Chapter - XI

Economic Growth
CHAPTER XI
ECONOMIC GROWTH

This Chapter discusses the economic growth of the Madras Presidency in which the development of industries and trade are examined.

In order to promote the industrial development of this Presidency, a scheme was submitted in 1905 to the Government of India and was sanctioned on a temporary basis both by that Government and by the Secretary of State. It was proposed to create a separate department to deal practically with the promotion of industries by experiment and advice, as well as with the imparting of theoretical instruction in technical schools and colleges and to place this department under an officer to be styled the Director of Industries and Technical Education.

In 1906, Chatterton was appointed as the first director of industries and technical enquiries. He was entrusted with the work of making a survey of the industries which existed then and to investigate the possibility of creating new industries. He carried on work on these lines with marked success.

In 1908, an industrial conference was held at Ootacamund which was attended by representatives of leading industrial institutes. The object of the conference was to consider the best method of developing further the work which had been begun by the Director of Industrial and Technical Enquiries and also to review the question of the improvement and extension of technical education. The deliberations of the conference took shape in a series of sixty eight resolutions of great value. One of the resolutions passed at the conference was that a permanent department of Industries under the control of an officer named “Director of Industries” was to be created.

The scheme for the establishment of a separate department of industries on a permanent basis was submitted for the sanction of the Secretary of State in March 1909, and his orders were received in the autumn.
But it came into execution only during the time of Pentland when a department of industries was sanctioned in March 1914.

The activities of the department were:

1. General assistance to trade and industry; collection and supply of statistics and other information useful to commerce and industry.
2. Experiments in new industries and industrial processes.
3. Management of Model industries.
4. Assistance to cottage industries.
5. Assistance to agriculturists—mainly through the Pumping and Boring sections.
6. Industrial education.

In addition to formulating the principles on which the Department of Industries should work, the conference submitted a comprehensive series of resolutions specifying in detail the various directions in which industrial development should be fostered. The most important of these were the transfer of industrial institutions from the control of the Educational department to that of the Director of Industries, the formation of a Bureau of Industrial information and an Industrial Museum, the establishing of weaving institutions under the superintendence of experts in textile manufacture approximately similar in character to the Manchester or Bradford Textile schools, the employment of a dyeing expert to report on the state of the dyeing industry and to consider the question of establishing one or more trade dyeing schools on the lines of the Leeds and Bradford Colleges, and the establishment of a leather trade school under the supervision of a leather expert.

The Bureau of Industrial and Commercial Information, which was the intelligence branch of the department was founded as a result of the Industrial
Conference held at Ootacamund in 1908. The purpose of the bureau was to provide information on general industrial and commercial subjects in connection with the existing industries and of projected developments of industries in the Presidency.¹²

The Bureau was responsible for taking measures to assist individuals or firms anxious to start new industries or extend and improve their business connections. It had to furnish information in regard to new processes of manufacture, use of machines, markets for goods, and sources of supply of materials and commodities, prices and openings for capital. It was responsible for indicating the possible source of raw materials and their suitability to various purposes, and providing assistance to find markets for the finished products by placing manufacturers in touch with consumers. The Bureau was also responsible for the collection, compilation and distribution of statistics relating to commerce and industries.¹³

Among the industries which formed the subject of experiment, the following were the most important:

The aluminium industry was first introduced into the Presidency by Chatterton¹⁴ even before he was appointed as the Director of the Industry. Experiments in the manufacture of aluminium vessels were first made in the School of Arts in the beginning of 1898.¹⁵ From the outset there was a good demand from the military authorities and from the Europeans for aluminium vessels and by establishing agents and subsidiary workshops at various places, the Indian demand was also stimulated.
TABLE 11.1

The annual receipts and charges of the aluminium department till it was sold in 1903

<table>
<thead>
<tr>
<th>Years</th>
<th>Receipts Rs.</th>
<th>Charges Rs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1897 - 98</td>
<td>-</td>
<td>3,800</td>
</tr>
<tr>
<td>1898 - 99</td>
<td>44,622</td>
<td>45,014</td>
</tr>
<tr>
<td>1899 - 00</td>
<td>91,432</td>
<td>93,000</td>
</tr>
<tr>
<td>1900 - 01</td>
<td>1,37,452</td>
<td>1,94,937</td>
</tr>
<tr>
<td>1901 - 02</td>
<td>1,84,550</td>
<td>2,34,874</td>
</tr>
<tr>
<td>1902 - 03</td>
<td>1,69,712</td>
<td>2,24,001</td>
</tr>
<tr>
<td>1903 - 04</td>
<td>2,91,583</td>
<td>94,143</td>
</tr>
</tbody>
</table>

