

REPORT

ON AN INQUIRY INTO

The Silk Industry in India

BY

H. MAXWELL-LEFROY,

Imperial Silk Specialist and

E. C. ANSORGE, I.C.S.

VOLUME II

Present Condition of the Silk Trade of India

BY

E. C. ANSORGE, I.C.S.



1916

CALCUTTA

SUPERINTENDENT GOVERNMENT PRINTING, INDIA
1917

R
XB (M73) 2M6

M17.2

16501

Price Rs. 1 As. 6 or 2s. 3d.

Report
On an Inquiry into the Silk Industry
in India

**Agents for the Sale of Books Published by the
Superintendent of Government Printing, India, Calcutta.**

IN EUROPE.

Constable & Co., 10, Orange Street, Leicester Square,
London, W.C.
Kegan Paul, Trench, Trübner & Co., 68-74, Carter
Lane, E.C., and 25, Museum Street, London, W.C.
Bernard Quaritch, 11, Grafton Street, New Bond
Street, London, W.
P. S. King & Sons, 2 & 4, Great Smith Street, West-
minster, London, S.W.
H. S. King & Co., 65, Cornhill, and 9, Pall Mall,
London.
Grindlay & Co., 54, Parliament Street, London, S.W.
Luzac & Co., 46, Great Russell Street, London, W.C.
W. Thacker & Co., 2, Creed Lane, London, E.C.
T. Fisher Unwin, Ltd., 1, Adelphi Terrace, London,
W.C.
Wm. Wesley & Son, 28, Essex St., Strand, London.
B. H. Blackwell, 50 & 51, Broad Street, Oxford.
Deighton Bell & Co., Ltd., Cambridge.
Oliver and Boyd, Tweeddale Court, Edinburgh.
E. Ponsonby, Ltd., 116, Grafton Street, Dublin.
Ernest Leroux, 28, Rue Bonaparte, Paris, France.
Martinus Nijhoff, The Hague, Holland.

IN INDIA AND CEYLON.

Thacker, Spink & Co., Calcutta and Simla.
Newman & Co., Calcutta.
R. Cambray & Co., Calcutta.
S. K. Lahiri & Co., Calcutta.
B. Banerjee & Co., Calcutta.
The Indian School Supply Depot, 309, Bow Bazar,
Street, Calcutta, and 226, Nawabpur, Dacca.
Butterworth & Co. (India), Ltd., Calcutta.
Rai M. C. Sarcar Bahadur & Sons, 75-1-1, Harrison
Road, Calcutta.
The Weldon Library, 18-5, Chowringhee, Calcutta.
Standard Literature Company, Limited, Calcutta,
Lal Chand & Sons, Calcutta.
Higginbotham & Co., Madras.
V. Kalyanarama Iyer & Co., Madras.
G. A. Natesan & Co., Madras.
S. Murthy & Co., Madras.
Thompson & Co., Madras.
Temple & Co., Madras.
P. R. Rama Iyer & Co., Madras.
Vas & Co., Madras.
E. M. Gopalakrishna Kone, Madras.
Thacker & Co., Ltd., Bombay.
A. J. Combridge & Co., Bombay.
D. B. Taraporevala, Sons & Co., Bombay.
Radhabai Atmaram Sagoon, Bombay.
Sunder Pandurang, Bombay.
Gopal Narayan & Co., Bombay.
Ram Chandra Govind & Son, Bombay.
A. H. Wheeler & Co., Allahabad, Calcutta and Bombay.
N. B. Mathur, Supt., Nazir Kanun Hind Press,
Allahabad.
Rai Sahib M. Gulab Singh & Sons, Mufid-i-Am Press,
Lahore.
Rama Krishna & Sons, Lahore.
Supt., American Baptist Mission Press, Rangoon.
Manager, the "Hitavada," Nagpur.
S. C. Talukdar, Proprietor, Students & Co., Cooch
Behar.
A. M. & J. Ferguson, Ceylon.
Manager, Educational Book Depôts, Nagpur and
Jubbulpore.*
Manager of the Imperial Book Depot, 63, Chandney
Chauk Street, Delhi.
Manager, "The Agra Medical Hall and Co-operative
Association, Ltd." (Successors to A. John & Co.,
Agra).*
Supt., Basel Mission Book and Tract Depository,
Mangalore.*
P. Varadachary & Co., Madras.*
H. Liddell, Printer, etc., 7, South Road, Allahabad.*
Ram Dayal Agarwala, 184, Katra, Allahabad.*
D. C. Anand & Sons, Peshawar.*
Manager, Newal Kishore Press, Lucknow.*

* Agents for the Sale of Legislative Department publications only.

REPORT

ON AN INQUIRY INTO

The Silk Industry in India

BY

H. MAXWELL-LEFROY,

Imperial Silk Specialist and

E. C. ANSORGE, I.C.S.

VOLUME II

Present Condition of the Silk Trade of India

BY

E. C. ANSORGE, I.C.S.



1916

CALCUTTA
SUPERINTENDENT GOVERNMENT PRINTING, INDIA
1917

CONTENTS.

PAGE.

INTRODUCTION

v

CHAPTER I.—THE SILK TRADE IN BOMBAY.

1. Trade of Bombay Port Town and Presidency	1
2. Uncertainty of figures for Railborne Trade	2
3. Consumption of raw silk in Bombay	4
4. Imports of foreign raw silk	6
5. Sources of imports and changes in their nature	8
6. Import trade in former years	12
7. Silk manufactures	14
8. Foreign manufactures. Imports of silk yarns, noils and warps into India	17
9. Goods of silk mixed with other materials	20
10. Silk piece-goods	21
11. Other silk manufactures and silk substitutes (mercerised cotton and artificial silk)	23
12. Organization of the silk trade	24
13. Trade in silk (by rail and coastwise) between Bombay and other provinces	25
14. Internal trade in silk	27
15. The Silk Industry in the Bombay Presidency	29
16. Silk in Poona and Ahmedabad, and causes of decline	30
17. Silk in Surat	31
18. Decline of the Silk Industry in the Bombay Presidency	33

CHAPTER II.—THE SILK TRADE IN MADRAS.

1. Raw silk imports	35
2. Consumption of China and Indian raw silk in the Presidency	36
3. Decline of Bengal raw silk in the Presidency	38
4. Methods of improvement	40
5. Raw silk exports by sea	41
6. Exports by rail	46
7. Silk substitutes: artificial silk and mercerised cotton	46
8. Silk manufactures. Foreign imports	47
9. Silk manufactures. Indian imports	48
10. Silk manufactures. Exports	49
11. Weaving in the Madras Presidency: Industrial methods. The "Big Conjeeveram Urban Weavers' Union."	51
12. Industrial condition	54

CHAPTER III.—THE SILK TRADE IN THE PUNJAB AND NORTH-WEST FRONTIER PROVINCE.

1. Raw silk. The transfrontier import of Kashmir silk	55
2. Punjab trade in raw silk and decline of Indian silk	57
3. Nature of raw silk in use in the Punjab	62
4. Silk substitutes	64
5. Methods in trade in raw silk from Yarkand and Bokhara	65
6. Industrial methods	66
7. Exports of raw silk	68
8. Silk manufactures. Foreign and Indian imports. The silk trade in the Punjab	69



	PAGE.
9. The silk trade in Peshawar	72
10. Causes of the decline of Indian manufactures	72
11. Exports of silk manufactures	73
12. Table of imports and exports	74
APPENDIX.—Statement showing silk, waste and cocoons produced in Kashmir	75

CHAPTER IV.—THE SILK TRADE OF INDIA.

SUMMARY AND CONCLUSION.

1. Raw silk exports	76
2. Share of each province and destination of exports	77
3. Exports of silk manufactures	79
4. Imports by sea. Raw silk	80
5. Imports by sea. Silk manufactures	81
6. Mercerised cotton yarn	85
7. Artificial silk yarn	86
8. Re-exports of foreign silk	87
9. Transfrontier trade	88
10. Estimates of total imports and exports	91
11. The Silk Industry in India. Estimate of total production	94
12. The census figures	96
13. Weaving in Benares	97
14. Winding and winding waste	98
15. Summary	100

APPENDIX A.—Effect of the War upon the Silk Trade in India

APPENDIX B.—(Tables).

Table I.—Imports of raw silk and waste into China from Bombay	105
„ II.—Exports of Indian raw silk	106
„ III.—Exports of raw silk, showing share of each province, quantity in lbs.	107
„ IV.—Exports of raw silk, showing share of each province, value in Rs.	107
„ V.—Exports of reeled silk and chassam from Bengal, Bombay and Sind	108
„ VI.—Exports of raw silk, chassam, and cocoons from Calcutta (in bales)	109
„ VII.—Exports of raw silk, showing countries of final destination	110
„ VIII.—Exports of Indian silk manufactures	110
„ IX.—Exports of silk manufactures from Bengal, Bombay and Madras	111
„ X.—Exports of silk piece-goods from Calcutta (in bales)	111
„ XI.—Exports of silk manufactures, showing countries of final destination	112
„ XII.—Imports of raw silk	113
„ XIII.—Imports of silk manufactures	113
„ XIV.—Imports of silk manufactures, showing countries of consignment	114
„ XV.—Re-exports of foreign silk	115

The following Statements and Returns have, among others, been made use of for the compilation of the Statistics contained in this report :—

Sea-borne Trade.

Annual Statements of the Sea-borne Trade of British India (available up to 1913-14).

Annual Statements of the Sea-borne Trade and Navigation of Bombay (available to 1914-15). Include coastwise Trade.

Annual Statements of the Sea-borne Trade and Navigation of Bengal (available to 1914-15).

Annual Statements of the Sea-borne Trade and Navigation of Madras (available to 1914-15).

Annual Statements of the Sea-borne Trade and Navigation of Sind (available to 1914-15).

Annual Statements of the Sea-borne Trade and Navigation of Burma (available to 1913-14).

Annual Reviews of the Trade of India (available to 1914-15).

Annual Reports on the Maritime Trade of Sind (available to 1913-14).

Railborne Trade.

Annual Accounts of Trade carried by Rail and River in India (available to 1913-14).

Reports of the Railborne Trade of Bombay (available to 1914-15).

Reports of the Railborne Trade of Madras (available to 1914-15).

Internal Land Trade by Rail and River of the Punjab including North-West Frontier Province (available to 1914-15).

Foreign Railborne Traffic of the Mysore State (now published quarterly—available to December 31st, 1915).

Transfrontier Trade.

External Land Trade Reports of the Punjab (to 1914-15).

External Land Trade Reports of North-West Frontier Province (to 1914-15).

Transfrontier Trade Reports of Burma (to 1913-14).

Transfrontier Trade Reports of Bengal (to 1914-15).

Transfrontier Trade Reports of Assam (to 1914-15).

Census.

Volumes comprising the Census Reports of India—1901 and 1911.

Industrial Occupations in the Madras Presidency by A. Chatterton, C. I. E. (extracted from the Census Report of 1911).

The following have also been consulted :—

Consular Reports on Silk in Lyons and St. Etienne.

Geoghegan's "Silk in India," 1880.

Liotard's "Memorandum on Silk in India," 1883.

Watt's Dictionary of Economic Products (Vol. VI).

Provincial Monographs on Silk Fabrics (Bombay, Madras, Bengal, Punjab, etc.).

Leo Durand's "Raw Silk."

Tariff Schedules and Monthly Statements of average values of articles, from the Bombay Customs Department.

I have also to acknowledge statistics supplied by—

The Director of Statistics, for Imports, Exports and Re-exports of British India.

The Director of Sericulture, Kashmir State, for production of silk in that State.

The office of the Director of Agriculture, Bengal, for mulberry acreage in Bengal.

The Secretary, Economic Conference, Mysore State, for mulberry acreage and Exports in Mysore.

Introduction.

It was originally intended that this report should give a complete survey of the present condition of the Silk Trade in India. Circumstances have, however, rendered it impossible for me to visit several of the most important of the silk centres. Rangoon, for example, is second only to Bombay as a centre of the import trade in foreign silk, and Mandalay was, according to the census of 1911, the fifth most important district in India for silk weaving and spinning. According to the same census, Murshidabad was the largest silk weaving and spinning district in India, and Malda is still of first-class importance as a silk-producing centre. It will be seen later that the difficulty of estimating the consumption of silk in the North-West is greatly complicated by the transit of Kashmir silk through the Punjab, and accurate details of the Kashmir trade have not been forthcoming. I have unfortunately been prevented from visiting either Burma or Kashmir, and my enquiries in Bengal have been confined to the Presidency Town. The scope of this report has had consequently to be somewhat reduced, and although, after dealing with the condition of the trade in the Bombay and Madras Presidencies and in the Punjab and the North-West Frontier Province, an attempt has been made to give a general estimate of the trade of India as a whole, this last chapter is largely based upon trade statistics and reports, which it has not always been possible to check or correct by information obtained from personal enquiries. Bombay, in addition to the fact that this Presidency is from the point of view of silk weaving one of the three chief areas in India, also holds a unique position by reason of its import trade, which constitutes it by far the most important silk-distributing centre in this country. Bengal is, of course, of the first importance as having been in former years one of the great silk-producing areas of the world, and until recently by far the most important in India. Burma, as has been said above, imports more raw silk by sea than any other province except Bombay, and also carries on an extensive trade in silk across its frontiers. It is said also that silk is more commonly worn in that province than in any other except Assam. The Punjab owes its importance in this connection to the fact that it is probably the greatest consumer of foreign silk manufactures in this country. The Madras Presidency contains a considerably larger number of silk weavers than any other Presidency, Province, or State, and its continued use of Indian material and comparatively small import of foreign silk gives to this Presidency a peculiar position in an enquiry of this nature. The conditions prevailing in these various provinces differ in the extreme:—in the Punjab and the North-West, for example, no Indian raw silk is to be seen: in Madras, in some places practically nothing but Mysore and Bengal silk is used. The problem to be faced throughout India, however, is the widespread adoption of foreign raw material and foreign manufactures in the place of the Indian products, and the decline of production in this country. Before such a problem can be solved it is of the utmost importance that the actual condition of the industry should be known. It is due to this consideration that details of the trade—which may at first sight appear meticulous—(such for example as the actual kinds and “chops” of raw silk in use in any centre)—have been included in this report. Before the indigenous material can replace foreign raw silk upon the looms, and before silk cloth woven in India can replace foreign manufactures in the markets, they must be supplied of the kind and quality which is most in demand. The nature of this demand differs all over India, and it is therefore indispensable that it should be clearly understood, before the Indian material can be supplied in a form which will satisfy the market. The first thing is to discover the exact nature of the demand in any particular market, and the second is to supply that demand as cheaply as possible. This is undoubtedly the procedure of the Japanese merchants, and it may seem the obvious one, but it is a fact that it is not the one commonly followed in this country. New markets and a new demand can, of course, be created where circumstances are favourable, but where old markets exist it is primarily of

importance to study their exact nature before attempting to compete with the goods which are actually in favour. Theories founded upon generalisations may frequently go wrong. In Mysore State there is, I believe, a proposal under consideration that Italian methods of reeling should be introduced, and the reeling of cocoons to a fine denier carried on in a State Filature on a large scale. In order to supply a European market with Mysore silk this might be, perhaps, a sound proposition :—about that I do not venture to express an opinion. The present chief market for Mysore silk is, however, the Madras Presidency, and, as will appear from the facts stated in the body of this report, the finer reeling of Mysore silk is generally speaking not required. At least it may be conceded that the matter is not one which can be settled in any other way than by deciding what market it is intended to supply and what is actually the demand in that particular market. An attempt to supply, so far as possible, information of this nature, has been made in the present report.

