

REPORTS AND INQUIRIES

Labour Conditions in the Cotton Textile Industry in India

The cotton textile industry in India is second only in economic importance to agriculture because of the number of workers it employs, the size of its output and the value of the goods it produces. The article below gives an account of some of the main social aspects of the industry and of their growth: manpower, wages and allowances, labour conditions, worker-management relations, social security, living conditions and social services. The article terminates with an assessment of the advances made by the industry and its future prospects and the effect of the Five-Year Plans carried out by the Government of India since 1951. Special consideration is given to the difficult period following the end of the Second World War and to the problems that arise through rationalisation and modernisation, the improvement of management methods and increased productivity.

The Indian cotton-mill industry is now more than a century old. At the close of the nineteenth century the total number of mills was 156, with 36,000 looms and over 4 million spindles. This number had risen to 257, with 90,000 looms and over 6 million spindles, when the First World War broke out. The industry consolidated its position during the war period and in the 1920s, and continued to make steady progress up to the depression of 1929, after which it remained rather stagnant until about 1937-38. The outbreak of the Second World War, however, provided it with another opportunity, as imports were restricted and it was called upon to meet the needs of the armed forces in India.

At the time of the partition in 1947, the number of mills in the Indian subcontinent was 423, with 202,662 looms and 10.3 million spindles. The progress of the industry in India since 1948 is indicated by a comparison of the statistics for that year and for 1960. The number of mills increased from 408 to 519, of looms from 197,469 to 205,564 and of spindles from 10.2 million to 13.8 million. The average number of workers employed remained fairly constant at a little under 800,000 but the quantity of cotton used in manufacture in the mills rose from 14.7 million hundredweight to 18 million.

The more important textile centres are Bombay, Ahmedabad, Madras, Coimbatore, Madurai, Delhi, Kanpur and Calcutta.

Of these centres, Madras has by far the largest number of mills: 136, giving work to some 101,000 persons; Bombay city and island, although the mills number only 65, employ as many as 194,000 textile workers; and Ahmedabad has 71 mills and 135,000 workers. India is one of the largest manufacturers of cloth in the world. In 1960 the estimated output was 5,000 million yards of mill cloth and about

1,900 million yards of handloom cloth. The exports of mill cloth amounted to 695 million yards, valued at 547 million rupees.

Of the 28 important industries covered by the Census of Indian Manufactures, the cotton textile industry alone in 1956 accounted for 42.8 per cent. of the total employment and 28.9 per cent. of the total capital. About 800,000 workers are employed in the industry and the annual wage bill is estimated at Rs. 1,000 million.

The draft outline of the Third Five-Year Plan envisages raising cloth production to 9,300 million yards, of which 5,800 million will be mill cloth. The target for exports is placed at 850 million yards per year.

EMPLOYMENT AND WAGES

The Labour Force

The estimated figures of employment in cotton mills in India were 787,000 in 1959 as compared with 685,000 in 1951.

Of the total numbers of workers engaged in the cotton textile industry in 1959, 6.7 per cent. were women. The percentage of women workers in this industry has been going down during the last 30 years. It was 19.4 in 1927; 13.8 in 1937; 10.1 in 1947; and 8.5 in 1950.¹

This downward trend is attributed to the introduction of the multiple shift system in cotton mills. Since the Factories Act, 1948, prohibits the employment of women workers between 7 p.m. and 6 a.m., women workers can be employed on day shifts only. They work mostly in the winding and reeling departments in cotton mills. They are also employed in some mills as spinners and doffers, siders or piecers, reelers, croppers, packers, sweepers, *ayahs*² and women doorkeepers. Women are not trained to handle skilled jobs in factories.

An inquiry by the Bombay Millowners' Association in 1951 revealed that the percentages of unmarried, married and widowed workers to the total strength of women workers were respectively 0.88, 49.42 and 49.70.³

There was considerable employment of child labour in the cotton textile industry in its early years; the practice has, however, been declining gradually. After 1922 all persons below the age of 12 years were entirely excluded from employment in factories. In 1923 and 1931 the respective numbers of children (i.e. persons between 12 and 15 years of age) in textile factories were 18,087 and 9,812.

The Factories Act, 1948, prohibits the employment of children below the age of 14 years and declares persons between the ages of 15 and 18 years to be adolescents. No child or adolescent can be employed in any factory unless certified as fit: while at work he has to carry a token showing this. Such certificates are valid only for one year.

Statistics relating to absenteeism are now collected by the Labour Office, Bombay, the Labour Bureau, Simla, and certain employers' associations in the industry. The percentages of absenteeism in two important centres are shown in table I. Monthly averages reveal slightly higher rates in April, May and June, the hot months before the monsoon.

¹ N. K. ADYANTHAYA: "Women's Employment in India", in *International Labour Review*, Vol. LXX, No. 1, July 1954, p. 51.

² An *ayah* is an Indian nurse.

³ Memorandum (No. 31) concerning Women's Employment in the Textile Industry, adopted at the Fourth Session of the I.L.O.'s Textiles Committee, 1953, may be read with interest in connection with problems of women's employment. (I.L.O. *Official Bulletin*, Vol. XXXVI, No. 1, 1 June 1953, pp. 3-5).

TABLE I. PERCENTAGES OF ABSENTEEISM IN BOMBAY AND AHMEDABAD

Centre	1939	1944	1951	1954	1958	1959	1960
Bombay . .	10.5	11.4	12.7	10.8	7.0	7.3	10.4
Ahmedabad	3.3	5.7	8.3	8.7	7.1	6.6	2.9

Note. The figures prior to 1947 are not based on a uniform definition.

Among the causes of absenteeism are illness, accidents, social and religious ceremonies, amusements, etc. The rate of absenteeism also goes up immediately after the pay day. The Bombay Textile Labour Inquiry Committee suggested that "proper conditions of work in the factory, adequate wages, protection from accidents and sickness and facilities for obtaining leave for rest and recuperation constitute the most effective means of reducing absenteeism".¹

There are two aspects of labour turnover : workers who enter employment in an undertaking and those who leave it, in a given period of time. Table II shows labour turnover figures in Bombay and Ahmedabad for given years.

TABLE II. LABOUR TURNOVER IN BOMBAY AND AHMEDABAD
(Percentages)

Year	Bombay		Ahmedabad	
	Accession	Separation	Accession	Separation
1951	1.84	1.16	1.16	0.77
1954	1.29	1.25	1.47	0.58
1958	1.64	1.59	1.85	1.03
1959	1.72	1.41	2.06	0.92

An example of the classification of workers is that of cotton textile workers in Bombay who have been officially classified in five categories : permanent, probationary, "badli", temporary and apprentice.