Source: *G.T.Boag, Madras Presidency, p.76.*

In 1900, the Indian aluminium company was formed with the view of following up and developing the work of the department of industries. For some time the company worked in conjunction with the department to open up a market in India, and in 1903, it was decided that the time had arrived when private enterprise could be left to carry on the business unaided. Accordingly in September 1903, the company took over the aluminium department of the school of arts, purchasing all the tools, plant and stock after valuation. The results of the valuation showed that the department had made a net profit of about Rs.60,000 during the period it had been pioneering the industry.

CHROME TANNING

One of the chief purposes of the Department of Industry during the period of its existence was the introduction of chrome tanning. The question of the intervention by government in the Madras tanning industry was first
taken up in 1903. The question was considered by government with reference to the economic waste involved in the use of country leather for kavalais or the buckets used by the ryots for well irrigation. Large number of these buckets were required annually by the ryots.

Owing to inferior methods of tanning, the leather perished after a comparatively short period of use and it was suggested that experiments should be made with the object of introducing and popularizing the more enduring chrome leather. In 1903 government sanctioned Rs.2,000 on experiments in the school of arts to determine whether chrome tannery could be successfully carried on in the presidency. The field of chrome tannery was at that time clear.

The experiments at first were conducted on a small scale, the establishment consisting merely of a tanning maistri, a flesher and three coolies but even in the first year the sales amounted to Rs.4,779 and enquiries from all parts of India indicated that the venture had aroused considerable interest. The demand for water buckets, however, was not great at first and it was soon found necessary to embark on the manufacture of boots, shoes and sandals. Chrome leather water buckets gradually became more popular and in the year 1908-09, Rs. 9,000 worth of leather was sold for this one purpose.

The main business of the department always consisted in supplying the demand for footwear, especially sandals. Large orders for sandals were obtained from some Government departments. In 1907-08 alone nearly 20,000 pairs of sandals were sold. The scale of these operations necessitated the removal of the department from the School of Arts and, in March 1908, the department moved over to a tannery of its own at Sembiam near Madras. Commercial side of the venture now began to attract attention. At the end of 1908 protests were made by Messrs. Chambers & Co., the Upper India Chamber of Commerce, and the Madras Chamber against the department's interference with private trade. In July 1910, the Government accepted an
offer from the Rewah Darbar to purchase the plant of the tannery for the sum of Rs. 50,000, the whole stock also being taken over at a valuation. The transfer was finally effected in the beginning of 1911.  

TABLE 11.2
THE ANNUAL RECEIPTS AND CHARGES TILL THE CHROME TANNING FACTORY WAS SOLD IN 1910-11

<table>
<thead>
<tr>
<th>Year</th>
<th>Receipts</th>
<th>Charges</th>
</tr>
</thead>
<tbody>
<tr>
<td>1903-04</td>
<td>41</td>
<td>2,200</td>
</tr>
<tr>
<td>1904-05</td>
<td>4,470</td>
<td>5,495</td>
</tr>
<tr>
<td>1905-06</td>
<td>25,630</td>
<td>49,435</td>
</tr>
<tr>
<td>1906-07</td>
<td>51,465</td>
<td>72,322</td>
</tr>
<tr>
<td>1907-08</td>
<td>85,357</td>
<td>88,728</td>
</tr>
<tr>
<td>1908-09</td>
<td>1,07,798</td>
<td>1,35,464</td>
</tr>
<tr>
<td>1909-10</td>
<td>83,971</td>
<td>99,705</td>
</tr>
<tr>
<td>1910-11</td>
<td>92,585</td>
<td>33,627</td>
</tr>
</tbody>
</table>

*Source: G.T. Boague, Madras Presidency 1881-1931, Government Press, Madras, 1933, P.77*

The net cost to Government was Rs. 55,000 odd spreading over a period of seven years. The chrome leather industry was now firmly established in this presidency and there is no doubt that the Government of Madras helped materially to contribute towards the result.  