CHAPTER I.

The Silk Trade of Bombay.

1. Bombay receives about 80 per cent. of the total imports of silk goods into India. The following table will show the amount of raw and manufactured silk imported into India in 1913-14 by sea and its distribution among the various importing provinces :—

Sea-borne Trade.	Rs.
<i>Imports 1913-14—</i>	
Bombay	3,23,84,265
Burma	86,52,705
Bengal	13,69,920
Sind	6,60,690
Madras	6,50,985
TOTAL OF INDIAN IMPORTS	4,37,18,565

In 1914-15 the total Sea-borne import trade of the Presidency fell to Rs. 2,57,01,712. These figures include silk of all kinds,—raw, waste, yarns and warps, and piece-goods. In addition to this amount, the Presidency received, according to the official figures, raw silk to the value of Rs. 49,84,826 and silk piece-goods to the value of Rs. 32,985 by rail, and Rs. 31,896 worth by coast-wise trade. Bombay being the emporium for the distribution of silk, a considerable amount of Sea-borne imports are re-exported from Bombay Port. In 1914-15 these re-exports were valued at Rs. 5,94,107. Exports from Bombay—by sea, rail and coastwise—amounted to Rs. 30,97,704. A balance-sheet for the Bombay Presidency may therefore be struck thus :—

Balance-sheet of Bombay Trade in silk during 1914-15.

	IMPORTS.			EXPORTS.		
	Raw (including yarn, noils and warps).	Manufactured.	TOTAL.	Raw.	Manufactured.	TOTAL.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
Sea-borne	1,33,23,042	1,23,78,670	2,57,01,712	1,07,468	6,71,842	7,79,310
Railborne	49,84,826	32,985	50,17,811	19,91,184	4,34,512	24,25,696
Coastwise	8,615	23,281	31,896	3,34,016	1,52,789	4,86,805
TOTAL	1,83,16,483	1,24,34,936	3,07,51,419	24,32,668	12,59,143	36,91,811
Deduct Exports	24,32,668	12,59,143	36,91,811			
Net Import	1,58,83,815	1,11,75,793	2,70,59,608			

From this table it would appear that by far the greater portion of the imported silk is consumed in Bombay itself, and from the appended balance-sheets of Bombay Port and Bombay Presidency it might be assumed that the

major portion of the imported raw silk, at least, is absorbed by Bombay Port Town.

Balance-sheet of Bombay Port trade in raw silk (excluding yarn, noils and warps) during 1914-15.

	Imports.	Exports.
	lbs.	lbs.
Sea-borne.		
Foreign silk	2,047,339	12,943
Cocoons and waste	130,252	40,017
Coastwise.		
Foreign silk	1,537	81,396
By Rail.		
Foreign silk { Within Presidency	3,856	548,000
{ From other Presidencies	37,042½	398,970
Indian silk { Within Presidency	25,905	21,180
{ From other Presidencies	605,797½*	4,246
TOTAL	2,851,729	1,106,752
Deduct Exports	1,106,752	
Net Import	1,744,977	

Balance-sheet of Bombay Presidency Trade in raw silk during 1914-15.

	Imports.	Exports.
	lbs.	lbs.
Coastwise { Foreign silk	450	Nil
{ Indian silk	290	4,424
By Rail. Indian { From Bombay Port	21,180	25,905
{ " other Presidencies	9,982½	5,445
Foreign { From Bombay Port	548,000	3,856
{ " other Presidencies	Nil	247½
TOTAL	579,902½	39,877½
Deduct Exports	39,877½	
Net Import	540,025	

2. If these tables, compiled from the official returns, could be trusted implicitly, we should have to account for an enormous consumption of silk of all kinds by Bombay Port Town. The figures are, however, to a certain extent illusory, for the reason that the statistics for Railborne Trade are extremely deceptive. This is due to the following causes:—

- (1) Goods booked as parcels by passenger trains are not apparently included in any returns. It is certain that a very considerable amount of silk is in this way transferred from one place to

* This includes 7,116 maunds (587,070 lbs.) recorded as exported from Calcutta to Bombay. This is probably a mistake, vide below.

another, and some silk centres undoubtedly receive and distribute most of their goods by this method. For example, according to local estimates Trichinopoly receives Rs. 50,000 worth of raw silk annually from Bengal and considerable supplies from Mysore or Kollegal, and in its turn exports large quantities of silk piece-goods to Madras, from which place they are distributed throughout the Presidency. The whole of this trade is carried as parcels by passenger train, the extra cost being regarded as compensated by the increased security.

- (2) The use of the Post Office as a medium for the despatch of small quantities of silk goods.* How far this factor affects the figures given above can only be a matter of conjecture, but a certain quantity of silk piece-goods is certainly sent by post from Bombay to the Punjab and North-West Frontier. Especially has this been the case recently, when, owing to the apprehension of unsettled conditions on the frontier, some importers have received their goods *via* Bombay or Karachi Ports and thence by post, instead of by the more risky transfrontier routes.
- (3) A certain quantity of silk manufactured goods must be taken out of Bombay Port Town by small retail-sellers—box-wallahs and the like—for sale up-country. These goods, going as personal luggage, will also escape registration by the railway companies.
- (4) These figures do not include any trade by road. It may safely be assumed that this traffic must be of some magnitude where, as in the case of Poona and Bombay, a large centre of the silk-trade lies close to the port town; or where there is no convenient route by rail. Thus, for example, in the "Foreign Railborne Traffic of Mysore State" (published by the Mysore Economic Conference) it is admitted that "the Kollegal taluk of the Coimbatore District finds an outlet for its produce by the bridge over the Cauvery at Sivasamudram, and a valuable silk traffic certainly passes this way."

From these examples it is clear that a very considerable quantity of silk is transferred from one place to another without any record of it being kept. Further, a careful study of the figures actually recorded makes it only too clear that very little reliance can be placed upon them. It will be necessary to give only a few examples of this, but the number might be increased almost indefinitely. From 1913-14 arrangements have been made by the Mysore State with the Railway Company for figures to be supplied direct at regular intervals during the year. The figures for exports and imports of silk for Mysore State in 1913-14, as published by the Mysore Economic Conference, read as follows:—

	Imports. Mds.	Exports. Mds.
Foreign raw silk	9½	Nil.
Indian raw silk	200	5,500

Below are shown the figures for the same year as given in the "Inland Trade (Rail and River borne) of India":—

	Imports. Cwt.	Exports. Cwt.
Foreign raw silk	11	122
Indian raw silk	194	2,010

These figures are so unlike as to render any comparison impossible. Nor can the figures published by the Mysore Economic Conference be taken as a correct guide to the movements of silk, and the other figures be disregarded, for, according to the former, Mysore State neither imported nor exported any foreign raw silk in the year 1914-15, but did import 349 maunds of Indian raw silk. Now nothing is more certain than that some quantity of

* Also raw silk: there is a considerable movement of raw silk in parcels up to ten pounds weight in India.

Chinese raw silk is used in Mysore, whether it be obtained by passenger or by goods train, and on the other hand there is no evidence to show that so large a quantity of Indian raw silk enters the Mysore State, since the only source from which Mysore might conceivably import Indian raw silk is the Kollegal taluk of the Coimbatore District in the Madras Presidency. Similarly, as regards values, previous to 1913-14 the values assigned were Rs. 553-7 a maund on raw silk exports to Madras and Rs. 383-2-6 on those to Bombay. In 1913-14 the values were assigned by the authorities in Mysore, and these read at Rs. 576 for foreign and Rs. 600 per maund for Indian raw silk. These figures tend to show that the values arbitrarily assigned in the ordinary way are very far indeed from the actual value of the goods.

While dealing with the figures for the Railborne Trade of Mysore State, it may be observed that it has recently been discovered that all previous statistics (up to 1915) included waste along with reeled silk under the head "Indian raw," thereby causing the exports of silk to be estimated at about 50 per cent. above their real value.

To take another example of the uncertainty of the official figures, it is stated in the Railborne Trade returns that Bombay received from Calcutta in 1914-15 over 7,000 maunds of Indian raw silk, valued at over Rs. 45½ lakhs. No such large consignment of Indian raw material is shown in preceding years and the only conclusion possible, if the figure is to be trusted, would be that some large silk concern in the Port Town has recently enormously increased its consumption of Bengal raw silk, for the sea-borne exports and railborne exports from Bombay Port Town show nothing to counterbalance this figure. The most careful enquiry has, however, failed to reveal any such increased consumption in the Port Town. Neither of the European Mills and none of the leading native importers in that city know anything of such a consignment, and on the other hand the chief exporting firm of Indian silk in Calcutta (Anderson, Wright and Co.) know equally little on the subject. The figure must, therefore, be considered at the best as highly doubtful unless and until details are obtained as to the actual consignee of such silk, and in the meantime it means a reduction of 7,116 maunds in quantity and over Rs. 45½ lakhs in value from the raw silk shown in the returns as imported by rail into Bombay during 1914-15 which (including this amount) is only given as 7,464 maunds in the official returns for that year.*

3. Since, therefore, a very large proportion of the silk carried by rail goes as parcels and not as goods and is therefore not included in the returns, and since moreover the returns themselves are open to grave suspicion, it is clear that the amount of silk both raw and manufactured actually consumed in Bombay Port Town may be taken as considerably less than appears to be indicated in the balance-sheet given above, for that town is the chief centre for the distribution of raw silk throughout India. The Madras Presidency draws most of its supplies of Chinese raw silk (of which it uses a large quantity) from Bombay Port, and therefore the amount shown in the Railborne Trade returns (*viz.*, 41 mds.) as exported thence to Madras Presidency in 1914-15 is certainly a considerable under-statement, the major portion of this trade being probably carried by passenger trains. No accurate estimate of the quantity of foreign raw silk actually consumed in Bombay City is available, but Mr. M. Nissim, of David Sassoon and Co., estimates that Bombay City took about 71,400 lbs. of Indian raw silk in 1914-15, to the value of about Rs. 5 lakhs. This estimate is supported by the Chhoi Silk Mill Co., who put the figure at Rs. 5 to 7 lakhs at the most. It may safely be assumed that a very large part of the 1,744,977 lbs. (already reduced to 1,157,907 lbs. if we deduct the doubtful consignment of 7,116 mds. from Calcutta), shown as "net import" in the balance-sheet on page 2, is not consumed in that city at all, but is distributed among the other silk centres by passenger train. It may be interesting to insert here a similar balance-

* Further enquiry has since shown this entry of 7,116 maunds to have been an error of registration in the Audit office concerned. "Silk, Raw—Indian" should have been "Tea—Indian."

sheet given by G. Watt in the "Dictionary of the Economic Products of India" for 1888-89.

Balance-sheet of the Transactions with the Port Town of Bombay in raw silk during 1888-89.

Imports.	Quantity in lbs.	Exports.	Quantity in lbs.
BY SEA FROM FOREIGN COUNTRIES.		BY SEA TO FOREIGN COUNTRIES.	
Foreign Produce—		Re-exports, Foreign Produce—	
Silk	1,678,932	Silk	109,182
Waste	Nil*		
Cocoons	7,030	BY SEA TO FOREIGN COUNTRIES.	
BY COASTWISE FROM INDIAN PROVINCES.		Indian Produce—	
Indian Produce		Silk	7,322
Silk	3,102	Waste	2,881
		Cocoons	Nil
BY COASTWISE FROM INDIAN PROVINCES.		BY COASTWISE TO INDIAN PROVINCES.	
Foreign Produce		Indian Produce—	
Silk	5,257	Silk	11,600
		BY COASTWISE TO INDIAN PROVINCES.	
BY RAIL AND RIVER, ETC.		Foreign Produce—	
Indian Produce	57,915	Silk	121,909
Foreign Produce	1,402		
		BY RAIL AND RIVER, ETC.	
TOTAL	1,753,638	Indian Produce	280,070
Deduct Exports	1,119,804	Foreign Produce	576,840
Net Import, being amount available for local demands.	633,834	TOTAL	1,119,804

This gives a net import to the Port Town of 633,834 lbs., and though there is no reason to suppose that in this case either the figures for railborne trade are entirely trustworthy, yet this quantity is probably far nearer the actual consumption than that shown in the balance-sheet for 1914-15.

A similar table from the same work for the trade of Bombay Presidency may also be inserted.

Balance-sheet of the recorded Transactions with the Bombay Presidency in 1888-89.

Imports.	Quantity in lbs.	Exports.	Quantity in lbs.
By Transfrontier Routes—		By Transfrontier Routes—	
(a) Indian	Nil	(a) Indian	Nil
(b) Foreign	Nil	(b) Foreign	Nil
By Rail and River—		By Rail and River—	
(a) Indian	265,980	(a) Indian	33,330
(b) Foreign	225,390	(b) Foreign	577
TOTAL	491,370	TOTAL	33,907
Deduct Exports	33,907		
Net Imports	457,463		

Comparing this table with that given on page 2 above, it will be seen that the net import in 1888-89 was 457,463 lbs. and in 1914-15 540,025 lbs. In these cases again the railborne trade is probably misstated, but Dr. Watt remarks "An examination of the incomplete statistics that exist regarding

* * There must be some mistake in the official returns, since a large proportion of the silk imported into Bombay from China is Waste, not Reeled Silk."

more recent years manifests the same fact, namely, that the Bombay Presidency manufactures use up about half a million pounds of raw silk of which fully one half that amount is Indian silk obtained through the Port Town. The Indian raw silk imports during 1914-15, as given in the Railborne Trade returns, will be seen from the table on page 2 to be very small—only a little over 30,000 lbs. in all, rather less, in fact, than the exports of the same material. Mr. Nissim, however, estimates that excluding Bombay Port Town the other towns in the Presidency took some 128,000 lbs. (Rs. 9 lakhs) of Indian raw silk in all. According to this estimate the consumption of Indian raw silk in Bombay Presidency is only half what it was in 1888-89, exports in the same time having (again if the figures are any guide) remained about the same. If Mr. Nissim's estimate is correct, however, the total net import will be considerably larger than is shown in the balance-sheet for 1914-15, showing that the total consumption of silk in the Presidency has increased in spite of the decrease in the use of Indian raw, the amount of Chinese raw consumed being double what it was in 1888-89. As this result depends upon our acceptance of the approximate correctness of the figures for export it cannot be said to be at all a certain one, but as those figures are not very large when compared with the import trade figures there is less room for errors of importance to have crept into them.