The "badlis" form a reserve labour force that is drawn upon when a substitute is needed for an absent permanent worker. The Millowners' Association, Bombay, in 1935 started a control system to decasualise such labour. Under this system workers seeking employment put their names down on registers kept for that purpose at the mills. Their first employment is as a badli or substitute. Mr. Gokhale states that in October 1956 the total number of badlis was 32,987, or 28.9 per cent. of the daily average number of workers (114,232).² The average daily number of badlis presenting themselves for work was 24,623 and the average daily number who actually worked was 21,726 or 88.2 per cent. of those seeking such employment.

¹ *Report of the Textile Labour Inquiry Committee*, Vol. II, Final Report (Bombay, 1940), pp. 364-365.

² R. G. GOKHALE : *The Bombay Cotton Mill Worker* (Bombay, Millowners' Association, 1957), p. 40.

Wage Rates and Earnings

Wage investigations in the cotton textile industry have been made by the Bombay Labour Office in many years, including 1914, 1921, 1925, 1926 and 1933. They showed that there were wide variations in the methods of fixing wage rates and paying wages, not only as between centre and centre but also as between one unit and another in a particular centre.

While there were, generally speaking, no appreciable changes in wages and earnings between 1933 and 1938, after the outbreak of the Second World War inflation led to a rise in price levels, and the industry made increasing profits. In 1942 an upward revision of workers' earnings took place.

The Labour Investigation Committee carried on work during the Second World War, publishing its report in 1944. As a result of various awards and recommendations, many of the upward revisions in wages and allowances had taken place in different centres by 1947. A picture of the movement of minimum earnings (basic wages plus dearness allowance) between 1947 and 1959 is given in table III.

TABLE III. MONTHLY EARNINGS OF WORKERS BETWEEN 1947 AND 1959
(*In rupees*)

Centre	1947	1951	1954	1958	1959
Bombay	74.90	87.28	95.43	111.58	116.42
Ahmedabad	84.20	99.05	96.91	103.31	117.03
Madras	58.00	69.77	71.45	81.84	87.41

The Central Wage Board for the Cotton Textile Industry was set up in 1957 in pursuance of the recommendations contained in the Second Five-Year Plan. It was composed of a chairman, two independent members, and two representatives each of the employers and the workers.

The Board was to determine the categories of employees to be brought within the scope of its work, and to work out a suitable wage structure, taking into account the needs of the industry in a developing economy, the requirements of social justice and the necessity to adjust wage differentials so as to provide for incentives. It was also to determine the desirability of extending the system of payment by results.

In its approach to the question of wage fixing the Board was guided by the resolution of the Fifteenth Indian Labour Conference which had affirmed the acceptance of the need-based wage to which the lowest-paid operative is entitled, and the principles of fair wages as set forth in the report of the Committee on Fair Wages. It framed its unanimous decisions on three considerations: (a) that the gap between the current wage and the need-based wage of the formula should be filled to the extent that the industry could bear; (b) that the wage structure should be adjusted to improve conditions in the industry and promote rationalisation to lead to greater productivity and higher emoluments to labour; and (c) that the consumer should not be overburdened.

The Board came to the conclusion that the industry should be divided into two categories: category I would consist of Bombay city and

island (including Kurla) in Maharashtra ; Ahmedabad, Baroda, Billimora, Navsari, Nadiad and Surat in Gujarat ; Phagwara and Hissar in Punjab ; Delhi ; Modinagar in Uttar Pradesh ; Calcutta city in West Bengal ; the whole of Madras state ; and Bangalore in Mysore state. The mills in all other centres would be in category II.

The main recommendations on wages and dearness allowances are reproduced below.

The Board has come to the conclusion that an increase at the average rate of Rs. 8 per month per worker shall be given to all workers in mills of category I from 1st January 1960, and a further flat increase of Rs. 2 per month per worker shall be given to them from 1st January 1962. Likewise an increase at the average rate of Rs. 6 per month per worker shall be given to all the workers in mills of category II from 1st January 1960, and a further flat increase of Rs. 2 per month per worker shall be given to them from 1st January 1962. These increases are subject to the condition that the said sums of Rs. 8 and of Rs. 6 shall ensure not less than Rs. 7 and Rs. 5 respectively to the lowest paid, and that the increase of Rs. 2 from 1st January 1962 shall be flat for all.

The Board recommends that dearness allowance should be linked to the cost-of-living index in all centres, and if any centre has no such cost-of-living index, the index of the nearest centre should be taken for that purpose. The Board has also come across some cases where there is only a consolidated wage or a fixed dearness allowance. In both cases we have found that the total wages are comparatively lower. We recommend that in these cases also the dearness allowance should be made adequate and linked to the cost-of-living index number by a suitable machinery.

In the case of Madras State the dearness allowance now paid neutralised less than what would be justified by the rise in the cost of living with 1936-1939 as the base. The Board recommends that for Madras State the dearness allowance should be increased so as to give full neutralisation for the rise in the cost of living to the worker on the minimum basic wage with 1936-1939 as the base.¹

The Government of India accepted the recommendations of the Board in March 1960. It was stated in Parliament on 28 November 1961 that out of 416 mills to which the recommendations were applicable, 357 had implemented them fully and 36 partially. The Government has started an investigation into the reasons why the remaining mills had not implemented the recommendations.

In Bombay an increase of 8 rupees a month was given as from June 1960 ; this was with retrospective effect from 1 January 1960, and the arrears due for the first four months were paid in July. A similar agreement was reached in Ahmedabad. In Madras state three-quarters of the cost-of-living allowance is to be merged in the basic wage and in future the allowance will be regulated on a revised graduated scale tied to the cost-of-living index numbers. Collective agreements have also been reached in Madhya Pradesh, Rajasthan, Uttar Pradesh, West Bengal and centres in Gujarat other than Ahmedabad.

Real Wages.

Mr. Raghuraj Singh, in his study of the movement of real wages of certain categories of workers in the cotton textile industry, says that in Bombay " by 1944, money wages were raised by more than 100 per cent. in the case of skilled workers and by 200 to 227 per cent. in the case of unskilled workers, while the cost-of-living index, as compared with 1934,

¹ *Report of the Central Wage Board for the Cotton Textile Industry* (Delhi, 1960), paras. 106-108.

also rose to 237. The real earnings of the former class were considerably reduced and its members were much worse off even by 1944 as compared with any other year in the preceding decade. The skilled worker, whatever his money wage in 1947, could not get as much as in 1933 in terms of real goods and services.¹

Between 1947 and 1953 there was a steady increase in the money earnings of all categories of workers, larger for unskilled than for skilled workers.