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WEAVING

TABLE 11.3
COTTON MILL INDUSTRY IN THE MADRAS PRESIDENCY

<table>
<thead>
<tr>
<th>Years</th>
<th>Cotton Mills</th>
<th>Looms</th>
<th>Spindles</th>
<th>Employees</th>
</tr>
</thead>
<tbody>
<tr>
<td>1891</td>
<td>8</td>
<td>555</td>
<td>173,000</td>
<td>5,900</td>
</tr>
<tr>
<td>1901</td>
<td>11</td>
<td>1735</td>
<td>288,000</td>
<td>12,600</td>
</tr>
<tr>
<td>1911</td>
<td>12</td>
<td>2023</td>
<td>339,500</td>
<td>18,860</td>
</tr>
<tr>
<td>1921</td>
<td>15</td>
<td>2727</td>
<td>423,232</td>
<td>24,118</td>
</tr>
</tbody>
</table>


Experiments in improved methods of weaving were commenced in the beginning of 1901-02 and a few fly-shuttle looms were set up in the school of Arts with the object of obtaining experience as to their working capacity and data regarding their possibilities. At the same time certain improved methods of sizing chiefly hand-sizing, tried. About the beginning of next year the looms were removed to the Anjuman Buildings and the experiments continued there. At first the manufacture of Madras handkerchiefs was taken up. Subsequently other classes of indigenous goods such as saris and dhotis. These experiments were sufficiently encouraging.

In 1905 it was decided to continue the experiment in a properly organized handloom weaving factory. A weaving factory was opened at Salem in 1906 where there was a large weaver population, with the object of introducing the factory system among them and of improving the preparatory processes such as warping and sizing, so as to increase the ratio of profit.

Experiments were made with the fly-shuttle loom and various small improvements were effected and the type of loom ultimately adopted at the Salem Factory was the old English fly-shuttle loom modified as far as
possible in the direction of simplicity so as to suit it for the manufacture of indigenous cloth.\textsuperscript{32}

Fly-shuttle looms were made in Conjeevaram and Saidapet in the Chingleput district. The workers carried on the industry generally with their own funds and were able to market the looms themselves. The workers were not solely engaged in making looms but made them side by side with their other carpentary works.\textsuperscript{33}

The use of the fly-shuttle spread with considerable rapidity. The factory was worked on a commercial scale so far as an experimental factory could be run on commercial lines. Besides cotton goods, silk cloths and shawls were manufactured and sale receipts in some years amounted to nearly Rs.12000.\textsuperscript{34} Weaving contests and exhibitions of weaving appliances were held from time to time and proved to be a valuable method of bringing home to the weaving community the advantages of improved appliances.\textsuperscript{35}

The factory system, however, proved unpopular. The weavers preferred to continue their hereditary practice of working in their own homes assisted by their women and children and disliked being subjected to the discipline and regular hours of a factory. Difficulty was also found owing to the poverty of the weaving class in inducing them to co-operate in the purchase or manufacture of warps or in any other respect. Towards the end of the year 1910, the factory at Salem was closed. But it was proposed to create larger and more effective factory at Madura where the weaving community was more advanced and more numerous. With the sanction of the Secretary of State, it was proposed to import a weaving expert to hold charge of this institution, and to provide in it for a thorough technical instruction in the industry. But this fact proved the factory’s undoing. The Chamber of commerce entered a protest and the factory was closed in September 1910.\textsuperscript{36}

The Government appointed two peripatetic weaving parties in 1913 and 1914 to introduce improved methods and appliances among weavers in
the several weaving centres. Their number was increased to ten in 1920. Each party consisted of a head maistri, an assistant maistri and three weavers. The efforts of these parties were principally directed (1) to persuade the local weavers to adopt the fly-shuttle slay and to carry out the necessary alteration in the country looms to enable this to be done and (2) to educate weavers to weave fine cloth.

**PUMPING STATIONS**

The Industries Department carried on an extensive and important work in connection with the development of irrigation by pumps driven by oil-engines. In this, as in other matters, the initiative came from Chatterton. He conducted as early as 1902 a series of important experiments in various pumping stations in the Presidency. The result was a considerable extension of irrigation supplied by pumps driven by internal combustion engines.

This method of irrigation at once attracted the attention to the questions of subterranean water-supply. Towards the end of 1906, a Deputy Collector accompanied by a boring party was placed on special duty in the chingleput district to promote the construction of wells. In January 1908, the work was taken over by the pumping Branch of the Department of Industries, and a very large number of borings were carried out with the result that an extensive underground water-supply was discovered in the Courtilliyar basin. Borings made in connection with the installations of oil-engines elsewhere disclosed the presence of other large underground sources of water-supply especially in the Palar and in the Pennar basins.