FOREIGN RAW SILK.

4. As will be seen from the balance-sheet of Bombay Port Town (above), foreign raw silk is received by sea, rail, and coastwise. The principal source of supply is, of course, China. In the official returns China and Hongkong are shown separately for purely geographical reasons, as the latter is a British possession. This distinction will be followed here, not only for the sake of convenience, but because the distinction does in reality correspond to a real difference in the nature of the raw silk imported from these places. Hongkong is the port for Canton and Southern China, and all silk from that part of China is shipped from Hongkong and is registered in the Returns as coming from that Port. The products of the Southern China provinces are various kinds of coarse silk from multivoltine worms, whereas those of the Northern China provinces are the finer silks from the univoltine. These latter are shipped from Shanghai. Wherever therefore in the course of the following paragraphs "China" silk is mentioned as distinct from "Hongkong," the former must be taken as referring to the silk which is exported from Shanghai, or—to make a rough line of demarcation—such silk as is produced in the provinces lying north of the Yang-Tsi-Kiang River, whereas Hongkong silk includes all the produce of the southern districts, the chief of which for present purposes are Kwang-Tung (Canton) and its neighbour Kwang-si.

In 1914-15 China (exclusive of Hongkong and Macao) was responsible for 1,343,091 lbs. out of the total of 2,047,339 lbs. imported into Bombay by sea. Of the balance Hongkong supplied 453,535 lbs, Japan 160,935 lbs., Siam 79,842 lbs. and the Straits Settlements* 9,932 lbs. In addition to these amounts Japan supplied 130,195 lbs. of waste, and Hongkong and China 32 and 25 lbs. respectively. The following table will make a comparison possible between the present import trade, in foreign raw silk and waste, with these countries, and that of previous years:—

Average Import of foreign raw silk and waste for five years ending	From China.	From Hongkong.	From Japan.	From Siam.	From Straits Settlements.
	lbs.	lbs.	lbs.	lbs.	lbs.
1909-10	771,247	631,119	79,739	38,890	71,629
1914-15	1,418,917	554,621	109,070	51,157	40,019

* It is not known whether any of this silk is produced there or is transhipped simply. (H. M. L.)

From this table it will be seen that whereas the imports from China have been nearly doubled during the last ten years, those from the Straits Settlements have very heavily decreased. Hongkong, though the amount shows some decrease, retains its position as second only to China proper in importance. The trade with Siam is subject to continual fluctuations varying during the last ten years from *nil* in 1910-11 and only 1,118 lbs. in 1909-10 to 96,706 lbs. in 1912-13 and 115,903 lbs. in 1907-08. On the whole, however, it shows an upward tendency, though it would be unsafe to assume that this will be permanent. The figures for Japan require further analysis. The whole—or practically the whole—of the imports from Japan recorded from 1905-06 to 1909-10 were waste and kachra; and therefore the figure given above (79,739 lbs.) may be taken as the average amount of waste imported from that country. In 1910-11, besides 77,612 lbs. of waste, 3,121 lbs. recorded as "Chaharam Cochinchina and Yellow Shanghai" were received in Bombay from Japan. In 1911-12, 50,916 lbs. were received in all, raw and waste not being distinguished. In the following year besides 104,315 lbs. of waste, 6 lbs. of raw were imported from Japan. In 1913-14 the quantity of raw silk was 15,016 lbs., besides 73,558 lbs. of waste, and in 1914-15 the figures for raw and waste rose to 160,935 and 130,252 lbs. respectively. Japan, therefore, while retaining and increasing her trade in silk waste, has during the last few years become a competitor of China and Hongkong in supplying Bombay with raw silk, and has already completely outstripped the Straits Settlements and Siam. It is true that the heavy consignment of 1914-15 may be an exceptional one, but it may, on the other hand, stimulate an increased demand for Japanese raw silk in India. It is, however, doubtful whether Japan will ever compete successfully with China in supplying the particular kinds of raw silk most in demand in this country, for most—if not all—of the Japanese raw silk received in India hitherto has been of very inferior quality. The only kinds of Japanese raw silk, indeed, which I have found in actual use have been various chops of "Doppioni" silks, cheap varieties the normal prices of which are from about 400 to 600 yen, as compared with 900 to 1,000 yen for the ordinary products of the Japanese filatures. Considerable attempts seem to have been made recently to popularize this silk, and I am informed that one chop was distributed from Bombay bearing a photograph of Sir Currimbhoy Ebrahim on the label. This sold before the war at Rs. 9 per Bombay seer, the "Chicken" and "Rose" (the two most used of the Sanshu Douppion chops) selling for Rs. 8-12 and Rs. 8-4 or Rs. 8-8 respectively. They are said to dye well and not to contain much waste or lose much weight in the process of bleaching, but it is also stated that they are very coarse and badly reeled—worse in the latter respect than Mysore silk. Bombay agents for Japanese firms appear to have visited various silk centres in India and exhibited many varieties of such silk, and one silk merchant in Kumbakonam showed me a quantity of such sample skeins. In that town—a very large centre for silk weaving and for the distribution of raw silk throughout the Madras Presidency—this Japanese silk is said to have been largely used last year, but as it was found to be entirely unsuitable for a warp and as its price has now risen from Rs. 8-12 to Rs. 13, it is now apparently hardly used there at all. The same kind of silk (Sanshu Douppion—"Chicken" and "Rose" chops—from Toyo-hashii, Japan) is used at Poona, but only in small quantities for gold thread and not for ordinary weaving. In Conjeevaram, again, another large silk-weaving centre in the Madras Presidency, the mere mention of Japanese reeled silk evoked exclamations of disgust! This was because of a consignment of the same kind of silk, received from Bombay two years ago, which was said to be very coarse, very badly reeled, and generally unsatisfactory.

So long, therefore, as all the first class Japanese silk goes to America or elsewhere and only the coarsest kinds are received in this country, there is no possibility of Japanese raw silk ousting Shanghai silk from the market, for such coarse silk only supplies a restricted demand, *viz.*, where any kind of silk, however coarse, can be used for the weft thread, and cheapness is the only consideration. Now that the price of such Japanese silk has risen so

heavily, an attempt is being made in Kumbakonam to introduce an exceedingly coarse quality of Indo-China, to supply this demand for a very cheap silk. If this attempt is successful, (as it appears to be so far owing to the cheapness of this silk, which sells at Rs. 10-15 as against Rs. 13 the present price of the Japanese silk), the imports of the latter are likely to decrease. Whether this happens or not it will be seen that Japan cannot at present be regarded as a competitor of Shanghai in the Indian market for raw silk.

In the supply of waste and kachra China has, until the last two years, borne a considerable share, though her consignments have in no year since 1904-05 been equal to those of Japan. Hongkong has also occasionally sent considerable amounts, and France, Italy, and other countries smaller quantities, but in 1914-15 130,195 lbs. out of a total of 130,252 lbs. were received from Japan.

5. Since 1910-11 the different kinds of raw silk have not been distinguished in the returns, but the figures for the years 1905-06 and 1910-11 will indicate the share borne by the principal importing countries in the supply of the more important kinds. It must be noted that as the countries which supply only occasional small quantities have been omitted from this table, the totals given in each case will not, of course, correspond with the sum of the items shown in the list; these totals have, however, been added so as to indicate the share borne by each country in the trade in each kind of silk.

Kinds of silk and chief countries whence imported.	1905-06.	1910-11.
	lbs.	lbs.
<i>Chaharam, Cochin China and Yellow Shanghai—</i>		
Hongkong	52,843	32,546
China	438,251	836,805
Italy . . . . .	....	3,136
Japan . . . . .	....	3,121
TOTAL IMPORTS	491,262*	875,608
<i>Mathow—</i>		
China	411	2,697
Hongkong	95,191	115,336
TOTAL IMPORTS	95,602	118,032
<i>Other kinds of China—</i>		
China	87,460	147,414
Hongkong	162,694	104,741
TOTAL IMPORTS	250,154*	252,155
<i>Panjam—</i>		
Hongkong	397,647	393,431
China	5,401	3,387
TOTAL IMPORTS	403,048	396,818
<i>Siam—</i>		
Straits Settlements	61,910	81,653
Siam	11,516	....
TOTAL IMPORTS	74,868*	81,656

*Includes small consignments from other countries.

From this table it will be seen that while silk from China (*i.e.*, Shanghai) increased between 1905-06 and 1910-11 by more than 458,000 lbs., silk from Hongkong (*i.e.*, Canton and South China) was reduced by over 62,000 lbs. It has been said that the official records for recent years do not show the amount of the various kinds of raw silk imported into India. Such a record was, however, kept by the Bombay Customs Office for test purposes only from January 20th to September 18th, 1913.

Statement showing the total quantity and value of raw silk imported into Bombay from 20th January 1913 to 18th September 1913.

Description.	Quantity.	Value.
	lbs.	Rs.
<i>Bokhara</i>	No imports.	
<i>Indo-China—</i>		
Limchow	229	703
Manchong	3,858	13,124
Shunfa	444	1,551
Yamchow	5,658	21,620
Shantung Kath No. 1	6,861	44,927
Ditto No. 3	2,635	18,195
TOTAL	19,695	1,00,120
<i>Yellow Shanghai—</i>		
Hoing	74,958	3,40,674
Kobin	56,020	2,37,927
Manchow	221,856	10,57,060
Meang	97,302	4,76,900
Santan	33,388	1,80,174
Sichoon	60,405	2,15,561
Nanchan	2,783	9,306
TOTAL	546,802	25,17,602
<i>Thonkoon or Duppon Silk—</i>		
(White Shanghai)	11,856	38,356
<i>Mathow—</i>		
Dankhvala	46,696	1,84,034
Lari	21,382	47,627
TOTAL	68,078	2,31,661

Statement showing the total quantity and value of raw silk imported into Bombay from 20th January 1913 to 18th September 1913.

Description.	Quantity.	Value.
	lbs.	Rs.
<i>Other kinds of China—</i>		
Kath	13,263	1,03,469
Lacklow	3,156	24,139
Mahang or Saisee	1,165	4,868
Siem	949	6,551
Steam	8,241	23,566
Tsatlie Curio Nos. 1 and 2	21,985	1,59,740
TOTAL	48,759	3,22,333
<i>Shanghai White—</i>		
Laying	322	1,682
Lie laying or kakaria	20,750	1,15,273
Tsatlie	13,297	84,998
Tycham kahang	44,736	2,56,659
Chinkum Pincum	19,434	1,06,123
Chikling	5,226	31,181
Mookchand	94,697	5,42,067
Tysing yang	6,124	33,496
Steam	672	6,382
Meang	1,159	5,505
Hamchow	4,914	26,855
TOTAL	211,331	12,10,221
<i>Panjam—</i>		
First Chhap	29,152	93,240
Can—pass	95,978	2,67,146
So—So No. 1	65,960	1,45,573
„ „ No. 2	62,017	1,28,472
„ „ No. 3	536	1,220
TOTAL	253,643	6,35,651
<i>Persian</i>	No imports.	
<i>Siam</i>	36,083	1,12,557
GRAND TOTAL	1,184,391	51,30,145

From this it appears that between those dates 253,643 lbs. of Panjam and 68,078 lbs. of Mathow, were imported into Bombay. Assuming that the import of these silks was in the same proportion during the remaining months of the year, and comparing the figures with those given above for 1910-11, decreases are evident in the case of both of these kinds of silk, and especially in the case of panjam. These two kinds of coarse silk are the most important of the imports from Hongkong; the decrease in them explains, therefore, the decrease in the total quantity of raw silk from that port, as shown in the table on page 6. By a similar comparison of the figures a decrease becomes evident in the quantity of Siam silk imported, but a considerable increase is apparent in the other kinds of Chinese silks, a particularly heavy consignment being received of "Minchow," a yellow Shanghai silk in great demand nearly all over India for warps. 221,856 lbs. valued at Rs. 10½ lakhs of this kind of silk were imported into Bombay during the above mentioned period, and large quantities of other kinds of silk from Shanghai—Hoing, Kobin, Meang, Mookchand, etc., were also received. It will be convenient to give here the sources of these various kinds of raw silk, so far as I have been able to ascertain them. Minchow, Kobin, Meang, Hoing, Sichoon and Shantung are all yellow silks imported from Shanghai. Lie-laying (or kakaria) and Mookchand are white silks from the same port. Panjam, Mathow, Lacklow, and the yellow and white Kath, etc., are exported from Hongkong, though the yellow Kath is said to be actually produced in the north and only re-reeled in Canton. White silk known as Tsatlie is received from both ports. Appended is a list giving the principal kinds of Chinese raw silk received in Bombay and the provinces in which they are produced, so far at least as my information goes.

SOUTHERN PROVINCES.		NORTHERN PROVINCES.	
Name of Silk.	Producing Province.	Name of Silk.	Producing Province.
Kath (white)	Kwang-tung (Canton).	Santan or Shantung	Shantung.
Lacklow		Kahing	Che-kiang.
Siem		Thonkoon or Dup pion	
Shivlam		Tsatlie	
Steam		Hangchow.	Hu-pe.
Tsatlie		Meang	
Panjam		Laying	
Mathow		Lie-laying or kakaria	Kiang-su.
Hangtan		Mookchand	
Mahang or Saisee	Kwang-si.	Manchow	Sz-chuen.
Tunchuck		Sichoon	
Quangshan	Hunan.	Lie-chung	
Fu-chow	Fokien.	Kobin	Ngan-whei.]

NOTE.—The kinds of silk shown in Italics do not appear to be received in India.