In Ahmedabad, Singh found that real earnings in 1948 were much lower in all trades than they had been in 1944. Between 1948 and 1951 small increases were made in money wages but real wages declined, although living standards certainly improved and compared favourably with those in Bombay. By 1953 there was a clear tendency towards stability of real wages.

Mr. Shrimali found that the cost of living of workers in the cotton textile industry has been steadily rising since 1955, although real earnings declined after that date. "On the whole, however, the real earnings of textile labour in 1957 showed a rise of 9.5 per cent. over the earnings in 1951. This is to be seen in contrast with the rise in productivity in the corresponding year. The productivity indexes for yarn and cloth in 1957 show a rise of 19.9 per cent. and 14.6 per cent. respectively over those in 1951."²

Dearness Allowance.

Inflation during the Second World War led to a fall in the purchasing power of money and the system was adopted of paying a dearness allowance in addition to wages. The need for such an adjustment became far more pressing when changes in the value of money were both frequent and substantial, as during the periods of rising prices.

The report of the Central Wage Board for the Cotton Textile Industry found that the rate of neutralisation by means of dearness allowance differs from centre to centre.³ While it is 100 per cent. on the minimum wages in Ahmedabad and 99 per cent. in Bombay, it is less in other centres, depending upon a variety of reasons. Compared with 1952-53 the index numbers of wholesale prices all over India have risen; food items registered a rise to 112 in 1958 as against 100 in 1952-53, and are even more expensive at present. The working-class consumer prices index numbers (base adjusted to 1949=100) rose in 1958 to 110 in Ahmedabad, 129 in Bombay, 110 in Calcutta, 113 in Delhi, 98 in Kanpur, 124 in Madras and 119 in Nagpur.

Bonus.

The practice of paying a bonus, started during the First World War, was given up after the war boom was over but was revived during the Second World War, when the industry made huge profits while real wages touched low levels. When the war had ended some employers who had been paying a bonus contended that it was an *ex-gratia* payment and could not be demanded as a matter of right. After the Industrial Disputes Act, 1947, disputes regarding bonus began to be accepted for

¹ Raghuraj SINGH: *Movement of Industrial Wages in India* (Bombay, Calcutta, Asia Publishing House, 1955), p. 115.

² P. D. SHRIMALI: "Wages in the Indian Textile Industry", in the *Indian Journal of Labour Economics* (Lucknow, Indian Society of Labour Economics, July 1960), p. 105.

³ *Report of the Central Wage Board*, op. cit., p. 10.

adjudication: tribunals and courts recognised bonus as a legitimate claim of workers. In a dispute between the Bombay Millowners' Association and the Rashtriya Mill Mazdoor Sangh, the Labour Appellate Tribunal observed:

Bonus is cash payment made to employees in addition to wages. It cannot any longer be regarded as an *ex-gratia* payment, for it has been recognised that a claim for bonus, if resisted, gives rise to an industrial dispute which has to be settled by a duly constituted Industrial Court or Tribunal. Where the industry has capacity to pay and has been so stabilised that its capacity to pay may be counted upon continuously, payment of a 'living wage' is desirable; but where the industry has not that capacity or its capacity varies or is expected to vary from year to year, so that the industry cannot afford to pay 'living wage', bonus must be looked upon as the temporary satisfaction, wholly or in part, of the needs of the employee.¹

It is generally recognised that bonus can be paid to workers out of profits, after deducting essential charges. In this matter the formula laid down by the Labour Appellate Tribunal in its full bench award of August 1951 serves as a general guide: the available surplus is determined after allowing for all prior charges, viz. (a) depreciation according to income tax rates; (b) income tax; (c) fair return on capital; (d) fair return on reserves utilised as working capital; and (e) any additional amount required in excess of depreciation for the purpose of rehabilitation, replacement and modernisation of machinery.²

In recent years, cotton mill managements have been giving bonus to the workers on either the basis of certain collective agreements or awards of industrial tribunals. In Bombay and Ahmedabad, agreements provided for the payment of bonus ranging from 15 days' to 3 months' basic wages for every year from 1953 to 1957, depending upon the available surplus of profits.

Awards and Agreements Affecting Textile Workers' Earnings

During the last few years the basic wages, dearness allowance and bonus, etc., of workers in the industry have been revised as a result either of collective agreements or of awards by adjudicators and industrial tribunals. In Ahmedabad, for example, 57 mills agreed to pay a bonus of 4.8 per cent. of the annual basic earnings for 1957; in Bombay 13 textile processing concerns in 1958 increased their dearness allowance by 5 per cent.; and in Madras certain mills agreed in 1960 to pay half-a-month's to six months' basic wages as bonus for the year 1958, in addition to an interim bonus already paid.

CONDITIONS OF WORK

The conditions of work in the cotton textile industry, as in other manufacturing industries, are governed by the Factories Act, 1948. This Act applies to all establishments employing ten or more workers where power is used and to those employing 20 or more workers where power is not used.

The hours of work for adults have been fixed at 48 per week and nine per day, with a maximum spreadover of 10.5 in a day, inclusive of rest

¹ *The Industrial Court Reporter*, Nov. 1951, p. 1605.

² *Industrial Awards in India* (Delhi Labour Bureau, Government of India, 1959), p. 84.

intervals. Such workers cannot be made to work for more than five hours without a rest interval of half-an-hour.

The states' chief inspectors of factories have been empowered to grant exemption from the limit of daily hours of work to factories in order to facilitate the change-over of shifts. State government or chief inspectors of factories can also allow any factory, for a specified reason, to make its employees work continuously for six hours before earning a rest interval.

A four-and-a-half-hour day, with a spreadover of five hours, has been fixed for children and such adolescents as are not certified fit to work as adults.

Besides a weekly day of rest, the Act provides that every worker who has worked for a period of at least 240 days during a calendar year shall be allowed, during the subsequent year, leave with pay at the rate for adults of one day for every 20 days worked and for children one day for every 15 days worked. This leave is exclusive of all holidays, whether occurring during or at either end of the period of leave, and can be taken in not more than three instalments in a year.

Proportionate leave with pay is granted to a worker who is discharged or dismissed before he has completed the 240 days' qualifying period of work. Persons starting work on a date other than 1 January are also entitled to such leave provided they have worked for two-thirds of the total number of days in the remainder of the calendar year.

