reluctance of Hindu merchant castes to lend money to tanners and the ordinary artisans' aversion for raw hides led to a greater participation of non-Hindu and non-artisan participation in this trade. The growth of production in the factories increased steadily during the period after World War I. By 1952 a government report estimated that the rural tanner was processing only 43% of the hides whereas the factories were handling about 50%. There were three types of units, with the village tannery at the bottom of the hierarchy, using family and community labour. At a higher level was the town tannery, which had a slaughterhouse and a spot market in hides. At the

top of the hierarchy was the big factory using a hundred workers or more in the large ports and industrial centers. The number of large tanneries in India rose from thirteen in 1901 to sixty-six in 1939. In Madras Presidency the 1931 census revealed that a quarter of the workers in tanning worked in small and large factories.

Artisans engaged in the production of leather articles were also influenced by change. Products that were in demand during the 19th century, like oil containers, water-bags, and embroidered shoes were in decline during the period after the First World War. With the use of motor transport the demand for saddlery declined. The Bhishtis declined with the steady rise in the supply of water by pipes. However, the leather artisans adapted to the situation quickly enough and began producing boots and shoes as well as harnesses and bags, according to the new styles in demand. The proportion of Mochis who followed their traditional occupations rose because of the increase in the demand for their skills during World War I. They supplied large consignments of 'munda' shoes to army contractors during the war. The 1920s was the period in which the production of finished goods increased. Mochis began to move into the cities. Meerut, Kanpur and Allahabad became centres for manufacture of leather footwear with Agra as the biggest center employing about 25,000 people in the early 1920s. By the 1930s there were Mochi-owned *karkhanas* in Allahabad using Mochi workers. Immigrant Mochis from Bombay Presidency in Madras "asserted a higher social standing than they would command in the lands they came from." [Roy, *Traditional Industry*, p. 191.] Muslims, Europeans, Parsis as well as Eurasians and the Chinese dominated the tanning trade and industry. In Bombay the Bohras and Memons owned tanneries. Muslim entrepreneurs were important in regions as far apart as Madras and the Punjab. In leather manufacture the artisan capitalists like the Mochis also played a role. This did not happen in the tanning industry. In fact subcontracting with the Mochi remained important even after the European multinational Bata entered the market for leather goods.

---

### **34.9 SUMMARY**

---

The evidence on de-industrialization in recent writings indicates that the picture is more complicated and less dismal than that which emerges from the works of the older nationalists and nationalist historians. Nevertheless it cannot be denied that there was a decline in artisanal production and employment in India during the 19th century. Despite the evidence of regional variations the overall employment, output and incomes of the artisans in India suffered a notable decline that was related to the disruptive impact of colonial rule and the steady rise in the imports of manufactures from Britain. The recent evidence has drawn attention to the creative responses of the traditional crafts to the impact of long-distance trade on craft production and the capacity of these industries to survive by combining technological with organizational changes to improve productivity and raise the output per worker. In the most optimistic account the share of artisanal production in total textiles consumption grew somewhat in the inter-war period in terms of output. Further, the value of the output of the artisanal sector grew because of a growing proportion of goods of higher quality and value produced by this sector in the 20th century. During the 1930s the share of the handloom sector in terms of physical output did not change, but there was an increase in terms of the value of output.

Technological changes and improvements in productivity may have been limited but a case for de-industrialization in the 20th century is unacceptable to older experts like Thorner and Krishnamurthy as well as more recent ones like Haynes and Roy. There is

no denying the decline in traditional industry in the 19th century with Eastern India being the worst affected region. Even if in Madras Presidency in the 19th century the decline in handlooms is not much in evidence, according to Specker, there is a reduction in the range and quality of the products manufactured. There is a general shift towards the production of coarse cloth in this region too and the incomes of the weavers decline as they do in other regions exposed to competition from imported products. Probably the greatest decline in output, incomes and employment was during the period 1850-1880 for the country as a whole. The controversy about de-industrialization is not only about the extent of disruption and decline but also about the colonial impact on the Indian economy. The negative impact of colonial rule in India is a subject of wider significance and other elements of the critique of colonial rule will be taken up in subsequent sections.