By comparing this list with the statement of imports between 20th January and 18th September 1913 (page 9 above) it will be seen that very large consignments were received in Bombay from Shanghai of the produce of the northern provinces—especially Sz-chuen, Hu-pe, and Kiang-su, and it appears to be chiefly such kinds of silk that account for the heavy increases under the head "China raw silk." Panjam and Mathow are evidently still received in large quantities from Hongkong, but as has been said above decreases are evident in these kinds of Canton silk. The fall in the quantity of panjam imported is due to the fact that this very coarse quality of

silk is mostly sent to the Punjab, where it is used very largely by the women, especially at Peshawar, Rawalpindi, etc., as thread for embroidery. Previously the women of the house were accustomed to embroider all the garments required at the time of marriage, but now-a-days it is said that the amount of such embroidery has decreased owing to the fact that suitable ready-made articles can be obtained in the bazar of Japanese or other manufacture. It would appear, therefore, that the kinds of silk the import of which has so largely and steadily increased are the yellow and white silks from the northern provinces, and especially the favourite Minchow, of which twice as much was imported during the period of which record was kept in 1913, as of any other individual kind. During those eight months 546,802 lbs. of all kinds of yellow Shanghai silk were received, the amount of white Shanghai being only 211,331 lbs., of which nearly half was of the kind known as Mookchand, from Kiang-su.

6. Hitherto we have been considering the trade of the last ten years. If we go further back, however, we shall find that the import of China silk has undergone a complete change of nature during the last half-century, which is of considerable significance to the silk industry of this country. Geoghegan, writing in 1880,* mentions the following facts. For the years 1861-62 to 1865-66 imports of China silk into Bombay averaged about 1,200,000 lbs. In 1870-71 they had risen to 2,043,631 lbs. The kind of China silk chiefly imported was "punjum"—a very inferior sort, worth from Re. 1-4 to Re. 1-12 per lb. It will be seen therefore, that imports of raw silk from China into Bombay were in 1870-71 very much the same in amount as they are to-day, and were considerably larger than they were during the five years ending 1909-10. In Appendix B (Table I) is a list of the imports from China to Bombay from about the date of which Geoghegan writes until the present day. This table will show that at that time the imports were almost wholly from Hongkong,—i.e., were very largely Canton silk. The finer qualities of silk from the Treaty Ports arrived in gradually increasing quantity, but it was not until the beginning of the present century that they first out-weighed the Canton silk imports. Until then the import of panjam and mathow was normally from about one third to nearly one half of the whole import from China. Since that date imports from Shanghai have risen, until they were in 1914-15 nearly three times as great as those from Hongkong. Bearing in mind the difference between the Canton and the North China silks, and the nature of panjam and mathow, these facts can lead to only one conclusion, viz., that whereas formerly imported silk was very largely used for purposes of embroidery, only a comparatively small portion of it was used for ordinary weaving, for both mathow and panjam are too coarse to be employed for that purpose. Reference has already been made to the decline of embroidery in the Punjab and North-West Frontier Province, and this must be taken, in view of the above figures, to apply to the whole of those portions of India which used Chinese silk. In place of very coarse silk for embroidery, fine thread for weaving is now being imported in far greater quantities than hitherto. When therefore it is said that in 1870 the import of Chinese silk was very much what it is to-day, it must be remembered that in the former year a very large proportion of that silk was coarse Canton produce, unfit for weaving purposes, whereas the bulk of the modern import is fine North China weaving silk. At that time such fine silk as was then imported came mostly from the Persian Gulf, and was, according to Geoghegan, in great request in Ahmedabad. Imports of Persian silk were, according to the same authority, 86,303 lbs. in 1861-62, 23,000 lbs. in 1865-66, and 10,000 lbs. in 1866-67. By 1870-71 they had risen to 42,558 lbs. There was also an average import of 100,000 lbs. from Bengal into Bombay by sea during the five years ending 1870-71. A small quantity of this, together with some 300,000 lbs. of China silk, was re-exported to Karachi. Both these imports have entirely ceased. Imports from Persia were in 1882-83 over 100,000 lbs. in amount and nearly Rs. 5 lakhs in value, and "Persian" silk was also received in considerable quan-

* "Some Account of Silk in India."

ties from Russia and Turkey in Asia. The disappearance of this kind of silk from the Indian market synchronized with the growth of the North China imports. In 1899-00 the raw silk imported from Persia amounted only to 8,463 lbs.; in the following year it fell to about 4,400 lbs.; and in 1901-02 to 382 lbs. Since then practically none of this kind of silk has reached Bombay. The following table will illustrate these remarks, and show the proportions in which the various kinds of silk were imported in 1876-77. It may be compared with the tables on pages 8 and 9 and will reveal the extent of the change which has taken place in India.

Imports of raw silk into Bombay in 1876-77.

Kind of silk and whence imported.	lbs.	Rs.
<i>Floss—</i>		
From Arabia	57	456
„ China—Hongkong	983	9,068
„ „ Treaty Ports	1	18
TOTAL	1,041	9,542
<i>Chaharam and Cochín China—</i>		
From Aden	126	630
„ China—Hongkong	68,010	3,14,961
„ „ Treaty Ports	10,983	52,061
„ Straits Settlements	239	1,189
TOTAL	79,358	3,68,841
<i>Mathow—</i>		
From China—Hongkong	2,802	5,188
TOTAL	2,802	5,188
<i>Other kinds of China—</i>		
From United Kingdom	129	806
„ Egypt—Alexandria	405	2,835
„ „ Suez	12,229	77,643
„ Ceylon	1	4
„ China—Hongkong	228,414	17,44,839
„ „ Treaty Ports	10,855	77,264
TOTAL	252,033	19,03,391
<i>Panjam and Kachra—</i>		
From Egypt—Suez	1,090	4,680
„ China—Hongkong	728,395	11,06,203
„ „ Treaty Ports	19,111	30,371
„ Japan	1	1
TOTAL	748,597	11,41,255

Imports of raw silk into Bombay in 1876-77—contd.

Kind of silk and whence imported.	lbs.	Rs.
<i>Persian—</i>		
From United Kingdom	16	96
„ Austria—Trieste	2,474	9,896
„ Arabia	194	776
„ Persia	36,943	1,50,851
„ Turkey in Asia—Bussorah	1,012	3,795
„ „ „ Bagdad	3,534	13,602
TOTAL	44,173	1,79,016
<i>Siam—</i>		
From China—Hongkong	278	695
„ Straits Settlements	51,174	1,11,949
TOTAL	51,452	1,12,644
<i>Other kinds—</i>		
From United Kingdom	2	35
„ Aden	327	572
TOTAL	329	607
TOTAL OF RAW SILK	1,179,785	37,20,484

MANUFACTURED SILK.

7. The total import of silk yarn, noils and warps, and all kinds of manufactured silk, into British India during 1913-14 amounted in value to Rs. 3,10 lakhs. In 1914-15 there was a heavy fall, owing to the outbreak of war,* the amount being only Rs. 1,94 lakhs, the lowest since 1906-07. Bombay, importing about 80 per cent. of the total, was naturally greatly affected by this decrease. In 1913-14 her share of the imports amounted to Rs. 2,26 lakhs whereas in 1914-15 the figure only reached Rs. 1,55 lakhs. Re-exports amounted to a little over Rs. 5 lakhs. Adding the figures for coastwise and railborne trade the balance-sheet of the transactions of Bombay Port Town in manufactured silk during 1914-15 will read as follows:—

Bombay Port Town Trade in manufactured silk, 1914-15.

	Imports.	Exports.
<i>Sea-borne—</i>	Rs.	Rs.
Yarns, Noils and Warps	32,10,424	10,012
Foreign Piece-goods	1,23,78,670	5,16,254
Indian Piece-goods . . . . .	....	1,55,588

* Vide Appendix A.

Bombay Port Town Trade in manufactured silk, 1914-15—contd.

	Imports.	Exports.
<i>Coastwise—</i>	Rs.	Rs.
Foreign Piece-goods	8,432	1,44,975
<i>By Rail—</i>		
1. To other Presidencies—		
Foreign Piece-goods	332	4,29,380
Indian Piece-goods	32,653	4,950
2. Within the Presidency—		
Foreign Piece-goods	1,11,110	6,291
Indian Piece-goods	3,510	8,640
TOTAL	1,57,45,131	12,76,090
<i>Deduct Exports</i>	12,76,090	
NET IMPORTS	1,44,69,041	

A similar balance-sheet for Bombay Presidency is appended:—

	Imports.	Exports.
<i>Coastwise—</i>	Rs.	Rs.
Indian Piece-goods	14,849	7,814
<i>By Rail—</i>		
1. Other Presidencies—		
Foreign Piece-goods . . . . .	....	182
2. With Bombay Port—		
Foreign Piece-goods	6,291	1,11,110
Indian Piece-goods	8,640	3,510
TOTAL	19,780	1,22,616
<i>Deduct Imports</i> . . . . .	....	19,780
NET EXPORTS . . . . .	....	1,02,836

Bombay Port, therefore, makes a net export of Indian piece-goods to the value of over Rs. 1,30,000, but is left with a very heavy net import of foreign manufactures. With regard to the latter, however, very considerable allowance must be made for goods despatched by post and by passenger train as parcels, the bulk of this apparent net import being probably accounted for in this way. The Presidency shows a net export of about Rs. 1,05,000 value in foreign manufactures. Reference to the table for transactions in raw silk on page 2 will show that during the same year it imported about 544,000 lbs. of foreign raw silk. The case of Indian silk raises a difficulty, for in spite of the fact that Bombay produces no silk at all, the tables show a net export of a little under 5,000 lbs. of Indian raw silk (*vide* table on page 2). The

appended table for the year 1913-14 will, however, explain this apparent anomaly, since in that year the Bombay Presidency was left with a net import of 17,800 lbs. of Indian raw silk, of which a part may have been re-exported in 1914-15.

Balance-sheet of transactions of Bombay Presidency in 1913-14.

	INDIAN RAW SILK.		INDIAN PIECE-GOODS.	
	Imports.	Exports.	Imports.	Exports.
	lbs.	lbs.	Rs.	Rs.
<i>Coastwise</i>	112	3,112	8,471	1,209
<i>By Rail—</i>				
Other Presidencies	4,907	5,650	3,798	5,598
Bombay Port	74,100	52,554	31,266	..
TOTAL	79,119	61,316	43,535	6,807
Deduct Exports	61,316	..	6,807	..
NET IMPORTS	17,803	..	36,728	..

The net imports of Indian silk manufactures were in 1914-15 over Rs. 12,000 in value, and in 1913-14 over Rs. 36,700. The Presidency does not appear, therefore, to manufacture sufficient Indian raw material into cloth to satisfy its own demand, but is forced to import also from other sources.

During the last ten years there has been a very marked increase in the quantity of manufactured silk goods imported into Bombay, as will be seen from the following table:—

Import of silk manufactures into Bombay by sea.

Year.	Value in Rs.
1905-06	1,39,28,751
1906-07	1,23,87,274
1907-08	1,42,89,336
1908-09	1,48,36,763
1909-10	1,58,37,129
1910-11	2,03,75,850
1911-12	1,92,85,775
1912-13	2,14,24,019
1913-14	2,26,05,930
1914-15	1,55,89,094

The fall in 1914-15 is obviously chiefly due to the war. The decrease was most evident in the case of mixed goods of silk and cotton, which come mainly from Europe and which fell by Rs. 34 lakhs. Piece-goods fell by Rs. 26 lakhs, and yarns, noils and warps by nearly Rs. 10 lakhs. Otherwise the increase has been steady, and is especially marked between 1909-10 and 1910-11, when it amounted to Rs. 45 lakhs. Piece-goods accounted for Rs. 29 lakhs of this amount; mixed goods following with an increase of Rs. 13 lakhs; and yarns, noils and warps with Rs. 3 lakhs. The countries chiefly participating in this increase were Japan, the value of whose consignments of piece-goods rose by Rs. 16 lakhs and of yarns, noils and warps by Rs. 4 lakhs; France with an increase of Rs. 6½ lakhs in mixed goods and Rs. 6 lakhs in

piece-goods; Germany, with an addition of Rs. 7½ lakhs' worth of mixed goods; Italy, with an increase of Rs. 3 lakhs in mixed goods and Rs. 2 lakhs in yarns, etc.; and China (excluding Hongkong), which increased its supplies of piece-goods by Rs. 4 lakhs. Hongkong and the United Kingdom also showed increases of Rs. 2 lakhs each. On the other hand, Belgium's mixed goods fell off by Rs. 4 lakhs, Egypt showed a decrease of Rs. 3 lakhs, and Austria-Hungary of Rs. 1 lakh. Japan was therefore responsible for nearly one half of the increase. Further details of imported foreign manufactures will be found under their appropriate headings.

The enormous rise in importance of this trade during the last forty years is illustrated by the following figures:—

In 1872-73 the total value was under Rs. 25 lakhs. In 1873-74 it rose to Rs. 27 lakhs and in the two succeeding years to Rs. 31½ and Rs. 31¼ respectively, falling in 1876-77 to less than Rs. 21¼ lakhs. Practically the whole import was in silk piece-goods, only from Rs. ¾ lakhs to Rs. 1½ lakhs being mixed goods and other kinds of silk. The principal source of supply was in 1876-77 Hongkong, which accounted for Rs. 13 lakhs out of a total of Rs. 20 lakhs' worth of piece-goods. Italy sent piece-goods valued at about Rs. 2½ lakhs, France Rs. 1½ lakhs, and the United Kingdom Rs. 1 lakh; and imports from Persia were valued at above Rs. ½ lakh. Mixed goods reached rather less than Rs. 1½ lakhs, of which the United Kingdom supplied nearly two-thirds, and Italy most of the remainder. When we compare these figures with those for 1913-14, when the imports amounted to Rs. 2,26 lakhs, it will be seen how greatly the demand for silk goods of foreign manufacture has increased in British India.

Foreign manufactures. Silk yarn, noils and warps.

8. Practically the whole of the import trade in these articles passes through Bombay Port, the share borne by the other Indian ports being less than a tenth of the whole. It will be convenient therefore to treat of the whole import trade in such articles into India in this place. Yarns, noils and warps have been separately enumerated in the Sea-borne Trade Returns since 1905, and the following table gives the quantity and value of the imports of such articles since that year:—

Import into British India of silk yarn, noils and warps.

Year.	Quantity in lbs.	Value in Rs.
1905-06	1,066,909	39,74,550
1906-07	670,616	27,81,358
1907-08	395,723	22,70,273
1908-09	840,256	38,66,884
1909-10	876,173	36,75,540
1910-11	923,315	40,63,365
1911-12	942,738	41,83,770
1912-13	1,143,015	40,93,905
1913-14	1,167,530	45,81,705

From this table it will be seen that imports have steadily increased of recent years.