General physical working conditions in cotton mills differ from centre to centre and within the same centre from unit to unit. In the older establishments they are not as satisfactory as in newly constructed concerns with an up-to-date layout. Air-conditioning plants have recently been installed in an increasing number of mills, particularly in Bombay and Ahmedabad, where some also have vacuum-stripping plants for recovering cotton dust.

Health and Safety

Workers in the cotton textile industry are almost entirely covered by the health and safety provisions contained in the Indian Factories Act, 1948. The health provisions are briefly as follows.

(1) Factory premises should be kept free from dirt and refuse, shop floors should be washed once a week, proper drainage should be provided, and walls and partitions should be painted or varnished at specified intervals.

(2) Effective arrangements should be made for the disposal of wastes and effluents.

(3) Adequate ventilation should be ensured, and a reasonable temperature maintained.

(4) Where dust or fumes injurious or oppressive to workers are given off, effective measures should be taken to prevent their inhalation and accumulation in any form.

(5) Artificial humidification should be maintained according to the prescribed standards.

(6) There should be no overcrowding such as to be injurious to the health of workers.

(7) Sufficient and suitable lighting, natural or artificial, should be provided.

(8) Drinking water should be provided, and where more than 250 workers are employed, provision should be made for cooling it.

(9) Latrines and urinals of prescribed types should be provided in sufficient numbers, for male and female workers.

(10) A sufficient number of spittoons should be provided at convenient places and these should be kept in a clean and hygienic condition.¹

The responsibility for the administration of the Act rests with the state governments, through the chief inspector of factories and his staff.

The annual factory report of Bombay state for 1959 reported that drainage facilities were then available in the suburbs of Bombay and in the towns of Nagpur, Surat, and the outlying areas of Ahmedabad. The Factory Department had insisted in those areas that the management should connect up its sanitary facilities with the municipal drainage system.

Ventilation was not always adequate and in some weaving sheds it was found that live steam was introduced even when the dry-bulb temperature was as high as 90 degrees Fahrenheit. More and more factories are taking to the use of fluorescent tubes in preference to incandescent lighting.

The annual factory report for Madras state for 1958 considered that factory premises were reasonably well maintained and clean. Adequate steps were taken to mitigate the dust nuisance in textile mills and to prevent its inhalation by employees working in processes emanating dust.

Safety provisions include those regarding the fencing of machinery ; work on or near machinery in motion ; prohibition of employment of young persons on dangerous machines without sufficient training and supervision ; suitable striking gear and devices for cutting off power ; precautionary measures in the case of self-acting machines ; covering of new machinery ; prohibition of employment of women and children near cotton-openers ; installation of hoists, lifts, cranes, etc., of sound material and their proper maintenance ; sound construction and proper maintenance of floors, stairs and means of access ; covering of pits, sumps, openings in floors, etc. ; carrying of excessive weights ; precautions against dangerous fumes, explosion of inflammable dust, gas, etc., and fire.

Table IV shows the figures for industrial injuries in textile factories during the period 1951 to 1958.

During 1958 in Bombay state there were 9,782 non-fatal accidents, 9,704 affecting men and 78 affecting women ; in Madras, there were 7 fatal and 2,892 non-fatal accidents in cotton mills.

The annual factory report of Bombay state for 1958 stated that :

Standard of fencing of low-level shafts, pulleys and belts in the blow rooms of textile mills is undergoing a considerable change. The former arrangement of providing the railings to such belts and pulleys is now being replaced by close-fitting guards made of angle iron framework with mashed or sheet iron panels. This method of fencing affords better protection to the worker and allows more space in alleys. It is also neat in appearance. Steady progress is being maintained in providing guards for the crank and tappet wheels of looms. Similarly belt hangers are also provided in increasing numbers. . . . In general, it may be stated that various interlocking devices

¹ Memorandum (No. 42) concerning working conditions in the textile industry, adopted at the Sixth Session of the I.L.O.'s Textiles Committee, 1958, may be read with interest in this context (*Official Bulletin*, Vol. XLI, 1958, No. 6, pp. 407-409).

TABLE IV. INDUSTRIAL INJURIES IN TEXTILE FACTORIES, 1951-58

Year	Fatal	Non-fatal	Total
1951	49	25,652	25,701
1952	49	27,362	27,411
1953	42	29,545	29,587
1954	54	32,053	32,107
1955	60	44,769	44,829
1956	55	50,093	50,148
1957	65	47,732	47,797
1958	60	43,878	43,938

Source : *Indian Labour Statistics*, 1961.

are provided for the dangerous machines in the textile mills, but attention paid in several of these factories towards their maintenance is not adequate. Quite often, guards though provided are not replaced after repairing the machines. Training of workers in safety methods of work is absolutely essential if accidents are to be reduced in factories. Even such accidents as falls from heights, falling objects, etc., often leading to fatal results, are caused on account of the fact that the workers are not trained to work in a careful manner.

INDUSTRIAL RELATIONS

The textile industry being one of the oldest in India, industrial relations in it have indeed set the pace for other manufacturing industries. Employers' and workers' organisations existed in this industry even before the beginning of this century.

Employers' Organisations

The Millowners' Association, Bombay, was established in 1875, and since the Factories Act of 1881 it has been interested in labour conditions in the industry. In 1934 it set up its own labour office. Its membership in 1960 was 126 mill companies. The Ahmedabad Millowners' Association was formed in 1891 and now has 64 members.¹ In 1918 the Federation of Gujarat Mills and Industries was started and its present membership of 151 includes cotton textile mills. The Southern India Millowners' Association, formed in Coimbatore in 1933, now has 107 members. Concerns in West Bengal, Bihar, Orissa and Assam set up the Bengal Millowners' Association in 1934.

There is also an Indian Cotton Mills' Federation to which the above associations are affiliated. The Federation, which was formed in 1958, acts as a representative organisation of the industry in India.

Workers' Organisations

In 1890 the Bombay Millhands' Association was established. It was interested chiefly in submitting representations and petitions and was not organised strictly on trade union lines. Like other workers' organi-

¹ See "The Ahmedabad Experiment in Labour-Management Relations", in *International Labour Review*, Vol. LXXIX, No. 4, Apr. 1959, pp. 343-379 and No. 5, May 1959, pp. 511-536.

sations, it merely appealed for relief or improvement in working conditions.