Accordingly in February 1909, the extension of boring operations to other districts was sanctioned and by the end of 1910 boring operations were extended throughout the Presidency. By supplying the ryot population with the tools necessary for the conduct of boring, the department greatly reduced the risks, and increased the incentives, connected with the sinking of wells.
matter of great moment in extensive tracts of the Presidency. The department also furnished advice as to the best types of machinery, and especially of motor driven pumps to be purchased. The pumping installations erected up to 31\textsuperscript{st} March 1910 were supplying irrigation for 25,000 acres.\textsuperscript{44} The pumping and boring section continued to do much useful work.

The work of the Engineering Branch consisted mainly of the conduct of boring operations, the maintenance of pumping installations, the supply, erection and maintenance of pumping plants suitable for irrigation as well as of industrial machinery. It was also responsible for the investigation of applications for loans under the Agriculturists Loans Act and of certain applications received under the State Aid to Industries Act.\textsuperscript{45} The activities of this section developed very much. In 1920, there were 1 Assistant Industrial Engineer, 13 Supervisors, 80 boring maistris.\textsuperscript{46}

**PENCIL MAKING PLANTS**

On the outbreak of War some pencil making plants - relics of former Swadesi enthusiasm were taken over by the department and pencil manufacture was resuscitated in 1915.\textsuperscript{47} The services of an expert were secured and in a comparatively short space of time he got the plant into working order and turned out pencils with a reasonable finish. In 1917, 40000 dozens of pencils, in 1918, 146664 dozens of pencils and in 1919, 84000 dozens of pencils were sold. The factory proved a commercial success and it was handed over to a syndicate in November 1918.\textsuperscript{48}

**FRUIT PRESERVING FACTORY**

In 1919, the Government sanctioned the undertaking of experiments in connection with the preservation of fruits.\textsuperscript{49} The object of starting the Institute was to create an organized fruit -preserving industry on the Nilgiris coupled with the necessary co-development of systematized fruit culture not only with
a view to supply the requirements of a factory but also to supply the public needs and to benefit the fruit-growers. The results of the preliminary experiments were so encouraging that it was decided to build a factory and instal the requisite plant for fruit-preserving. The construction of the factory building was completed in June 1922. The manufacture of jam on a commercial basis was begun in July of the same year. All these stimulated the cultivation of fruit trees on the Nilgiris.

**SUGAR-CURING**

A sugarcane-crushing factory was first started at Pallapaliyam in 1912 and the object of its establishment was to evolve a suitable design of furnace capable of boiling the cane juice into jaggery with megass as fuel, thus rendering any additional or other fuel unnecessary; to demonstrate to agriculturists the increasing percentage of extraction of juice from sugarcane with the use of power-driven mills in place of bullock-driven iron mills. It was under the control of the Director of Agriculture until 1920 when it was transferred to the Director of Industries. The factory worked successfully.

**INDUSTRIAL EDUCATION**

To foster the development of industries in the presidency Industrial Education was attended to. The History of the educational department during the period presents a record of steady development in Industrial Education. The premier technical and Industrial institution in the presidency was the College of Engineering, Madras. In 1904 a Committee was appointed to consider the requirements of this college in the matter of accommodation and laboratories, the necessity for the revision of the syllabus of studies and the curriculum and other connected questions. The committee made various recommendations which were substantially accepted by Madras Government.
in 1906 and embodied in the revised rules of the college issued in March 1907.\[55\]

Among the changes made, the important changes were the extension of the college course from two to four years and the removal of the college to Guindy, a more suitable location, outside the municipal limits of Madras, where an extensive site was secured for the construction of an entirely new building with the necessary workshops and laboratories, hostels for the students and residences for the principal and professors. If it had not been removed to this site the expansion of the college would have been impossible.\[56\]

The only institution in which any artistic training was given in this presidency was the Government School of Arts at Madras.\[57\] This school had also an industrial side, and until 1905 that branch was especially in evidence owing to the extensive operations carried on in aluminium ware, woodwork, textile fabrics and chrome leather. In 1904 the question of the complete reorganization of the school was taken up and orders were passed in 1905 limiting the scale of industrial operations and defining in general terms the lines on which the school should in future be conducted.\[58\] The scope of the teaching was restricted to (i) pure design and (ii) design as applied to industries such as metal-work, the lacquer trade and wood-carving. A superintendent was appointed towards the close of 1907 and in 1908 other important changes were introduced in the constitution and working of the school, while in the following year the staff was completely reorganized. These measures were productive of very satisfactory results.\[59\]