The most noticeable feature of this import trade is the rapid rise in the quantity received from Japan. In 1905-06 the value of its goods imported into Bombay was Rs. 60,739 out of a total import of nearly Rs. 39 lakhs; in 1913-14 it supplied goods to the value of Rs. 25 lakhs out of a total of Rs. 41½

lakhs. The following table shows the principal importing countries and the value of the goods imported by each into Bombay :—

Import of Yarn, Noils and Warps in the year	From United Kingdom.	From Italy.	From Austria-Hungary.	From Egypt.	From China.	From Japan.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1914-15	1,98,466	3,59,897	3,298	..	1,50,723	24,75,624
1913-14	2,80,679	11,01,241	2,565	..	2,62,501	25,09,511
1909-10	5,66,333	12,49,457	1,42,703	2,51,280	3,01,879	9,91,589
1905-06	5,71,093	18,00,639	10,68,773	3,64,923	..	60,739

From this table it will be clear how largely Japan has captured this market and how little the war has affected her supply, in spite of a fall from Rs. 41½ lakhs to Rs. 32 lakhs in the total amount imported into Bombay in 1914-15. The supply from Italy was already steadily diminishing, and in 1914-15 it fell from Rs. 11 lakhs to Rs. 3½ lakhs: the decrease in the case of China and the United Kingdom is also noteworthy. Imports from France also have fallen greatly during the last two or three years. The large and increasing demand for spun silk is explained by the fact that it is supplied in warps and skeins ready prepared. Large quantities of Japanese spun-silk yarn and warps find their way from Bombay Port to the Bombay Presidency and to the Punjab, and the yarn is also used in the Madanpura quarter of Benares city. In the Bombay Presidency the yarn of the Fujigasu Spinning Co. is used at Poona for the weft thread on a warp of Chinese silk. In Ahmedabad the use of such silk is said to have greatly increased of recent years, the quantity of reeled silk having decreased. In that city the Vijay Weaving Works (employing 21 fly-shuttle looms) uses, besides mercerised cotton, a certain quantity of Japanese spun-silk yarn (from the Kanegafuchi Spinning Co.) which is said to cost Rs. 6 per lb. (of 39 tolas), for the production of plain suitings, for which the demand is said to be greater than the supply, owing to the difficulty of getting labour and to the high price of the yarn. In Surat both the Kanegafuchi and the Fujigasu silks (both yarn and warps) are in use, the chief importer being not a silk merchant but a general store-keeper. Here a spun-silk warp is combined with a mercerised cotton or spun-silk weft, and one weaving-master combines a thread of spun-silk with two of Chinese silk (Meang) for a warp, using Chinese silk (Minchow) for the weft. The woven cloth is exported to Burma. Most of the silk which is sent to the Punjab goes first to Amritsar, from which centre it is distributed to Multan, Ludhiana, Peshawar, etc. Spun silk from the Fujigasu Co. is found in Amritsar and Multan, but only Swiss spun silk appears to be in use at Peshawar. The price of the Japanese article is said to be Rs. 60 for 5½ seers in Amritsar and it is used for manufacturing chaddars and turbans or for suitings. The Kashmir Weaving Co., Amritsar, formerly made use of Japanese spun-silk yarn, but their agents in Bombay are now sending them another kind which bears only the label of the Bombay firm of agents. It is, however, from the David Sassoon Alliance Mill in Bombay. It is supplied in the same count as the Japanese article (140/2 metric) and appears entirely to satisfy the recipients. This Mill, I understand, mostly spins yarns of counts 140/2 and 210/2, and very rarely of any other count. The price is, in Bombay, Rs. 4 to Rs. 4-2 per lb., whereas that of the Shanghai-spun yarn of the same count and denomination is Rs. 4-8 per lb., and of the Japan-spun yarn, again of the same count and denomination, Rs. 4-6 per lb. It should therefore be only a matter of advertising the Bombay Mills' article sufficiently in the Indian market to achieve the substitution of this article on the looms for the Japanese goods so commonly in use in the Punjab.

In Multan there is a considerable demand for spun silk, which is either combined with cotton, or is used for a warp with a weft of Bokhara or

Chinese (Hoing) silk, the latter kind of cloth selling for Re. 1-6 to Rs. 2 a yard. In the Madras Presidency spun silk was given a trial a few years ago, and appears to have been generally rejected on the ground that it would not take dyes well. This seems to have been the experience of the merchants of most of the largest silk centres in the Presidency, such as Conjeeveram, Salem, Trichinopoly and Kumbakonam. At the last-mentioned place, however, one of the principal importers speaks of obtaining further supplies of it, owing to the high price of reeled silks at present. The only important centre of the Madras Presidency which still seems to use spun silk in any quantity is Madura, and even there only a small percentage of the total quantity of silk used is spun, and it is admitted that the dyes—which are aniline only—are not fast upon this kind of silk. In this place only Milan warps appear to be used, so that apparently no Japanese spun silk, or at any rate only a negligible quantity, is used in this Presidency. The average yearly value of these articles imported into Madras was from 1905-06 to 1909-10 a little under Rs. 7,000, and from 1910-11 to 1914-15 a little over the same amount. The import rose, however, in 1912-13 and 1913-14 to Rs. 16,746 and Rs. 13,279 respectively, owing to consignments from Japan which first arrived in those years. Previous to 1910-11 the principal exporting country was, after the United Kingdom, Austria-Hungary (Free Ports) and in 1905-06 Italy. In 1912-13, 1913-14 and 1914-15 the value of the Japanese consignments was Rs. 9,450, Rs. 5,200 and Rs. 5,200 respectively, the value of the imports from the United Kingdom in the same years being Rs. 6,646, Rs. 7,657 and Rs. 839 respectively, these two countries dividing between them the total import. The Japanese consignments to this Presidency may, however, be regarded as in the nature of samples, and the comparatively large imports of the years 1912-13 and 1913-14 are not likely to be equalled in the near future unless spun silk is adopted much more extensively than at present owing to the high prices ruling for reeled silks.*

Spun silk from Switzerland is used in the Punjab and is said to cost Rs. 10 a seer, dyed. Italian silk waste yarn ("Stag" Brand) is also used in Amritsar, in smaller quantities, but does not appear to go to Peshawar, where, however, the Swiss article is used for embroidery, for the padding of gold thread, and for the manufacture of *naras* or *azárbands*, a web-cloth for scarves, etc., made by a rough process of knitting upon a wooden frame.† The same kind of articles, viz., *azárbands* and *parándás* (knitted hair-nets), are also made from silk waste yarn at Amritsar. A certain amount of Italian spun silk appears also to be used in the Bombay Presidency, and some is said to go to Benares. Shanghai also supplies a cheap warp, though I have not come across it in actual use. It will thus be seen how widely and for what various purposes spun silk and waste yarn is used, both on account of its comparative cheapness and on account of its convenience, since not only does it not require winding into various qualities of good or waste, as in the case of most reeled silk, but it can also be obtained ready for use in the form of a warp.

There does not appear to be any special characteristic of the Japanese brands which recommends them to the Indian buyer. All qualities, from the finest possible to the thick coarse yarn used in the Punjab for *azárbands*, etc., are supplied by Italy, and as has been mentioned above, the product of the Bombay Mills appears entirely able to take the place of the Japanese goods. The only reason why the Japanese article has achieved so great a popularity (the extent of which may be judged from the import figures) appears to be the energy of the Japanese exporters, who through their agents in India have flooded the market with the right article at the right time. S. Manzato, of B. G. Gorio and Co., Bombay, ascribes the success of the Japanese over the Italian article to cheap labour in the former country, but I have not been able to compare the prices of Japanese and Italian spun silk of exactly the same quality, and without such a comparison it is impossible to judge how far this is the case. Italy, however, appears sometimes to experience a certain amount of difficulty in obtaining sufficient material, and on occasion imports consign-

* Vide note on page 36.

† The process of manufacture of these articles is described and illustrated in the Punjab Monograph on the Silk Industry.

ments of waste silk from Kashmir. It is difficult to say with any certainty whether the demand for such silk in India will continue to increase. That it is doing so in the Punjab at present is beyond doubt, and it also appears to be the case in the Bombay Presidency. It is possible, however, that silk-dealers in those provinces will finally come to the same conclusion as those in the Madras Presidency and will reject it in favour of reeled silk. At present, however, the comparatively high prices ruling for reeled silks of all kinds leads to the conclusion that a still greater increase in the demand for spun silks will follow, and there is no reason to suppose that for the present any decrease is to be expected in the total quantity of this material imported into India.

Goods of silk mixed with other materials.

9. Articles of this nature are supplied chiefly by France, Italy, Germany and the United Kingdom and in consequence of the war there was a very heavy fall in the amount imported last year. The figures for the last ten years show an increase in this class of goods, the average import for the five years ending 1908-09 being about Rs. 30½ lakhs, and that for the five years ending 1913-14 nearly Rs. 38 lakhs. The value of such goods imported in that year reached over Rs. 50 lakhs, but in 1914-15 it fell to less than Rs. 16½ lakhs. The shares borne by the principal importing countries in 1913-14 were—Germany Rs. 16½ lakhs, France Rs. 14 lakhs, United Kingdom Rs. 10 lakhs, and Italy Rs. 7½ lakhs. All these countries have participated in the increase in recent years, except France whose trade has remained on much the same level as it was in 1904-05. Hongkong, which was formerly a competitor, has dropped to comparative insignificance in the last few years. Japan has not as yet seriously contested this trade. Of the principal countries the war has affected the United Kingdom most seriously and Italy least. The imports of the former fell from Rs. 10 lakhs to Rs. 80,000 in value, whereas those of Italy fell only from Rs. 7½ to Rs. 4 lakhs. Germany's imports fell from Rs. 16½ to Rs. 3 lakhs, and those of France from Rs. 14½ to Rs. 6 lakhs in value.

The demand for these articles seems to be greatest in the Bombay Presidency and the Punjab. There must be a considerable export of this nature from Bombay Port to Amritsar and Delhi, where they are sold in large quantities. They include silk flowered grenadines from Switzerland, cotton and silk goods of various kinds from France, and imitation silk saris from Austria-Hungary, these being of cotton embroidered with silk and imitation gold thread. Details of these articles will be given later, when we come to deal with the Punjab import of manufactured silk. German mixed velvets and satin were also imported in large quantities until the outbreak of the war. Mr. Ghamat, of the Bombay Customs Department, has kindly collected a number of samples of these and forwarded them to me. The satins are of all kinds—plain or self-coloured, corded satin brocade, satin embroidered with silk spots and flowers, and figured satin brocade similarly embroidered, varying in price from about 8½d. to 1s. 3½d. per yard. They are sold in lengths of 32-3 yards or 35-6 yards, the widths varying from 16½ to 24 inches. They all agree, however, in the brilliance of their dyes, the hideousness of their colour-effects and the cheapness and flimsiness of their material. The velvets are apparently of cotton or cotton-backed silk, and are supplied in lengths of 25 to 30 yards. The former cost 11½d. to 13d. per yard in width of 18 inches; the latter vary from 1s. 4½d. to 1s. 8d. per yard, the widths being 17½ to 18 inches. There is a very wide range of colours—blue, purple, cerise, green, bottle-green, chocolate light and dark, violet, scarlet light and dark, black, jetblack and gold. The ingenuity shown in preparing the sample boxes of these velvets is especially noteworthy, the goods being set out in the most striking possible way. I do not know of any reason why all these articles should not be manufactured in India, if a market continues for such inferior goods. In the Punjab, to which these articles largely go, the popular taste appears to subordinate durability and quality to brilliance of colouring and cheapness, and it certainly ought to be possible

to supply what is needed within the country. It would, no doubt, be a misfortune for skilled silk weavers to turn their hands to the manufacture of shoddy articles of this kind, but it should be possible to set up the industry side by side with the existing weaving, especially in places where silk-weaving has already disappeared or is dying out, (as, for example, in Ahmednagar), and where weavers are still available though they have been driven to take up other occupations.

Silk piece-goods.

10. The total import of pure silk goods into Bombay in 1914-15 was valued at Rs. 1,06 lakhs, showing a decrease of over Rs. 26 lakhs from the preceding year. As the Eastern countries supply well over 90 per cent. of the whole amount the fall cannot wholly be ascribed to the war, and it should probably be partly referred to the growing competition of mercerised cotton goods in the market. A decrease was already apparent in 1913-14, though this chiefly affected not the Bombay but the Burma market, which in the case of goods of this description receives about 30 per cent. of the total import into India. Until that year, however, imports during the last ten years have shown a fairly steady increase, the value having risen from Rs. 69 lakhs in 1902-03 to Rs. 1,34 lakhs in 1912-13. The following table gives the total value of silk piece-goods imported into Bombay during various years, and the share borne by the chief importing countries, for comparison :—

	From Japan. In Rs. lakhs.	From China. In Rs. lakhs.	From Hong- kong. In Rs. lakhs.	From France In Rs. lakhs.	Total Import. In Rs. lakhs.
During 1902-03	17½	20	14	13	69
Average for 5 years ending 1907-08	30	20	15	5½	73
Average for 5 years ending 1912-13	55	30	18½	7	113
During 1913-14	64½	35	22½	7	132½
During 1914-15	46	31½	23	3	106

It will be seen that French goods, after losing their original position in the market ten years ago, have since then remained fairly steady until last year. The other three countries have all had some share in supplying the increased demand, but Japanese articles now amount to nearly one half of the total import of pure silk goods. The success of the Japanese goods seems to be due, more than anything else, to the aptitude shown by that country in fitting the supply exactly to the demand, as in the case of silk yarns and warps, and to the variety of the articles which it puts upon the market. It is said that Japanese agents visit the merchants in Bombay, and other of the chief silk centres of India, every few months and enquire into the exact nature of the demand, the particular type of silk cloth most readily sold, and even the particular patterns most suited to the public taste. The style and quality of the *saris* and other articles of clothing most in fashion is carefully observed, and fresh patterns adapted to the popular taste of the moment are regularly exported to India. Where other countries monopolise the markets with goods of a particular description, no time is lost in manufacturing and putting upon the market articles of the same or similar nature and pattern. Ten years ago all the flowered silk (*kohaku*) imported into India came from France. Now the whole supply comes from Japan. The same is true of damask. Some white embossed satin, for which there is not so great a demand, still comes from France, but it is said to cost nearly 50 per cent. more than the Japanese article. The following list of the different kinds of silk piece-goods imported from Japan into Bombay will give some idea of the extent and variety of the trade :—*gauze* (flowered, chicken, plain, khaka, satin, pati, chokdi); *paj* (plain, flowered, chicken, doria, duranga, painted, rainbow); *crepe* (plain, chicken, khaka, painted); *kanavez* (roll, plain,

duranga, chokdi, satin pati, watered, gold-embroidered); *pineapple* (plain, satin pati, chokdi, rainbow, chatai, chicken).