The unprecedented profits made by the cotton textile industry during the First World War, the rise in the cost of living, the Russian revolution, the establishment of the I.L.O. and the post-war freedom movement—these and other factors led to the formation of many trade unions after that war, such as the Madras Labour Union and the Textile Labour Association in Ahmedabad. In 1924 there were 23 trade unions in the cotton textile industry, of which 17 submitting returns had a membership of 30,975. Between that date and 1928 four unions began to function in Bombay.

The period between 1929 and 1939 was one of fluctuations in the fortunes of the cotton textile industry. After 1947 there was a spurt in trade union activity. In 1949-50 the number of unions submitting returns was 135 and in 1958-59 it was 289; but the total membership showed a decline from 324,800 to 296,300.

Most of the unions of cotton textile workers have a small membership. The largest is at Ahmedabad and has about 85,000 members: one at Bombay has a membership of 61,600, another in the same city numbers 12,400 and a fourth at Delhi 12,500.

Industrial Disputes

Before 1918 large-scale strikes were not common in India, but the period after the First World War was marked by industrial strife. During the war the cotton textile industry had enjoyed prosperity and "although wages had been raised by many employers, the general level of real wages had fallen considerably. The influenza epidemic of the two preceding years had taken a heavy toll, and demand for labour was keen, while the idea of organisation for the purpose of securing concessions had taken root in the more important centres."¹

Two disputes in Madras during 1920-21 entailed a loss of 1.15 million working days, and general strikes in Bombay during 1924 and 1925 a loss of 7.75 and 11 million working days respectively. The general strike in the Bombay textile mills in 1929 resulted in a loss of over 6.7 million working days.

During the period 1937-42 the chief industrial disputes centred round the demand for dearness allowance. There was a strike in Bombay in March 1940 involving 175,000 textile workers, 15 strikes in 1941 resulting in the loss of 163,000 man-days, and 27 strikes in 1942 with a loss of 224,000 man-days.

A general strike in 58 cotton mills in Bombay in 1947 involved over 100,000 workers and another in Madras lasted for more than three months and entailed a loss of 1.2 million man-days. During 1948 two strikes in the textile mills at Coimbatore entailed a loss of 1.98 million man-days and there were a number of disputes in cotton mills in other centres. In 1950 there were 187 disputes in the industry, involving over 400,000 workers and the loss of 10.3 million man-days.

In 1955, although the number of disputes rose to 231, the number of workers affected was only 169,800 and the number of man-days lost was 2.1 million. The figures for 1960 are: 174 disputes, 282,600 workers involved and 970,700 man-days lost.

¹ "Industrial Disputes in India, 1921-1928", in *Bulletin of Indian Industries and Labour*, No. 43, 1930, pp. 2-3.

Lay-Off and Retrenchment Compensation

The Industrial Disputes Act was amended in 1953 to provide for compensation to workers in the event of their lay-off or retrenchment. Cotton-mill workers in factories with an average daily employment of 50 or more workers, and who have a record of 240 days' service in the preceding 12 calendar months, are covered by this Act. Badli or casual workers are, however, not entitled to such compensation. The compensation is payable at the rate of half the basic wage and dearness allowance for a maximum period of 45 days in any period of 12 calendar months.

The Act was amended again in 1956 to provide that, where a worker is laid off for more than 45 days, whether continuously or intermittently, and the lay-off after the first 45 days is a continuous period of one week or more, he shall be paid for all the days of every subsequent period of lay-off for one week or more, unless there is an agreement to the contrary between him and the employer.

Those workers who are eligible for lay-off compensation are also entitled to retrenchment compensation. This is paid if the services of a worker are terminated for any reason except (1) voluntary retirement, (2) retirement on reaching the age of superannuation, and (3) termination of service on account of continued ill-health.

No workman employed in any industry who has been in continuous service for not less than one year can be retrenched by an employer until one month's notice is given to him in writing indicating the reasons for retrenchment and the period of notice has expired or compensation has been paid at the rate of 15 days' average wages for every completed year of service or any part thereof in excess of six months. No such notice is necessary if the retrenchment is under an agreement which specifies a date for termination of service. An employer desiring to effect retrenchment must give notice in the prescribed manner to the appropriate government. In case a person is retrenched after the expiry of the first 45 days' lay-off, any amount paid to him as lay-off compensation can be set off against retrenchment compensation. The principle of 'last come first go' is to be followed as the procedure for retrenchment. But where a departure is made from this principle, it is obligatory on the employer to record the reasons therefore. During 1956, a number of undertakings put up notices of closures on allegedly 'bona fide' grounds. The Supreme Court held that in cases of bona fide closure no retrenchment compensation was payable. In order to reduce the hardships caused to workers on account of this interpretation, the Industrial Disputes (Amendment) Act of 1957 was passed and it was brought into force with retrospective effect, i.e. from December 1956. This amendment provides that retrenchment compensation shall be payable in the event of 'bona fide closure' or transfer of an undertaking. In the case of change of ownership, the workers shall not be entitled to compensation if they were re-employed on terms and conditions which were not less favourable to them. On account of closure due to circumstances beyond the control of employers, the maximum compensation payable to workmen has been limited to their average pay for three months.¹

Collective Bargaining

Although the cotton textile industry has some of the best organised employers' associations in India, the same cannot be said of the organisations of workers. One of the best-knit trade unions in the country,

¹ *The Indian Labour Year Book, 1959* (Delhi Labour Bureau, Government of India, 1960), pp. 409-410.

however, is the Textile Labour Association, Ahmedabad. The pattern of labour-management relations which has developed in Ahmedabad is in a category by itself.¹

Works committees in undertakings employing more than 100 workers, under the Industrial Disputes Act, 1947, and joint committees, under the Bombay Industrial Relations Act, 1946, provide the machinery for consultation and exchange of views in matters of mutual interest to management and workers in the cotton textile industry. In recent years the Code of Discipline in Industry, adopted at the Sixteenth Session of the Indian Labour Conference, has exerted some influence towards collective bargaining, having been accepted by the central organisations of employers and workers. It enjoins management and trade unions to settle all disputes and grievances through negotiation, conciliation and arbitration. The scheme of workers' participation in management, under which joint councils of management have been set up in some cotton mills, has also introduced another factor in favour of collaboration at the level of the undertaking.

By and large, however, even in the textile industry, collective bargaining has only made a beginning and is yet a long way from being an accepted method of maintaining industrial peace.