---

## 34.10 GLOSSARY

---

<b>Fly Shuttle</b>	John Kay invented it in 1733. The weaver uses this by pulling a cord that triggers hammers to propel the shuttle left, then right, across the width of the cloth. The flying shuttle, fly shuttle or spring shuttle replaced the old weaving process of carrying the weft through the warp the shuttle had been passed by hand from side to side through alternate warp threads. In weaving two workers needed to throw the shuttle from one end to the other. With the flying shuttle, the amount of work a weaver could do was more than doubled, and the quality of the cloth was also improved. (See Illustrations on pp.37-38 of the present Block, Unit 35)
<b>Jajmani System</b>	<i>Jajman</i> means patron. Under the <i>jajmani</i> system, in a village, members of different castes perform various services/tasks for their patrons, usually members of the dominant castes. Service castes are linked through hereditary bonds to their patrons. The lower-caste members provide services according to traditional occupational specializations. Thus, client families of launderers, barbers, shoemakers, carpenters, potters, tailors, and priests provide customary services to their patrons, in return they receive customary seasonal payments of grain, clothing, and money.
<b>Pit Loom</b>	In this type of loom the weaver sits on cushions on the floor and puts his/her feet into a pit that houses the loom paddles. (See Illustrations on pp.44-45, Block 5, Unit 23)

---

## 34.11 EXERCISES

---

- 1) Give a brief account of Daniel Thorner's critique of the Nationalist thesis on de-industrialization.
- 2) Critically examine Morris D. Morris' argument that there was 'not much direct evidence of the decline of India's traditional industries.'
- 3) Analyse the impact of Lancashire imports on the Indian textile industry.
- 4) Define FTJE. Analyse the impact of de-industrialization on employment.
- 5) Examine Tirthankar Roy's argument on de-industrialization.

---

## 34.12 SUGGESTED READINGS

---

- Bagchi, Amiya Kumar, 'De-industrialization in Gangetic Bihar, 1809-1901,' in *Essays in Honour of S.C. Sarkar*, New Delhi, 1976.
- Chandra, Bipan, 'Reinterpretation of Nineteenth Century Indian Economic History,' *Indian Economic and Social History Review*, (hereafter *IESHR*) 5,1, 1968.
- Chandavarkar, Raj, 'Industrialization in India before 1947: Conventional Approaches and Alternative Perspectives', *Modern Asian Studies* (hereafter *MAS*), 19, 3, 1985.
- Dutt, R.C, *The Economic History of India in the Victorian Age*, London, 1906.
- Guha, Sumit, 'The Handloom Industry of Central India: 1825-1950,' *IESHR*, 26, 3, 1989.
- Harnetty, Peter, 'De-industrialization Revisited: The Handloom weavers of the central Provinces of India, c. 1800-1947', *Modern Asian Studies*, 25, 3.
- Haynes, Douglas, 'The Dynamics of continuity in Indian Domestic Industry: Jari Manufacture in Surat, 1900-47,' *IESHR*, 23, 2, 1986.
- Haynes, Douglas, 'The Logic of the Artisan Firm in a Capitalist Economy: Handloom Weavers and Technological Change in Western India, 1880-1947', in Burton Stein and Sanjay Subrahmanyam (eds), *Institutions and Economic Change in South Asia*, Delhi, 1996.
- J. Krishnamurty, 'De-industrialization in Gangetic Bihar Another Look at the Evidence,' *IESHR*, 22, 4, 1985.
- Kumar, Dharma (ed.), *The Cambridge Economic History of India*, vol. II, c.1757-c.1970. Cambridge, 1983.
- Morris, Morris D, 'Towards a Reinterpretation of Nineteenth Century Indian Economic History,' *IESHR*, 5,1, 1968.
- Raychaudhuri, Tapan, 'A Re-interpretation of Nineteenth Century Indian Economic History?', *IESHR*, 5,1, 1968.
- Roy, Tirthankar, *Artisans and Industrialization. Indian Weaving in the Twentieth Century*, Delhi, 1993.
- Roy, Tirthankar, (ed.), *Cloth and Commerce: Textiles in Colonial India*, New Delhi, 1996.
- Roy, Tirthankar, *Traditional Industry in the Economy of Colonial India*, Cambridge, 1999.
- Simmons, Colin, '“De-industrialization”, Industrialization and the Indian Economy, c.1850-1947,' *Modern Asian Studies*, Vol. 13, 3, 1985.
- Specker, Konrad, 'Madras Handlooms in the Nineteenth Century,' *IESHR*, 26,2, 1989
- Thorner, Daniel and Thorner, Alice, '“De-industrialization” in India, 1881-1931,' in *Land and Labour in India, Bombay*, 1962.
- Twomey, M.J, 'Employment in Nineteenth Century Indian Textiles,' *Explorations in Economic History*, 20, 3, 1983.
- Vicziany, Marika, 'The De-industrialization of India in the Nineteenth Century: A Methodological Critique of Amiya Kumar Bagchi,' *IESHR*, 16, 2, 1979.
- Yanagisawa, Haruka, 'The Handloom Industry and its Market Structure: The Case of Madras Presidency in the First Half of the Twentieth Century,' *IESHR*, 30,1, 1993.