With this list may be compared the following list of silk articles imported from China:—*gutpot* (plain and flowered); *gauze* (plain and flowered); *atlas*; *crepe*; *paj* (plain and flowered); *hozria*, *lustrin*, and *satin* (all plain and flowered); *satin mashru* (striped and five striped); *tanchoi*; *izar*; *borders*; *saris-golas*—(i.e., bordered saris); and *dupetus* (generally of *paj*); besides cheap piece-goods of wild silk.

For *paj* in particular, both plain and flowered, there is a large market. This is also produced by the Bombay Mills, but the general complaint is made that the Mills work on conservative lines and are much less ready than the Japanese to bring out new patterns. They are consequently less able to supply the market with the particular patterns and kinds of silk cloth most in demand at the moment.

The extent to which Japan has captured the trade in these articles is instanced by the fact that the goods of that country have retained their position in the market, in spite of the price having gone up from 25 per cent. to 75 per cent. owing to the war. The silk trade appears to be the barometer of financial prosperity in the United States of America, and at the present time her demand for Japanese goods has so enormously increased that prices have risen very high, yet none the less Japanese silk piece-goods far outnumbered those of any other country in the Indian market during 1914-15.

The superior method and organization of the Japanese trade is shown not only in such important matters as the adaptation of supply to demand but also in the attention paid to the smallest details of good management. For example, all the silk goods from Japan arrive at Bombay Port carefully packed in tin-lined cases. This is not the case with any of the Shanghai or other Chinese silk manufactures. Similarly, all heavy Japanese silks bear a Government stamp giving the weight of the article, revealing more careful supervision than is elsewhere provided.

I cannot venture any opinion as to how far this organization is the result of private enterprise, and how far it is due to Government intervention, but there can be no doubt whatsoever that the trade in Indian silk goods cannot hope, without organization, to compete with the highly organized trade of Japan. Whether, so organized, it can compete with any success, will depend upon the industrial conditions prevailing in these two countries. The success of the Japanese goods is sometimes referred to the cheaper and more efficient labour which is said to be available in that country, but there is no clear evidence that labour in India, similarly organized, could not be as efficient as that of Japan. Nor would such a condition by any means explain the greater diversity and variety of Japanese goods, and the frequent failure in this country to supply the public with what it needs. The demand prevailing in North-West India for finely-woven and highly-finished silk piece-goods has been met, almost entirely, from outside, through imports from Japan and China, the supply received from Benares or the Bombay Mills being comparatively very small, and that obtained from the local looms almost negligible. It is, of course, possible that superior organization is not the root cause of the Japanese success, but only a contributory factor, the fundamental reason lying in the difference of conditions of labour in the two countries. This would be the case if the Japanese labourer is compelled by circumstances to work in the silk industry at a lower wage, when the Indian labourer is able to employ himself more profitably in other industries. Whether this is so or not is a question which can only be answered by a study on the spot of the conditions prevailing in Japan. If it should be found to be the case it is obvious that although organization must always be beneficial, success in this particular industry must rest with the country which is able to put its goods on the market at the lowest price. Sentimental considerations will certainly not go very far in persuading an intending customer to pay more for an article which he might obtain at a lower price. In this connection I may be allowed to quote Mr. Cumming's "Review of the Industrial Position and Prospects in Bengal in 1908":—"At a time when so much is said and written about the

support of local industries, Bengali ladies of the better class are purchasing *saris* of Chinese silk manufactured in Japan and sold in Calcutta in preference to the Calcutta or the Benares products." This is not only true of Bengal,—and indeed I see no reason why the case should be otherwise, or why Japan should not enjoy the fruits of its superior industry and initiative, in these are the causes of its success. Unless, however, conditions of labour are so different in this country as to preclude successful competition, there is no reason why an effort should not be made, by means of sound organization, to put to their full use the natural resources of this country, which in the case of silk are very considerable.

Other silk manufactures and silk substitutes.

11. Other articles of silk manufacture are of small importance. They include thread for sewing, and amounted in value to Rs. 1,02,765 in 1914-15. The United Kingdom, Japan and Germany are the principal exporting countries, supplying about 50 per cent., 20 per cent. and 16 per cent. respectively in 1913-14, though last year German goods amounted only to about 4 per cent. of the whole, Japanese goods rising to about 30 per cent. Besides silk goods, however, mention must be made of mercerised cotton yarn, and piece-goods of cotton and artificial silk. These articles have only been separately recorded in the returns since last year and it is, therefore, not possible to compare the amounts imported previously. They are now of considerable importance, imports of mercerised cotton into Bombay amounting in 1914-15 to 1,530,324 lbs., valued at Rs. 23,42,741, and of goods of cotton and artificial silk to a value of Rs. 3,47,877. It may be mentioned here that artificial silk is also frequently used for the embroidery on Japanese piece-goods, sold as pure silk. This is an abuse all the more difficult to check in that petty dealers in this country are very frequently ignorant as to what is, and what is not, real silk. Thus for example spun silk is often regarded as no more real silk than artificial silk or even mercerised cotton, and would certainly be classed with those articles, by many such dealers, as a silk substitute. It would be a decided check upon a deception which trades upon this ignorance if it were possible for all pure silk articles, whether of spun or of reeled silk, to be stamped as such at the time of clearing the goods at the Customs. Articles of cotton and artificial silk are, of course, acknowledged as such, and are so recorded in the returns. They come mostly from England, only about 3 per cent. of the total import being received from other countries. Imports into Karachi of the same kind of goods amounted in value to Rs. 15,884, almost entirely from the United Kingdom.

Mercerised cotton yarn is chiefly supplied by the British Empire and Japan. In 1914-15 the imports of this article from the former were valued at Rs. 12,53,678 and those from the latter at Rs. 10,85,068. Small quantities were also received from Switzerland and Germany. In addition to these quantities received in Bombay, imports into Karachi of the same material were valued at Rs. 2,42,899 and were supplied by the United Kingdom, Italy and Switzerland, the value of the imports being Rs. 1,82,023, Rs. 8,476 and Rs. 52,400 respectively. Mercerised cotton yarn is used very extensively in the Bombay Presidency and in the Punjab, and the Madras Presidency draws its supplies of the Japanese article from Bombay, only European mercerised cotton being received in the Madras Ports. It is not however used in very great quantity in that Presidency. In Benares, on the other hand, the value of this material consumed in the town is said to amount to Rs. 2 or Rs. 3 lakhs. All this must be received from Bombay, for in 1914-15 only 1,450 lbs., valued at Rs. 2,350, were received in Calcutta. The dyed article is no longer used there owing to the high price of dyes, and the Japanese is ordinarily used, it being less costly than the English. It is also used in Benares for the manufacture of very coarse gold thread, which is prepared in the town. The use of this article in the Punjab will be discussed in the chapter which deals with that province. In the Bombay Presidency there is a large demand. In Ahmedabad less reeled

silk and much more spun silk and mercerised cotton is now used than was formerly the case. The "Vijay Weaving Works" employ 21 looms (of which only 15 are, however, now in use, owing, it is said, to the lack of labour) almost entirely on mercerised cotton. This concern has been started within the last two years and manufactures plain mercerised cotton cloth of various shades, and a small quantity of spun silk. The mercerised cotton in use is Japanese and costs Rs. 13 per packet of 10 lbs. (390 tolas). The finished cloth sells at from 12 annas to Re. 1-1 per yard, the spun silk cloth fetching from Re. 1-12 to Rs. 2 per yard. The looms are all fitted with fly shuttles, and the outturn must be considerable. The cloth is well-woven and of good appearance and there is said to be a greater demand for the finished cloth than can be met with the limited amount of labour available. Such being the case the installation of some other kind of loom,—such as the Churchill loom,—for increasing the output, seems the obvious remedy. In Surat both the English and the Japanese article is in use. Here one employer of weavers uses very little else except mercerised cotton and spun silk. The English article (from Manchester) is used for the warp with a weft of white or grey thread from the Mitsui Bushen Kaisha Limited, or of Japanese spun silk. All the dyed mercerised cotton, however, is obtained from England. A weft of this article is also used with spun silk warps. Another employer, himself a weaver and employing about 120 weavers under him, combines threads of silk and mercerised cotton in the manufacture of cloth for the Burma market. Thus one thread of Minchow (Chinese silk) is twisted with one of mercerised cotton and the combined thread used as a weft-thread with a warp of mercerised cotton; or again one thread of mercerised cotton is twisted with two threads of Meang to form the weft. A *lungi* of the former kind sells for Rs. 2-4 for 2½ yards. A mercerised weft is also used with a spun-silk warp as at Ahmedabad, a *lungi* of this manufacture costing Rs. 3-4 for 5 yards (half width). The demand for mercerised cotton yarn in the Presidency appears to be on the increase, and further reference to the use of this material in British India will be found elsewhere.*

Imports of artificial silk yarn are not separately recorded in the Trade Returns, so that it is impossible to estimate the quantity with any certainty. Of the total imports of this article into Bombay and Karachi it is estimated by the importers that 75 per cent. goes to the Punjab and only 25 per cent. to all other provinces. The Sassoon Mills are reported to have started using it in 1915, and a little is consumed by Hyderabad (Deccan). The quantity used in the Bombay Presidency, however, appears to be very small, and I found none at all in use in the big weaving centres of Surat and Ahmedabad. For further details regarding the use of this material reference may be made to page 86, where an attempt is made to estimate the total quantity consumed in India and the extent to which it serves as a substitute for natural silk in this country.

TRADE ORGANIZATION.

12. The import trade in raw silk and silk manufactures is largely in the hands of a few individuals. The firm of Nagendas Fulchand Chinai imports some thirty to thirty-five lakhs of rupees worth of raw silk from Shanghai, where there is a branch of the firm. That of Gobhai imports Japanese and Shanghai piece-goods, besides raw silk and artificial silk, to the value of from Rs. 20 lakhs to Rs. 30 lakhs, most of this import being of Japanese manufactures. This firm has also branches at Amritsar and Delhi for these articles. The firms of Currimbhoy Ebrahim and Tata and Sons also deal in the raw material, the former having agents in Japan for purchasing silk. The whole trade in China raw silk is said to be controlled by some four or five importers, whereas the trade in Japanese and Chinese piece-goods is shared by about forty persons, of whom, however, about half a dozen are especially prominent. The trade in spun-silk, now a large one, is also in the hands of about six persons. The whole trade in imported silk is conducted by Indian merchants, except for two Japanese firms of commission agents in Bombay—the Japanese Cotton Trading Co. and the Mitsui Bushen Kaisha.

* Vide page 85.

None of these importers have ordinarily any direct dealings with the silk merchants in the mofussil. The latter instruct their agents to buy silk on order through the brokers, of whom there are said to be about a dozen in Bombay, two or three of them conducting most of the business. The more businesslike of the mofussil merchants receive intimations from time to time of the latest shipments of silk and the kinds received, their qualities and prices. The agents in Bombay nearly always buy on commission and very rarely on their own risk. The brokers are said to get ¼ per cent. commission on their purchases from the importing firms. The agents probably obtain about 1 per cent. commission, but reliable information on this head is difficult to obtain. The mofussil merchants are sometimes only dealers in silk, importing from Bombay in the manner described, and selling the raw material to the actual employers of weavers, who are smaller merchants in the town. Sometimes, however, they prepare the silk for weaving, employing winders, dyers, throwsters and pirn-winders, and selling the raw silk ready-prepared for the loom. Elsewhere these processes are left to the actual employers of the weavers. Sometimes, again, the mofussil importers are themselves the employers of the weavers, keeping a number of looms at work in the nature of a small factory. Details of these various methods will be found elsewhere, the practice varying from province to province and even from town to town. The disadvantages of a system which leaves the import trade in raw material destined to supply a very large area in the hands of an inconsiderable number of individuals are obvious. In some places, where the influence of a single importer, who is interested in a particular commodity, is paramount, those who are actually concerned in the silk industry are liable to be unable to obtain anything but that particular commodity, though it may cease to be the article which is most suitable for their purposes. This particularly affects the Indian raw material, for whereas the Japanese and Chinese goods are the particular concern of several important firms, very little interest is now taken in pushing the Indian goods on the market. In many places Mysore raw silk is totally unknown, and in others the quality and quantity of Bengal silk required cannot easily be obtained. Were there any organization, conducted on strictly business lines, for the better advertising of all kinds of Indian raw silk, it is fairly certain that a number of markets could be supplied which at present are ignorant of, or cannot obtain, such material, although it is at least as suitable for their purposes as the kinds of foreign raw silk now being imported.

Internal Trade.

13. Besides the imports of foreign silk by sea Bombay received in 1914-15 1,987 lbs. of foreign raw silk by coasting vessels and 449 maunds by rail. Of the coastwise import 1,137 lbs. came from Kathiawar, and the remainder was shared about equally between Burma and the other British Ports within the Bombay Presidency. Nearly the whole of the import by rail is recorded as having been received from Mysore. As has been seen from the table given above, Bombay received during that year, according to the official returns, raw silk, foreign and Indian, to the value of nearly Rs. 4½ lakhs,* and manufactures valued at about Rs. 33,000 by rail, and nearly Rs. 32,000 by coasting vessels. The principal sources of supply were Mysore, which is recorded as having sent 440 maunds of foreign, and 109 maunds of Indian raw silk, of a total value of over Rs. 2 lakhs; and Madras, which was responsible for Indian raw silk to the value of Rs. 1½ lakhs. The large import of foreign raw silk from Mysore is inexplicable, for a similar, though smaller, import (61 maunds) is recorded in the preceding year (1913-14), in spite of the fact that Mysore imported (according to the official returns) less than 80 maunds of such silk during the five years ending 1913-14. Unless therefore that State receives large supplies of foreign raw silk by road from neighbouring territory and again exports them (which is extremely unlikely), there appears to be a serious mistake in the official returns.

* Excluding the supposed consignment from Calcutta referred to on page 4.