SOCIAL SECURITY

Workers in the cotton textile industry are covered by social security schemes under the Workmen's Compensation Act, 1923, amended; the Employees' State Insurance Act, 1948; the Employees' Provident Funds Act, 1952; and the maternity benefit Acts of almost all states.² In addition, the Industrial Disputes (Amendment) Act, 1953, provides for retrenchment and lay-off compensation.

The employees' state insurance scheme provides sickness, maternity, medical, disablement and dependants' benefit. As the scheme has been extended stage by stage to different industrial areas, the workmen's compensation scheme under the earlier Act and the maternity benefit schemes of various states have ceased to apply to undertakings brought under it.

Provident funds were introduced in cotton mills by law in 1951, by an ordinance of 15 November 1951, which in 1952 was replaced by the Employees' Provident Funds Act. In the beginning, the rate of contribution of employees and employer was $6\frac{1}{4}$ per cent. but with effect from 1 November 1956, the employees were given the option to contribute more, subject to a maximum of $8\frac{1}{3}$ per cent. of their basic wages and dearness allowances.

At the end of 1960, 1,324 factories were covered under the Act; of these, 1,308 submitting returns employed 1,282,810 workers, of whom 1,118,023 were subscribers to the Employees' Provident Fund.

Gratuity

The payment of a gratuity upon retirement may be regarded as a reward for continuous service and is not strictly a measure of social security.

¹ See "The Ahmedabad Experiment in Labour-Management Relations", op. cit.

² For details regarding these enactments, see section on India in "Social Security in Asia", in *International Labour Review*, Vol. LXXXII, No. 1, July 1960, p. 82 ff.

The Industrial Court, Bombay, in November 1954 directed that gratuity should be paid to employees—

(1) on the death of an employee while in the service of the mill or on his becoming physically or mentally incapacitated for further service—one month's wages for each completed year of service for the period before the coming into force of the Provident Funds Act, 1952, in the textile industry in Bombay, and a half-a-month's basic wages for each completed year of service thereafter, subject to a maximum of 15 months' basic wages, to be paid to him or his heirs or executors or nominees as the case may be ;

(2) on voluntary retirement or resignation of an employee after 15 year's continuous service in the company, on the same scale as in (1) ;

(3) on termination of service by the company (a) after 10 years' but before 15 years' continuous service in the company—three-fourths of a month's basic wages for each completed year of service before the coming into force of the Provident Funds Act, 1952, and half-a-month's basic wages for each completed year of service thereafter ; (b) after 15 years' continuous service in the company—on the same scale as in (1).

The court issued a supplementary award in September 1959, the salient features of which are :

(1) if there is a break of service of longer than six months' duration, the operative will forfeit credit for previous service ;

(2) badli service is to be treated as service for the purpose of assessing eligibility to service gratuity ;

(3) the first six months of apprenticeship will not be counted for the purpose of eligibility or payment of gratuity ;

(4) an operative retiring at the age of superannuation should be considered as having left on grounds of physical incapacity and should be paid gratuity on that basis ;

(5) the worker or his agent will have to produce a medical certificate in proof of physical or mental incapacity.

HOUSING

The types of dwelling and the surroundings in which cotton-mill workers had to pass their lives after working hours were deplorable before the First World War. In the inter-war period there was no appreciable improvement in housing conditions.¹ An inquiry made in 1926 by the Bombay Labour Office showed that 28 of the textile mills had provided housing in the form of single-room tenements for about 20 per cent. of their employees. In Madurai only one of the cotton mills had provided housing accommodation : a settlement of 176 quarters. The Royal Commission on Labour in India, in its report published in 1931, commended the housing scheme of the Buckingham and Carnatic Mills Company in Madras city, which had built three villages with 459 houses and was building another village of 200 houses.

An important development in the field of workers' housing was the launching of the subsidised industrial housing scheme of the Government of India in September 1952, which applies to cotton-mill workers

¹ For a general picture of housing of industrial workers in the twenties and early thirties see I.L.O. : *Industrial Labour in India* (Geneva, 1938), pp. 296-309.

among others. Under the scheme, loans and subsidies are given by the Government to state governments, statutory housing boards, municipal bodies, industrial employers and registered co-operative societies of industrial workers.

The rents to be charged for accommodation in Bombay and Calcutta range from Rs. 19 to Rs. 29.50 per month and outside these two cities Rs. 12.50 to Rs. 16 per month, depending on the nature of the accommodation.

By 30 June 1961 over 33,000 houses had been completed in Bombay under the scheme at a total assistance cost of 136 million rupees; in West Bombay the respective figures were 7,000 and 28 million; and in Uttar Pradesh, 6,500 and 28 million. The Textile Labour Association, Ahmedabad, by the end of 1959 had set up 100 housing co-operative societies.

WELFARE FACILITIES

Welfare facilities for cotton-textile workers may be divided into two categories: those provided at the workplaces and those for the workers' spare time.

As far as the first category is concerned, the Indian Factories Act, 1948, contains provision for facilities such as the washing, storing and drying of wet clothing; adequate seating accommodation; first-aid appliances; canteens; rest and lunch rooms; and crèches. The enforcement of these provisions and of the rules made under them by the state governments is secured by the chief inspectors of factories in the states and their staff, and it may be said that, generally speaking, these facilities are provided adequately.

The second category of facilities is equally important: they are provided by the state governments, employers and a few trade unions.

Some state governments maintain labour welfare centres in the industrial areas. They provide indoor games, sports and physical culture, and have reading-rooms and libraries attached to them. In some centres adult education classes and sewing, handicrafts and cooking classes for women and girls are arranged; others hold open-air cinema shows, music programmes, folk songs or folk dances.

Welfare Work by Employers

In 1953 the Labour Bureau of the Government of India conducted a special survey to collect information relating to labour conditions in the cotton textile industry. It showed that the standards of the welfare amenities differ from centre to centre: while some cotton mills have been content to provide the facilities required by law, others have undertaken welfare activities on an intensive scale and much beyond what the law requires. The large cotton mills in the country have provided dispensaries in the charge of qualified doctors: some mills have well-equipped hospitals as well. Several have provided separate maternity homes or wards.¹ Crèches for workers' children exist in most of the mills, although the standards vary considerably. Facilities for indoor and outdoor games, co-operative societies, schools for workers and their children and provident fund and gratuity schemes existed in several mills.

¹ The medical facilities are now provided by the employees' state insurance scheme.

In Bombay, during 1960, the member mills of the Millowners' Association provided canteens, grain shops, literary classes, co-operative credit societies and recreational facilities for their employees.