In 1908 Government summoned a conference of gentlemen interested in the conduct of the chief industries of the Presidency in order to determine the lines on which industrial development should proceed. This conference recommended among other things, the employment of a dyeing expert to report on the state of that industry and to advise on the question of the
establishment of one or more trade dyeing schools on the lines of the Leeds and Bradford colleges, the establishment of weaving institutions of a character similar to the Manchester and Bradford textile schools and the opening of a leather trade school in Madras.60

The Government institutions for industrial education were few. They were the Government Industrial Schools at Bellary and Calicut, the Government Trade School, Mangalore, the Government School of Technology-Madras, the Leather Trades Institute, the Textile Institute and the School of Arts and Crafts.61 During the regime of Lawley the appointment of special officer to be styled the Superintendent of Industrial Education to supervise and extend industrial education in the Presidency was sanctioned. Chatterton was appointed as Superintendent of Industrial Education.62

The development of industrial education was also provided by aided institutions. The control of the industrial work in aided schools was transferred to the Director of Industries in 1910.63 A full-time Inspector of Industrial School was appointed in 1919.64 The development in government grant to aided industrial schools can be seen from the following table.

**TABLE 11.4**

**THE RISE IN GOVERNMENT GRANT TO AIDED INDUSTRIAL SCHOOLS**

<table>
<thead>
<tr>
<th>Years</th>
<th>Number of Schools Aided</th>
<th>Number of pupils on the roll</th>
<th>Government grant Rs.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1910-1911</td>
<td>43</td>
<td>2,094</td>
<td>23,665</td>
</tr>
<tr>
<td>1915-1916</td>
<td>37</td>
<td>1916</td>
<td>48,840</td>
</tr>
<tr>
<td>1920-1921</td>
<td>37</td>
<td>1696</td>
<td>77,504</td>
</tr>
</tbody>
</table>

*Source: Annual Reports of the Department of Education 1910-1911 to 1920-1921.*
The Leather Trades Institute was opened in 1915\(^65\) with the object of improving the method of manufacturing, while the conception of the school course was that it should consist mainly of practical work in the school tannery, the practical work being supplemented by a measure of theoretical instruction.\(^66\)

Madras Trades School which later became Government School of Technology was started in 1916\(^67\) with the object of supplying the industrial public with intelligent and skilled engineers, mechanics, electricians and plumbers equipped with sound theoretical and practical knowledge.\(^68\) The subjects taught were (i) Mechanical Engineering, (2) Electrical Engineering, (3) Plumbing, (4) Electrical Wiring, (5) Mechanical Drawing, (6) Printing.\(^69\) The strength of the school in the year 1918-1919 was 250 and it rose to 370 in 1919-1920.\(^70\)

**RURAL INDUSTRIES**

The chief rural industries of the presidency were cotton ginning, oil pressing, rice curing and leather industry.
### TABLE 11.5
RURAL INDUSTRIES OF THE MADRAS PRESIDENCY

<table>
<thead>
<tr>
<th></th>
<th>1912</th>
<th></th>
<th>1917</th>
<th></th>
<th>1920</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No of Factories</td>
<td>No Employed</td>
<td>No of Factories</td>
<td>No Employed</td>
<td>No of Factories</td>
<td>No Employed</td>
</tr>
<tr>
<td>Cotton Ginning &amp; cleaning works</td>
<td>60</td>
<td>5563</td>
<td>144</td>
<td>12,702</td>
<td>187</td>
<td>14,562</td>
</tr>
<tr>
<td>Oil Pressing</td>
<td>1</td>
<td>57</td>
<td>11</td>
<td>352</td>
<td>12</td>
<td>368</td>
</tr>
<tr>
<td>Ricecuring</td>
<td>68</td>
<td>3224</td>
<td>140</td>
<td>8156</td>
<td>278</td>
<td>10,432</td>
</tr>
</tbody>
</table>

Source: Statistics of British India - XIX. Factories, Reports for the years from 1912 to 1920.

The ginning and pressing of cotton was an important subsidiary industry to agriculture and was carried on in the several ginning and pressing factories spread throughout the major cotton growing tracts. The number of such works increased and by the year 1920, the presidency had in all about 187 ginning and pressing works in which nearly 14,562 persons were employed. The largest number was found in the Coimbatore, Bellary and Tinnevelly districts, which had the largest areas under cotton. Ginning by hand was carried on to some extent in villages.