Outside the Bombay Presidency by far the largest consumer of foreign raw silk is the Punjab. The total import of such silk into Bombay Port amounted last year to over 2 million lbs., after deduction of exports. Of this quantity rather over $\frac{1}{2}$ million lbs. are recorded as having been exported by rail to places within the Presidency, and rather under $\frac{1}{2}$ million lbs. to other Presidencies. Bombay Port Town, therefore, is left with a net import for its own consumption of about half the total import—or 1 million lbs. This figure is however subject to very large deductions for the reasons given on page 2 above, large quantities of silk being exported by passenger train. The following table gives the amount, in maunds, of foreign raw silk imported by rail and coastwise into the undermentioned provinces from the Bombay Presidency; practically the whole amount being, of course, from Bombay Port:—

Export of foreign raw silk from Bombay to	1914-15.	1913-14.	1909-10.	1905-06.
	Mds.	Mds.	Mds.	Mds.
Punjab (by rail)	4,292	3,920	..	4,113
Sind (by coast and rail)	694	1,035	956	1,284
Nizam's Territory (by rail)	196	294	185	280
United Provinces (by rail)	123	120	4,634	..
Central Provinces (by rail)	103	156	..	101
Madras (by coast and rail)	35	49	179	3
Others (by coast and rail)	49	41	90	46
TOTAL	5,492	5,615	6,044	5,830

The ultimate destination of the large quantity recorded in 1909-10 as consigned to the United Provinces was probably the Punjab. From this table it will be seen that the imports of foreign silk into that province have remained fairly steady, and that it regularly consumes about three-quarters of the whole export from Bombay Presidency, or about one-sixth of the total quantity imported into Bombay. The remaining two-sixths are divided between Gujarat and Kathiawar on the one hand and the remaining provinces and other places within the Presidency on the other hand. From the above table it will appear that the consumption of foreign silk imported from Bombay by those provinces has to a certain extent decreased. As, however, Bombay is by far the largest but not the only port which receives supplies of foreign raw silk by sea, it is not safe to conclude that actual consumption in any province has decreased without taking into account all the sources of supply, which include inter-provincial trade by rail. These figures will be given in their appropriate places. Attention need only be drawn here to the fact that whereas the total import of the raw material into Bombay Port has increased in recent years, exports from the Port to other provinces, re-exports by sea, and exports to other places in the Presidency, have all, according to the Trade Returns, decreased. The conclusion that the Port Town is now absorbing a very greatly increased quantity of the raw material itself, which more than counter-balances the decreases in other centres, is not a feasible one, for there is no other evidence of such an enormous increase in consumption. On the other hand, it is beyond question that the use of foreign raw silk in the Madras Presidency has greatly increased, and that Presidency draws its supplies very largely from Bombay. As has been shown in the table above the recorded export to Madras is a trivial one. The only conclusion, therefore, is that only a portion of the railborne trade is recorded in the Returns, and most of the one million lbs. of foreign raw silk, which appears from the official figures to have been used up in the Port Town, was really distributed among the other provinces or the remainder of the Bombay Presidency, and went partly to the silk-centres of Madras, the export being effected by passenger train or by post.

Similarly, it is probable that foreign silk manufactures are largely sent out of Bombay by the same methods, so that the recorded figures for railborne and coastwise trade in such goods cannot in this case also be taken as more than a very rough indication of their movements. The principal recipients are the Punjab and the United Provinces of Agra and Oudh by rail, and Sind by coastwise trade. A smaller quantity goes regularly also to the Nizam's Territory, and occasional consignments are obtained by the Central Provinces, Madras, and other provinces. The subjoined table shows the total quantity, in maunds, recorded as having been exported from Bombay to other provinces by rail:—

Foreign piece-goods exported by rail from Bombay to	1914-15.	1913-14.	1909-10.	1905-06.
	Mds.	Mds.	Mds.	Mds.
Punjab	770	1,403	1,730	1,459
United Provinces	374	364	464	244
Other provinces	100	134	102	152
TOTAL	1,244	1,901	2,296	1,855
TOTAL VALUE RS.	4,29,562	6,37,739	7,88,189	6,11,236

The use of foreign silk manufactures in the Punjab appears therefore to have decreased heavily last year, the amount in use in the United Provinces having, on the other hand, remained fairly steady. Besides this quantity exported by rail, Sind receives a regular supply by coastwise trade from Bombay Port. This amounted in value to Rs. 1,28,000 in 1914-15, and here again a decrease is evident, the figure reaching a little over Rs. 3 lakhs in 1905-06 and over 2 lakhs in 1909-10. From these figures, if they could be considered reliable, it would appear that the general use of foreign manufactured silk is decreasing. This conclusion can hardly be drawn, however, in view of the undoubted fact that the imports of such articles into British India have heavily increased during the last few years. It is true that re-exports of such silk have also increased and rose in value from Rs. 4½ lakhs in 1909-10 to Rs. 10 lakhs in 1913-14, but this goes very little way in accounting for an increase which amounted to over Rs. 70 lakhs, of which more than four-fifths went through Bombay Port. It appears therefore that the figures for railborne trade of recent years are very incomplete and record only a portion of the whole trade.

The trade in Indian manufactured silk is on a small scale. Bombay Port receives these articles from Calcutta, Mysore and the Punjab, and exports to the United Provinces, Central Provinces, and Nizam's Territory. The total imports in 1914-15 amounted only to about Rs. ½ lakh in value, and were mainly received from Calcutta by rail and Kathiawar by coastwise trade. The total exports amounted only to about Rs. 12,000 in value. In 1913-14 the Port received 100 maunds, valued at Rs. 1 lakh, from Calcutta and Mysore by rail, besides a small amount by coastwise vessels, and exported 46 maunds, valued at Rs. 33,000, to the Central Provinces, etc. In 1909-10 the total import (from Punjab, Mysore, etc.), was valued at nearly Rs. 1½ lakhs, and the total export (to the United Provinces, Nizam's Territory, etc.), at over Rs. 1 lakh. In 1905-06 the imports (from Calcutta, etc.), were only valued at about Rs. 30,000, but 1,614 maunds valued at over Rs. 10½ lakhs, were exported by rail, and over Rs. ½ lakh's worth by coast, to the United Provinces, Punjab, Nizam's Territory, and other places. It is evident therefore that the trade in Indian manufactured silk has very seriously declined, and so far as concerns Bombay Port is now of very small importance.

14. Within the Bombay Presidency the most important movements of silk are the exports of foreign raw material from Bombay Port. These in

1914-15 amounted to 6,643 maunds, valued at Rs. 26 $\frac{3}{4}$ lakhs. Over 4,000 maunds went to Gujarat and Kathiawar, over 2,000 to the South Maratha Country, and most of the remainder to East and West Deccan. The quantity of foreign raw silk distributed in Bombay Presidency from the Port was in previous years slightly higher, the amount being in 1913-14 over 7,000 maunds and in 1909-10 and 1905-06 nearly 8,000 maunds. Meanwhile values appear to have risen, the total amount in 1909-10 being valued only at Rs. 27 $\frac{1}{2}$ lakhs. The following table gives the quantity of foreign raw silk, in maunds, imported into the several blocks of the Presidency during those years. This table may be compared with that given on page 26 showing the quantity exported to other provinces.

Import of foreign raw silk into	1914-15.	1913-14.	1909-10.	1905-06.
Gujarat and Kathiawar	4,070	4,418	3,515	2,989
East Deccan	7410	348	685	1,050
West Deccan	125	156	287	326
South Maratha Country	2,022	2,281	3,448	3,278
North Deccan	14	..	25	216

Exports of this material from those blocks by rail are negligible, being practically confined to very small consignments from Gujarat, East Deccan, and South Maratha Country to Bombay Port, and the coastwise trade is unimportant except as regards Kathiawar, which sends a few maunds of foreign raw silk to Bombay each year and receives an increasing quantity which last year amounted to about 277 maunds. The figures given above may therefore be taken as an indication of the amount of this material consumed in each block. It will be seen that Gujarat, containing the important weaving and dyeing centres Surat and Ahmedabad, consumes a greater quantity than was formerly the case, and this is still further enhanced by the net quantity received by coastwise trade. The other blocks all show a decrease, which is especially apparent in East Deccan (Ahmednagar, Sholapur and Bijapur), and in North Deccan (Khandesh and Nasik); the last-named block having now ceased to import any considerable quantity.

Turning to the Indian material, the most important movement is between Bombay Port and Gujarat and Kathiawar. In 1914-15 Bombay Port sent 231 maunds to that block, but received back from it 264 maunds. Similarly in 1913-14 the Port sent 880 maunds to Gujarat and Kathiawar (which also received 101 maunds from South Maratha Country and small quantities from other places), and received thence 571 maunds. The figures for previous years show the same result: thus in 1909-10 the import into Gujarat and Kathiawar was 128 maunds and the export to the Port Town 382; and in 1905-06 the imports were 641 maunds and the export 246. From these figures it is clear that Indian raw silk is chiefly sent to Gujarat and Kathiawar for the purpose of dyeing, etc., and is not largely used there for weaving purposes. The other movements of this material within the province are unimportant. Gujarat and Kathiawar also received 121 maunds from Madras, Mysore and the Punjab, but again exported 43 maunds of this amount, mostly to the Punjab. Most of this material was evidently sent to these places (Kathiawar, Surat and Ahmedabad) for the same purposes, *viz.*, for dyeing and preparing.

The railborne trade in manufactured articles requires only a passing notice. The most noteworthy fact in 1914-15 was a large export in foreign piece-goods from Gujarat and Kathiawar to Bombay Port Town. This amounted to 298 maunds and was valued at about Rs. 1 lakh. In the preceding year no such consignment appears to have been sent, nor does it appear in the returns for 1909-10. In 1905-06 Indian piece-goods valued at over Rs. $\frac{1}{2}$ lakh were received in Bombay from the same block. This agrees with the figures already given to confirm the view that conditions in the towns in that block are improving, and it indicates also that the foreign has ousted the

Indian raw material on the looms. Exports from Bombay Port are generally of foreign piece-goods to the East Deccan block (Ahmednagar, Sholapur and Bijapur), while this block generally sends articles of Indian manufacture to the West Deccan (Poona and Satara) and elsewhere. These latter were valued in 1914-15 at Rs. 25,000 and in 1913-14 at Rs. 13,770. Silk looms appear to have practically ceased to work in Ahmednagar, therefore Sholapur and Bijapur must be almost wholly responsible for this output, and it is probable that these places make greater use of Indian raw material than is the case elsewhere in the Presidency.

SILK INDUSTRY.

15. Apart from the official figures for recorded transactions in silk, local enquiry shows that practically no Indian raw silk is used in Surat, Ahmedabad or Poona. Mr. Nissim's estimate of the quantity of this material consumed in the Bombay Port Town has already been given. The Chhoi Silk Mill Co. Ltd., has kindly supplied the following figures, showing its own consumption of raw silk, chiefly Bengal and China, and outturn of silk cloth during the five years ending 30th June 1915. In addition to raw silk this Concern also consumes Mill Spun Silk, from silk waste, and cotton yarn.

Year.	Silk consumed.	Silk cloth produced.
	<i>Rs. a. p.</i>	<i>Rs. a. p.</i>
1911	1,38,053 3 8	3,35,339 0 0
1912	78,759 7 4	3,28,058 0 10
1913	80,766 14 0	3,14,367 2 5
1914	66,194 15 0	2,62,413 0 8
1915	60,110 11 11	2,27,976 7 3
TOTAL	4,23,885 3 11	14,68,203 11 2

No indication is given of the proportion of Bengal raw silk to China raw silk so consumed. Mr. Nissim's estimate of the Indian raw silk consumed by the rest of the Presidency is as follows:—Ahmednagar, Sholapur and Chitapur 28,000 lbs., Rs. 2 lakhs:—Yeola 15,000 lbs., Rs. 1 lakh:—Hubli, Dharwar and Bagalkote 85,700 lbs., Rs. 6 lakhs. Adding the estimated amount of consumption in Bombay City (*viz.*, 71,400 lbs.:—Rs. 5 lakhs), the total quantity of this material consumed in the Bombay Presidency during 1914-15 amounted to about 200,000 lbs., valued at roughly Rs. 14 lakhs. There is nothing to indicate the source of this silk, but it may be conjectured that Hubli and Dharwar receive supplies from Mysore *via* Harihar, by which route, according to the Returns for the Railborne Traffic of the Mysore State, 333 maunds or 27,472 lbs. of Indian raw silk were exported in 1914-15. During the first three quarters of 1915-16 the export by this route was 404 maunds or 33,330 lbs. of raw silk (excluding waste), an increase which very possibly means that Hubli and Dharwar are now, owing to the high price of China silk, drawing upon Mysore more heavily than was formerly the case for the supply of the Indian material. Similarly, Sholapur may also receive supplies of Mysore raw silk, either *via* Harihar or *via* Hindupur. The export from Mysore State by the former route is a large one, amounting to 1,400 maunds or 115,500 lbs. in 1914-15, and during the first three quarters of 1915-16 to 1,709 maunds or 140,992 lbs. The total export of this material from Mysore during 1914-15 by these two routes (which lead in the direction of the Bombay Presidency, the third route, Bisanatham, going towards Madras) amounted to 142,972 lbs., and in the first three quarters of 1915-16 to 174,322 lbs. If Mr. Nissim's estimate is correct, it is probable that this

quantity of Mysore silk is mostly consumed in the Bombay silk-centres mentioned by him.

16. The foreign raw silk consumed in the Bombay Presidency is nearly all Chinese. In Poona the "Double Dragons" Chop is most in evidence, *kath* from Hongkong (or "Calcutta" silk, as it is called) being also used. The former costs, doubled, Rs. 15 a seer; the latter Rs. 18 a seer. From the price it would seem that the latter is the North China variety, re-reeled in Canton. Bengal silk is said to be about Re. 1 per seer less than the Chinese, but to be unsuitable owing to continuous breaks in the thread. For the manufacture of gold thread cheap Japanese "Sanshu Douppion" silk is used, as has been stated elsewhere. The price of this is said to have risen from Rs. 9 to Rs. 11 on account of the war. All these kinds of raw silk are obtained through agents in Bombay, there being no direct communication between the merchant in Poona and the actual importer. The raw silk consumed in this town is not all prepared for the looms in Poona itself, only about 50 persons being engaged there on this kind of work. Frequently the preparatory processes are done in Surat (a great centre for twisting, winding, etc.), or in Benares or elsewhere. German aniline dyes are employed, though an inferior kind is also said to be obtainable from Bijapur. From the "Monograph upon the Silk Fabrics of the Bombay Presidency" it appears that in 1900 Bengal and Persian raw silk was also found at Poona. Neither of these kinds is now in use. The silk cloth manufactured in the town is mostly consumed locally, selling at from Rs. 3 to Rs. 12 per yard, but exports are sometimes made to Nagpur, Berar, Khandesh and other places. Silk cloth is also imported from Coimbatore, Surat and Benares. Selling prices are reported to have fallen since the outbreak of the war.