All the mills in Bombay run canteens for their workers. About 16 mills served hot meals in their canteens at low prices varying from 25 to 37 naya paisas per meal.¹ Over 6,000 workers took advantage of the hot-meal service, which was subsidised by the managements to the extent of Rs. 8,000 per month. The other canteens provide eatables, snacks and drinks.

All the Bombay cotton mills have established grain shops on a cost-price basis. Nearly 20 articles of food (including cereals and pulses), soap and matches are sold at these shops, which are recognised by the Government as fair-price shops and are authorised to sell subsidised food grains to workers.

Twenty-seven mills in Bombay city were running 93 literary classes, attended by about 2,500 employees. The average annual cost of these classes came to about Rs. 50,000.

In 1960 there were 66 co-operative credit societies in the Bombay cotton mills, with a membership of 116,291. Out of the total cost of Rs. 61.4 million for running these societies, expenditure amounting to Rs. 128,188 was borne by the managements.

About 13 mills had gymnasia or sports clubs for their workers. The Millowners' Association, Bombay, has been conducting an inter-mill sports tournament every year.

Welfare Work by Workers' Organisations

Welfare work on any considerable scale is undertaken only by a few workers' organisations, the most important being the Textile Labour Association, Ahmedabad. During 1957-58 it ran 27 cultural centres which were used as libraries and reading-rooms providing books, periodicals and newspapers and planning other welfare activities of an intellectual, moral and cultural nature. In addition, it maintained a number of reading-rooms and libraries either in hired buildings or in workers' *chawls*. The total number of readers of magazines was about 67 million and of books 57,000. In its nursery schools the attendance was 6,291 boys and 21 girls. Scholarships amounting to Rs. 6,570 were awarded to 283 students. Vocational training in tailoring was given during the last five years to 466 persons, of whom 370 were males and 96 females. Women welfare workers conducted activities in health, cleanliness and personal hygiene; literacy; dancing and music; cooking; sewing, knitting, embroidery and other home industries; picnics and outings; and general social reform.

SOME PROBLEMS OF THE INDUSTRY

Progress during the Five-Year Plans

In 1951 the number of cotton mills in India was 445, providing employment for 722,038 workers; in 1956 these figures had risen to 465 and 789,042 respectively. The number of mills in 1960 had risen

¹ 100 naya paisas = 1 rupee.

to 519, while the number of workers had declined to 766,447. Table V gives production figures since the beginning of the First Five-Year Plan.

To achieve the additional production in 1965-66 of 800 million yards in the mill sector, it is expected that about 25,000 automatic looms will have to be installed during the Third Five-Year Plan.¹

TABLE V. PRODUCTION SINCE THE FIRST FIVE-YEAR PLAN

	1950-51	1955-56	1960-61		Targets for 1965-66	
	Production	Production	Estimated capacity	Production	Capacity	Production
Yarn (in million lbs.)	1,179	1,640	2,100	1,900	2,250	2,250
Mill-made cloth (in million yards) .	3,720	5,120	5,300	5,000	5,800	5,800

Source : The Indian Cotton Mills' Federation : *Report for the Year 1960*, p. 6.

Post-War Difficulties

Several working parties and inquiry committees appointed by the Government of India have reported on the difficulties experienced by the industry since the Second World War. The first Working Party for the Cotton Textile Industry (Chairman : Mr. A. Ramaswami Mudaliar) submitted its report in 1952.

An inquiry committee which reported in 1958 also urged the need for rehabilitation and improvement of machinery in the textile industry.² A working group for the cotton textile industry, appointed by the National Industrial Development Corporation, submitted its report in 1960 and the Government of India has accepted its recommendations, which are discussed in some detail below.

In recent years, the closure of a number of textile mills has attracted considerable attention. The results of such closures are twofold : idle capacity in the industry and unemployment which a country with a labour-surplus economy can ill afford. The main reason for the closures seems to be the "bad condition of the machinery, in many cases neglected continuously, without proper attendance and repairs and replacements. Inefficient management has also been one of the main reasons for this state of affairs."³

The Working Group which reported in 1960 stated : "At present there are 39 textile mills which are remaining closed, accounting for a total capacity of 0.68 million spindles and 11,170 looms. This is about 5 per cent. of the total installed capacity of the industry."⁴

¹ Government of India, Planning Commission : *Third Five-Year Plan*, 1961, p. 487.

² For more details of the committee's report see "Labour Problems of Modernisation in the Textile Industry", in *International Labour Review*, Vol. LXXXI, No. 6, June 1960, p. 539.

³ Ministry of Commerce and Industry, India : *Report of the Textile Inquiry Committee*, 1958 (Delhi, 1958), p. 27.

⁴ *Report of the Working Group for the Cotton Textile Industry*, 1960, p. 49.

*Rationalisation and Modernisation*¹

The closure of textile mills and the demand from the industry for the installation of automatic looms have, in recent years, led to the crystallisation of views on the rehabilitation and replacement of machinery.

Since rationalisation may mean redundancy and changes in working conditions it may seriously affect industrial relations when the need for good relations is imperative. In a memorandum submitted to the Committee, the Indian National Textile Workers' Federation, Ahmedabad, stated that it was not opposed to rationalisation provided that this did not cause unemployment, that the working conditions were such as would not create undue fatigue to workers, and that an adequate share in the gains of rationalisation was ensured to the workers. The Federation was, however, opposed to automation, particularly the introduction of automatic looms to replace ordinary looms.²

The subject of rationalisation in the textile industry was considered at the Fifteenth Session of the Indian Labour Conference in July 1957. The Conference, while underlining the need for management-labour agreements before the introduction of rationalisation schemes, agreed that the following conditions should be accepted in any scheme of rationalisation :

(i) there should be no retrenchment or loss of wages by the existing employees, i.e. the existing complement should be maintained, barring cases of natural separation or wastage ;

(ii) there should be an equitable sharing of the gains of rationalisation between the community, the employer and the workers ;

(iii) there should be a proper assessment of workloads by experts mutually agreed upon, and also suitable improvements in the working conditions.³

In the view of the 1960 Working Group, modernisation means not only the replacement of uneconomic or obsolete machinery but also the introduction of modern techniques and methods to improve productivity, the reduction of the unit cost of production (which, according to the Group, is on the high side compared with many other countries) and the relief of the operative from strain. The Working Group said :

One of the major effects of modernisation is an increase in the capital cost of equipment and the advantages of modernisation depend on the extent to which this equipment is utilised and maintained. Full machine utilisation involves the adoption by managements of certain management skills which are the essential prerequisites of a modern industry. These include maintenance of good working conditions, supply of appropriate raw materials and spare parts, a proper organisation of their manpower resources including maintenance of good industrial relations, production planning, training, etc. The introduction of new management techniques such as quality control, cost control, work study, etc., is also essential. The implementation of these practices is important even in older units, but in the context of the high cost of modernisation, their adoption in modernised units is imperative.⁴

¹ Resolution (No. 43) concerning the effects of technological developments in the textile industry, adopted by the I.L.O.'s Textiles Committee at its Sixth Session, 1958, may be read with interest in this context (*Official Bulletin*, Vol. XLI, No. 6, 1958, pp. 418-421).