Next to cotton works, the growing and best established factory industry in the presidency was the rice mills. The number of rice mills, small and large, totalled 278 during the year 1920, where as it was only 68 in 1912.

As a premier rice-producing province, Madras owned one-third of the total rice mills in India. Within the Madras presidency, Tanjor had the
largest number of mills. Next in the order of importance were the North Arcot, South Arcot, Trichnopoly, Madura and west Godavari Districts.74

Generally mills were located in areas served by the railway or within short distances of railway stations. The rice milling industry was able to provide employment to ryots as a subsidiary occupation. The number of labourers employed in the 278 larger mills totalled 10,432 in 1920.75

Oil Pressing was an important industry which served a large section of the population, as oil formed one of the principal items of diet. The number of the oil pressing industry increased gradually from one in the year 1912 to twelve in 1920 providing employment to three hundred and sixty eight persons.76

It was carried on as a family occupation by a class of people known as “Vaniyars” or oilmongers, whose hereditary profession was crushing and selling oil. Oil pressing was done by them from ginelly, castor, coconut and groundnut seeds in wooden mills, (Chekkus) driven by a pair of bulls.77

The Kind of oil pressed in different districts depended upon the oil seeds grown there or in the neighbourhood. In Malabar and Tanjore the chief oil extracted was coconut, while in the circars and parts of the south gingelly oil was largely extrated. In Ramnad, South Arcot, Coimbatore and other places where groundnut was grown in large quantities, groundnut oil was pressed both for consumption and export.78 In the ceded districts castor was grown in abundance and castor oil was pressed in the wooden mills.79

The hides and skins and leather industry was one of the most important industries in the Madras Presidency. Tanning was one of the earliest industries besides agriculture, which developed here. Though modern tanneries were growing in number, tanning as a cottage industry was carried on in many villages. They purchased poor quality hides and tanned them in their houses or they received hide for tanning from ryots who paid them
wages for preparing them. The 1920 census showed that there were 40,233 persons in the presidency employed in this industry.\footnote{80}

**COMMERCE**

The period was marked by general improvement in trade. External trade was carried on with foreign countries, with Non-British Indian Ports and with British ports in other presidencies.

**TABLE 11.6**

**FOREIGN TRADE OF MADRAS PRESIDENCY**

<table>
<thead>
<tr>
<th>Country</th>
<th>Percentage share of total foreign trade</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1904-1905</td>
</tr>
<tr>
<td>UK</td>
<td>45.8</td>
</tr>
<tr>
<td>CEYLON</td>
<td>12.1</td>
</tr>
<tr>
<td>STRAITS</td>
<td>3.4</td>
</tr>
<tr>
<td>FRANCE</td>
<td>8.7</td>
</tr>
<tr>
<td>GERMANY</td>
<td>5.8</td>
</tr>
<tr>
<td>NETHERLANDS</td>
<td>0.5</td>
</tr>
<tr>
<td>BELGIUM</td>
<td>5.1</td>
</tr>
<tr>
<td>JAPAN</td>
<td>3.0</td>
</tr>
<tr>
<td>AMERICA</td>
<td>4.6</td>
</tr>
<tr>
<td>OTHER</td>
<td>9.0</td>
</tr>
</tbody>
</table>

*Source: Annual Statement of the Sea-Borne Trade and Navigation of the Madras Presidency for the years shown*

External trade was encouraged by the Madras government. In order to facilitate external trade the government facilitated the building of new ships. There was an increase of one hundred and seventy in the number of vessels entering the ports of Madras Presidency from foreign ports.\footnote{81} During the year 1904 alone 45 vessels of an aggregate tonnage of 1,411 tons were built, and 45 vessels of 1,476 tons were registered under Act X of 1841 at the several
ports of the Madras presidency, chiefly at calicut, Mangalore, Kilakarai and Masulipatam. Of the total trade 45% was with united kingdom, 13% with Ceylon, 9% with France, 6% with Germany, 5% with Belgium and 4% with the straits settlements.

The value of external trade of the Presidency increased steadily and it rose from Rs.27,85,50,000 in 1900-1901 to Rs.36,32,40,861 in 1905 - 06 to Rs.48,03,73,250 in 1910-11, the increase being mostly under foreign trade. The total customs revenue of the Presidency (imports and exports) excluding refunds and drawbacks rose from Rs.43,37,468 in 1905-06 to Rs.68,39,573 in 1910-11.

The chief items of export were cotton, coffee, sugar, tea, myrabolams, sennaleaf, rawskins, hides, jute, manures, mica, castor-seed, gingelly - seed, cotton twist and yarn, handkerchiefs, coir manufactures and tanned hides.