² *Report of the Textile Inquiry Committee, 1958*, op. cit., p. 30.

³ *Ibid.*, pp. 30-31.

⁴ *Report of the Working Group*, op. cit.

The Working Group estimated that Rs. 1,800 million would probably be needed for rehabilitation and modernisation. The programme would entail an annual expenditure of Rs. 300-360 million during the Third Five-Year Plan period.

The Group considered that 15 per cent. of the cotton textile labour force was likely to be thrown out of work during the next five years as a result of the rehabilitation and modernisation proposed by it. The absorption of these workers would not be difficult because the national wastage of labour resulting from death, old age, superannuation, etc., would account for 3 per cent. per year. Provision should be made for a suitable gratuity on superannuation and compensation for loss of employment resulting from rationalisation. The Group also suggested that third-shift working should be encouraged to enable speedier rehabilitation and modernisation, and that the further recruitment of textile workers should be halted as far as possible. A strict register of badlis should be maintained in each area.

Other recommendations of the Group were :

(1) A healthy atmosphere of mutual understanding should be created between labour and management.

(2) In those states where more than one union is recognised, the law should be amended so that management could negotiate only with one union as the spokesman of labour.

(3) Management should encourage suggestion schemes.

(4) Workers should be trained at plant level.

(5) Conditions of promotion in the technical cadre needed improvement and such members of personnel should feel assured of security of service. High-grade technicians in the industry should be enabled to serve on a panel in each centre, on which work units could draw for advice.

Management

In recent years considerable attention has been given (at least among progressive sections) to questions of management and it is recognised that in this sphere also proper training is essential. The 1960 Working Group recognised that, while a number of textile houses are working on fairly modern and efficient lines, the standard of management in other mills leaves much to be desired. The Group stated that the machinery in most of these mills was very old and worn out, but the lack of efficiency on the part of the managements had also been a contributing factor leading to some closures. The abnormal differences in productivity were due partly to differences of management.

As the Group's recommendations on management are of great importance for the future of the industry, one of the relevant paragraphs in its report is quoted below.

The need for better management must be realised by those in industry, and the enthusiasm for the introduction of scientific management practices must come from within the industry. No amount of preaching from outside will have much effect. In this respect the various Millowners' Associations and the Indian Cotton Mills Federation have an important role in educating their weaker members to improve themselves. It would be a good thing if leaders in industry who have evolved sound management policies and practices were to assist management of weaker units and enlighten them on problems of purchase, sales, production planning organisation, industrial

relations, etc. The managements of weaker units and their technical staff should be encouraged to visit some of the best mills in the country and have discussions with the managements and technicians of those mills. Such frequent contacts would enable them to have a better understanding of their own problems and their solutions. In brief, the Working Group would suggest to the industry itself to remodel their managerial standards and improve them by collective thinking and pooling of knowledge. The method of selection for supervisory and managerial positions should also require toning up.¹

Productivity

On account of the leading position occupied by the cotton textile industry in the economy of the country, the increasing home demand for cloth as a result of rising living standards, and the need for stepping up production for exports, the importance of achieving higher productivity in the industry has been recognised for more than a decade.

In India labour is plentiful while capital is scarce. The Government of India requested the I.L.O. in 1952 for experts "to show how productivity and earnings of workers in Indian textile and engineering industries can be raised by the application, in selected plants, of modern techniques of work study and plant organisation, and, in addition, where appropriate, by the introduction of suitable systems of payment by results".² Two members of the team were assigned to the textile industry in Bombay and Ahmedabad. The team demonstrated that it was possible to raise productivity by the introduction of productivity techniques without capital outlay.³

Many developments have since taken place. A national productivity centre, as a part of the Indian Labour Institute, was started in Bombay, as had been recommended by the I.L.O. team. In 1958, the National Productivity Council was established in New Delhi; it now has branches all over India in the various industrial centres.

The Council has been sending teams to various countries to study productivity techniques. A cotton textile industry team visited the United States, Japan, the Federal Republic of Germany, France and Switzerland. Among its more important recommendations were—

(1) that everyone in the industry, whether employer or employee, should strive to produce the greatest quantity of goods or services consistent with quality;

(2) that rationalisation or automation should not be opposed and that such measures should be taken as would reduce production costs and help to maintain and create (instead of limit) employment;

(3) that workloads below a reasonable standard should be avoided, as they are unfair to the industry and to other workers; those above a reasonable standard are unfair to the operatives concerned, economically unsound and psychologically harmful, and eventually lead to waste and lower production;

¹ *Report of the Working Group*, op. cit.

² Expanded Programme of Technical Assistance: *Report to the Government of India on a Productivity Mission* (December 1952-May 1954) (I.L.O./TAP/India/P.2/Geneva, 1955), p. 1.

³ For an account of the initial achievements of the team see *Industry and Labour* (Geneva, I.L.O.), Vol. X, No. 4, 15 Aug. 1953, pp. 149-153. See also Memorandum (No. 35) concerning productivity in the textile industry, adopted at the Fifth Session of the Textiles Committee, 1955, in *Official Bulletin*, Vol. XXXVIII, No. 5, 1955, pp. 161-163.

(4) that a productivity centre for the textile industry should be set up to promote the use and application of tools and techniques and to achieve higher productivity.¹

The team has also suggested standards for mixing cotton for specific counts ; improvements in cards and frames ; the use of modern machines for winding and warping ; the introduction wherever possible of automation or semi-automation, with adequate controls, of processing machinery ; alterations and modifications of buildings and plant layout to improve working conditions ; effective maintenance of equipment and machines ; and quality control and production planning.

On the subject of sharing the gains of productivity, the team suggested that management should agree to share the gains of better productivity with the workers on a just basis.

¹ Indian Productivity Team : *Cotton Textile Industry in U.S.A., Japan, West Germany, France and Switzerland* (New Delhi, National Productivity Council, 1960), pp. 4-10.