### TABLE 11.7
**PRINCIPAL ARTICLES OF EXPORT**

<table>
<thead>
<tr>
<th>Year</th>
<th>Raw cotton</th>
<th>Hides &amp; Skins</th>
<th>Oil seeds</th>
<th>Grain &amp; pulse</th>
<th>Coffee</th>
<th>Tea</th>
</tr>
</thead>
<tbody>
<tr>
<td>1895-96</td>
<td>160</td>
<td>337</td>
<td>108</td>
<td>85</td>
<td>224</td>
<td>21</td>
</tr>
<tr>
<td>1900-01</td>
<td>154</td>
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<td>1905-06</td>
<td>229</td>
<td>91</td>
<td>100</td>
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<td>1910-11</td>
<td>414</td>
<td>375</td>
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<td>1915-16</td>
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<td>287</td>
<td>406</td>
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<td>1920-21</td>
<td>227</td>
<td>316</td>
<td>252</td>
<td>22</td>
<td>133</td>
<td>205</td>
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*Source: Annual Statement of the Sea-Borne Trade and Navigation of the Madras Presidency for the years shown*

There was general increase in the total exports from the Presidency. The total exports exceeded the imports by Rs. 638 lakhs in 1904 - 1905 which represented the balance of trade in favour of the presidency.
excess was nearly 70% more than in the previous years and it was due to unprecedented exports of cotton.

There was progress in the trade of the province and particularly a large increase in “Yarns and fabrics” chiefly cotton. The farms opened for the study of improvement in cotton in various districts functioned effectively which led to an increase in the yield of cotton and there by a large increase in the exports of yarns and fabrics chiefly cotton in the following years.\textsuperscript{87}

During the year 1904-1905 there was a large increase under the head of yarns and textile fabrics chiefly cotton. The increase under this head was about 62.8 percent.\textsuperscript{88} As per the Report of 1910-1911 there was an increase of Rs.152.56 lakhs or 8 percent under exports of Indian produce, the chief articles contributing to the increase being raw cotton, coffee or tea. Good crops and high prices for raw cotton simulated cultivation and increased the value of exports by 30 percent.\textsuperscript{89}

The increase in the export of cotton continued during the following years of the period of study except during the year 1915-1916 as is shown in the following table.

\begin{table}
\centering
\caption{THE INCREASE IN THE EXPORT OF COTTON}
\begin{tabular}{|c|c|}
\hline
Year & Exports (in maunds) \\
\hline
1913-1914 & 1,078,000 \\
1914-1915 & 11,70,000 \\
1915-1916 & 992000 \\
1916-1917 & 1285000 \\
1917-1918 & 1307000 \\
1918-1919 & 1362000 \\
1919-1920 & 1511000 \\
\hline
\end{tabular}
\end{table}

\textit{Source: Madras Administration Reports for the years 1913-1920.}
The reason for the fall in the year 1915-1916 was that the area under cotton decreased during that one year considerably in all the important cotton growing districts, as fall in the prices was anticipated owing to the war in Europe.\textsuperscript{90}

The traders were greatly benefited by the cotton farms opened in 1901 in Bellary and Tinnevelly.\textsuperscript{91} Apart from the increase in the export of cotton, there was also an increase in the exports of coffee, sugar, tea, myrabolams, senna leaf, rawskins, hides, jute, manures, mica, castor-seed, gingelly - seed, cotton twist and yarn, handkerchiefs, coir manufactures and tanned hides.\textsuperscript{92}

To promote trade reforms were introduced. The reforms introduced at the instance or under the orders of the Government of India were the creation of an Imperial Customs service and the formation of a separate audit section for the audit of the Customs accounts. The chief measure adopted for facilitating the conduct of work by merchants was the reorganization of the establishments of the Madras Custom House with the appointment of two additional Appraisers for the Custom House.\textsuperscript{93}

So long as goods landed at the port were being stored in the customs sheds close to the office of the Collector of customs. A new import shed was constructed in 1908 by the Madras Port Trust in their own premises in the beach at a distance from the customs treasury and office.\textsuperscript{94}

Another important reform introduced during the period was the transfer of the control of the outports and land customs stations from the officers of the Salt and Abkari department to the Collector of Customs, Madras. To make the administration of the out ports more efficient a scheme was prepared and introduced, with the sanction of the Government of India with effect from the 1st April 1910 for placing the executive administration of the outports under the control of the Collector of Customs.\textsuperscript{95} Madras, although the establishment formed part of the Salt and Abkari department and so
enjoyed the advantages in the way of recruitment and promotion that accrue to it as part of a large department.96

The Collector of Customs or one of his trained assistants inspected every outport and land customs station once in each half-year. Intermediate inspections, inspections of the smaller ports and land customs stations and disposal of the numerous petty matters which it was not necessary or desirable to refer to Madras were done by five trained Inspectors of Customs who were given each a certain number of the outports and land customs stations. Reference on doubtful points of customs law were made to the Collector of Customs, Madras, as it should, and hence there was a great improvement in the certainty and uniformity of customs.97

The internal trade with other provinces and other presidencies was promoted. The value of trade with other presidencies and interportal trade with in the presidency amounted in 1904-05 to Rs. 1,097.25 lakhs or 32.40 lakhs more than in the previous years.98 The goods imported from other provinces were grain and pulse, salt, kerosene-oil and coal and the export items were raw cotton, oil seeds, tobacco, rice, gingelly-oil, provisions, salt, oil seeds, betel-nuts and sugar were exported.99

The administration of the Madras port was transferred to the Harbour Trust board from 1st Dec 1904.100 The trade returns showed large increases both under imports and exports, the port of Madras heading the list under each, cochin coming next to it in imports, and Tuticorin in exports.101

During Arthur Lawley’s administration a native Chamber of Commerce called the South India Chamber of Commerce came into existence in Madras City.102 The Madras Exhibition was organized to encourage Indian industrial enterprise on a small scale in 1915 and 1917. Both yielded a surplus for the war fund.103
IMPROVEMENT IN PUBLIC WORKS

The outlay on buildings, communication, and miscellaneous public improvements under the head “Provincial-Civil Works (Original Works)” steadily increased. The expenditure in the quinquennium ending 1910-11 being Rs. 1,48,16,698 as against Rs. 1,00,42,411 in the previous quinquennium, while the contributions rose from Rs. 15,65,021 to Rs. 18,39,279. The following were among the more important works which were undertaken under “Communications”:

1. the construction of a bridge over the Indravati river in the Vizagapatam district on the road from Jeypore to the boundary of the Central Provinces, at an estimated cost of Rs. 3,67,000, towards which the Maharaja of Jeypore contributed 11/2 lakhs of rupees. This bridge opened up communication with the fertile and populous taluk of Nowrangpur;

2. the bridges over the Cauvery and Coleroon at Trichinopoly, forming an important link of communication between Madras and the southern districts, and the ghat road from Kuruwanuth to Kumili, which was the only means of communication from Madura to Travancore were taken over by the Public Works Department from the respective district boards;

3. the old Napier Bridge over the Cooum on the Beach road at Madras was replaced by an entirely new structure;

4. the construction of a road to connect Kodaikanal with the plains via “Law’s trace” at an estimated cost of Rs. 5,65,000, towards which the Madura District Board agreed to pay one lakh of rupees.

The period was marked by special attention to sanitary works. Various water-supply and drainage schemes were undertaken by the Public Works
Department on behalf of local corporations, and the Sanitary Engineer’s staff was strengthened to cope with the increased work.

Special interest was taken in hospitals with the result that the principal Government hospitals in Madras were brought up to date at much expense by the extension and improvement of their accommodation.\textsuperscript{107}

In the annual administration reports are found, long lists of important buildings erected during the period- hospital, schools, public offices, etc. Special mention may be made here of-

1. the Central Record office constructed at Madras at a cost of Rs. 3,40,235 for the Preservation of valuable records of old date scattered throughout the presidency was opened for use in March 1909\textsuperscript{108} and
2. the Agricultural College and Research Institute at Coimbatore, built at a cost of Rs. 7,57,931.\textsuperscript{109}

During the governorship of pentland in 1913 the foundation stone was laid for the new university library building to be constructed at a cost of four lakhs of rupees.\textsuperscript{110} The new corporation building in Madras appropriately named after the father of local self Government - Ripon was inaugurated in 1913 by the viceroy Lord Hardinge.\textsuperscript{111} The foundation stone for this building in immaculate white constructed on Indo - Saracenic style, was laid by Minto.\textsuperscript{112} The names of three viceroys were associated with this “Temple of civic rights”.\textsuperscript{113}

Thus the development in the industries, trade and publicworks was discussed in this chapter. To promote industry and trade transport was developed which will be discussed in the other chapter.
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