In Ahmedabad a greater variety of China silk is found but neither Bengal nor Mysore raw silk. The kinds of China silk most used are Minchow, costing Rs. 13-12 per seer (of 72 tolas); Kobin, at Rs. 14-8; Kakaria, at Rs. 14; Hoing, at Rs. 13, and Sichoon, at Rs. 10-8. All of these are Shanghai silks, 60 per cent. of the yellow and 40 per cent. of the white variety being employed. Spun silk and mercerised cotton are gaining in favour in this city, far more weaving being now done with these materials than was formerly the case, and the use of reeled silk is said to have considerably decreased. The Chinese raw material is obtained from the firm of Nagendas Fulchand Chinai, the only Commission Agent in this city. Commission is reported to amount to 1 per cent. on the value of the purchase. The silk industry in this city appears to be rapidly declining. According to the census figures there were 8,915 persons engaged in silk spinning, weaving, carding, etc., in this district in 1901. In 1911 the number of silk spinners and weavers had fallen to 7,336. To-day there are said to be only 500 looms in the City, where ten years ago there were 2,000. There are reported to be several causes which contribute to this decline. In the first place weaving is said to be often impossible in the climate of Ahmedabad without the use of *sares* for sizing, and this renders it more expensive in that city than elsewhere. Further, the failure of the monsoon two years ago is said to have assisted in the decline by reducing the demand. "Kinkhabs" are now less in demand, and this kind of article used to be a staple product of the Ahmedabad looms, which have been famous for it for at least the last half-century. On the other hand, the manufacture of *saris* for the Deccan market has partially replaced that of "kinkhabs." Another contributory cause is reported to be the lack of labour, Cotton Mill hands now earning from Rs. 25 to Rs. 30 a month and many silk weavers turning to such employment. The neighbouring centre of Surat is also said to be assisting the decline in Ahmedabad, since Surat is producing much cheaper silk, with which the Ahmedabad looms are unable to compete. The increased use of spun silk is undoubtedly one result of this competition, and in some cases inferior qualities of silk are combined with superior qualities to reduce the cost of the material. Thus one thread of an inferior quality of Minchow is twisted with one of the best quality, or a thread of Kakaria is combined with one of Minchow to form the weft thread in weaving. In spite of the difficulty now being felt with regard to the silk industry in Ahmedabad, the merchants are still reported to tax themselves at the rate of Rs. 7 per picul, on all silk imported into the city, for charitable purposes, which must

considerably increase the price of the raw material. The real causes of the decline of the industry, however, appear to be the following:—

(1) The competition of the Cotton Mills which pay their hands better.

(2) The failure of the employers of the weavers to recognize the change in demand and adapt themselves to it. The decrease in demand ascribed to the failure of the monsoon two years ago is far more likely to be due to a change in the nature of that demand, for the neighbouring centre of Surat has experienced no such decrease. The merchants are very unwilling to set their looms to work upon anything except rich gold-embroidered *saris* of the kind manufactured by their fathers, the demand for which is certainly a limited, and possibly a decreasing one. Only 4 or 5 persons in the town are now able, it is alleged, to set the looms for particular patterns, and the ordinary manufacture consists of this very fine gold-embroidered silk cloth, woven in standard patterns, and costing from Rs. 15 to Rs. 50 per piece of about one yard. The women of the town are however largely engaged upon the process known as *bandhani*, in the course of which knots are tied in the cloth, and it is then dipped in dye, sometimes more than once, patterns being produced by this method. The silk used for this is Hoing for the warp and Kakaria for the weft, and the manufactured cloth sells for Rs. 16 for a piece of $4\frac{1}{2}$ yards (24 inches wide) and is used for making *saris*. This kind of work is however done solely by women, who earn only Rs. 3 or 4 a month in this way; it does not therefore affect the general position of the industry in the town.

(3) The merchants themselves. There are estimated to be from 500 to 1,000 of these in the City—mostly men of small capital,—and by their lack of initiative and business capacity they are certainly contributing to the decline of the industry. In spite of the fact that it is owned that Surat turns out cheaper silk cloth than Ahmedabad, and it is recognized that the old demand is decreasing, they generally fail to make any attempt to meet the new demand. They are unable or unwilling to raise the pay of the weavers employed by them, with the result that the Cotton Mills offer superior attractions and entice the weavers away from the silk-looms. It is impossible not to regard these small employers of weavers as a serious drag upon the industry as a whole, and they must inevitably present an obstacle to any attempt to revive it.

(4) The entire supply of silk seems to be in the hands of one firm, which has a branch in Shanghai and which naturally has an interest in supplying Chinese silk. It is very possible that this is partly the cause why the Indian raw material never appears to be imported into Ahmedabad.

I am convinced that the weavers, if combined together, could do far better for themselves than is possible under present conditions. The industry is at present conducted in a wasteful manner, the number of persons who are practically mere middlemen being enormous. It is a matter for regret that skilled silk-weavers should be driven to work in the Cotton Mills, and considering the success of the silk industry in Surat it can hardly be unavoidable. Were it possible to constitute the weavers of this city into a Co-operative Union, on the lines of the Conjeeveram Weavers' Union in Madras, there would, I think, be very good hope of vastly improving the conditions now prevailing in Ahmedabad.

17. In Surat, on the other hand, the industry is in a flourishing condition, though it has suffered a temporary check from the unfavourable conditions brought about by the war. The largest importer of China raw silk now imports only half the quantity which he obtained from Bombay before its outbreak, and the firm of Sorabji Hormusha Joshi and Co., which employed some 150 weavers before the war, now finds work for only about a score. This is largely because there was a large export of silk to Turkey, Jeddah and Mecca, the Ports of the Persian Gulf, and Tunis, Algiers and Morocco. "Watered Silk" (known as *garam sut*) is manufactured by this firm in considerable quantity, and 90 per cent. of this kind of cloth was exported in this way to different parts of the Turkish Empire. The demand for such cloth has therefore practically failed. All the silk merchants of this town agree,

however, that before the war there was a steady improvement of the silk industry, and the number of weavers in the town is said to have increased from about 2,000 in 1896 to 3,000 in 1904 and over 5,000 at the present time. The increase is reported to be due to the immigration of skilled weavers from Benares and Lahore, who have now permanently settled in Surat. According to the Census figures of 1911 there were then over 13,000 persons in this district engaged in silk spinning and weaving. A great many kinds of China silk are in use:—Minchow, Meang (locally called kakaria), Tsatie, Lacklow, White Shanghai (apparently real kakaria), Hoing, Sichoon, and sometimes Kobin. Japanese spun-silk yarn and warps are also employed, being obtained by a general store-keeper from native agents in Bombay. No artificial silk is in use, but there is a good deal of English and Japanese mercerised cotton. A sample of Bokhara (or Yarkand) raw silk was recently obtained from a Punjabi firm in Bombay, but this is said to be the first import of that kind for fifteen years. It is used only for making a warp, Chinese silk being used for the weft. This kind of silk, though its price is Rs. 18 a seer, is said to be actually cheaper than Minchow, for the cost of the latter is greatly raised by the charges incurred in separating the waste and by the loss involved in its extraction.* This increase of price is said to amount to about 40 per cent. of the original cost, so that actually about Rs. 19 a seer is paid for such silk, though the market price is only about Rs. 14. China silk is obtained through Bombay agents, the amount of commission being ordinarily only $\frac{1}{2}$ per cent. though when a particular kind of silk has to be specially obtained according to order, as much as $2\frac{1}{2}$ per cent. is charged. The above mentioned firm uses Minchow and Lacklow (or Tsatie) for the warp, and steam silk (white or yellow) for the weft. The steam silk is especially suitable on account of its softness, the white variety being preferred. The cost of these kinds of silk, ready prepared, is said to be as follows:—Tsatie Rs. 9 per lb., Lacklow rather less, and Minchow Rs. 8 per lb. The cost is about Rs. 2 per lb. less in the state in which the silk arrives from China. The steam silk (white) is said to be Rs. 12, though it was formerly only Rs. 8, but the price is variable and the silk is not always easily obtainable in Bombay, being more frequently received in Burma. The principal kinds of manufacture by this firm are 1. *satin*, made from a Lacklow (or, if that is not obtainable, a Tsatie) warp and a weft of steam silk. This is sold in Bombay and fetches nearly Rs. 3 per yard of 26 inches. 2. *Imitation satin*, made of a silk warp and a weft of unbleached cotton, there being, on one side, seven threads of silk to one of cotton. This is exported to Aden for sale in the interior and fetches about Re. 1 per yard of 24 inches. 3. A Minchow warp is combined with a weft of Japanese tram or spun silk. This sells for Re. 1-2 per yard. 4. *Watered Silk* made from a warp of Lacklow (or Tsatie) and a weft of bleached cotton, the cotton being concealed. This kind of cloth is exported to the Turkish Empire, as already stated, and fetches Re. 1-8 to Rs. 3 a yard. It is very carefully finished and calendered. The Satins are mostly sold in India, a considerable quantity of the pure silk satin being exported to Burma. The weavers of these kinds of cloth are said to receive a varying wage rising to as much as Rs. 20 for 50 yards, the amount depending on the skill required. They make from 12 annas to Re. 1 a day. The Manager of this firm has kindly supplied me with the following details concerning the silk used and processes employed in that concern. The Japanese silk costs Rs. 5 for a bundle of 5 kilos: (containing 140 hanks), middle quality, the count being 140/2. Minchow is only used for the warp. It is slightly inferior in lustre to Tsatie. After boiling in borax it loses most of its yellow colour, and if boiled in soap solution it becomes entirely white, but loses some of its lustre in the process. The quantity of borax and soap used for boiling is 75 per cent. of the weight of the silk in the case of the former and 25 per cent. in the case of the latter. The Tsatie is said to be the Canton variety and is imported in bundles weighing about 250 lbs. It is used only for a warp, the fibre being very strong. In the manufacture of satin and imitation satin the cloth is boiled in borax after weaving: the silk and cotton manufactures are boiled in soap solution.

* Vide pages 98 to 160.

Other merchants of Surat manufacture silk cloth largely or wholly for the Burmese market, one having a branch at Rangoon. Minchow and "lari" (apparently best quality Minchow) and coarse Meang are used for these manufactures. Japanese spun silk is also occasionally used. The "lari" is woven into *dhupsai*, which costs Rs. 7-8 for a lungi of 2 yards by 42 inches. Minchow is woven into *bepati*, lungis of 7 or 8 yards of 21 inches costing Rs. 5-8. Meang is used for inferior *bepatis*. The prices of the raw silk are given as—lari Rs. 17 per standard seer, Minchow Rs. 14-12, Meang Rs. 12-14 or Rs. 12-6. Other qualities of Meang are "H. K." at Rs. 11-14, "C. K." No. 2 at Rs. 12-8, and "C. C." No. 2 at Rs. 12-2. The employers are reported to pay the weavers about Rs. 16 for 50 local yards (about 2 ft. 4 ins.), providing the raw material and giving advances, but the rate appears to vary, for in one case the employer, himself a weaver, kept a written scale of pay varying according to the nature of the cloth, *viz.*, Rs. 7 per 54 yards by 20 inches; Rs. 7-8 for 54 yards by 22 inches; Rs. 6-12 for 54 yards by 18 inches; and so on. Owing to the diversity of the widths of cloth manufactured in Surat, therefore, statements as to the amount of pay received by the weavers have to be accepted with caution. The fact that there does not seem to be the same lack of labour which is being experienced in Ahmedabad, however, makes it probable that the weavers' earnings are higher in Surat than in that town. One merchant is said to buy finished cloth direct from the weavers themselves, who provide their own materials. The cloth is sent to Poona, where this merchant has a shop. This method certainly appears to be more likely to conduce to the prosperity of the weavers, supposing that they are able to obtain their raw silk without incurring large debts, which is unlikely, and also supposing that they receive the full price for their cloth, which (to judge from the practice elsewhere) is equally unlikely. It may be doubted whether, without combination, the weavers will ever be able to obtain the full profit of their labour under such a system.

Other kinds of silk manufactures in Surat—cloth woven of silk threads mixed with threads of mercerised cotton, etc.—have been mentioned elsewhere. Enough has been said to show the diversity of the manufactured articles and the wide range of markets which they are designed to supply. Under the circumstances it is not at all surprising that whereas the silk industry of Surat was, at least until the outbreak of war, in a very prosperous condition, that of Ahmedabad appears to have fallen into a steady decline. The latter city already depends largely on imports of foreign manufactures. Japanese goods, in particular, are greatly in demand. Some of these are made in Japan, but dyed and finished in France before export to India. Others are dyed in Bombay or in Surat. Cloth from the Bombay Mills is also sold, but the Japanese articles are preferred, in spite of the cheapness of the Mills cloth. Various reasons are given for this preference—superiority of texture, greater durability, less deterioration in washing, and so on. Japanese embroidered cloth is also sold in demand for marriage occasions, and such *saris* are, however, still always in demand for marriage occasions, and such *saris* borders for the same, and *phentas* (*i.e.*, kamarbands) are always to be bought in this city.

18. The industry has declined not only in Ahmedabad, but also in Poona. In that town there are now said to be only 1,000 weavers at work, where ten years ago there were double that number. In the Ahmednagar district, where according to the census figures there were 786 silk weavers and spinners in 1911, silk weaving is already a thing of the past. The flourishing condition of the industry in Surat, therefore, must be regarded rather as an exception than as the rule in the Bombay Presidency. The census figures for that Presidency (including Sind) show a decrease from 46,779 persons engaged in carding, spinning and weaving silk in 1901, to 38,594 silk spinners and weavers in 1911, though the figures for the Bombay States show an increase from 4,290 to 5,543. On the other hand, the number of persons engaged in the cotton hand-weaving industry was in 1901 only 227,303, whereas the number of persons employed in spinning, weaving, and sizing cotton in 1911 was 614,518. It appears, therefore, that while the cotton hand-loom industry has greatly increased in the Presidency, that of silk has seriously declined.

A comparison of the census figures for 1901 and 1911 shows further that all the chief silk centres of the Presidency have shared in this decline except Surat. The figures for the nine principal silk-weaving districts are as follows:—

District.	1901.	1911.
	Silk carders, spinners and weavers; makers of silk braid and thread.	Silk spinners and weavers.
Surat	11,856	13,209
Bijapur	9,183	5,061
Ahmedabad	8,915	7,336
Dharwar	5,593	4,997
Nasik	3,291	2,839
Belgaum	1,588	993
Poona	1,488	1,231
Sholapur	1,378	328
Ahmednagar	811	786
TOTAL	44,103	36,780

Besides these, a certain number of persons, mostly women, are engaged on *bandhana*. These amounted in 1901 to 528 in Ahmedabad and 183 in Surat. This is still done, as already stated, in Ahmedabad, but from the above table it is clear that the decrease of weavers in this and most other centres has been very considerable. Such being the case, the very satisfactory state of things in Surat is all the more noteworthy. Surat is now one of the largest weaving-centres in India, and it is certainly not due to chance that the place in which the greatest diversity of manufactures takes place, and which finds markets for its goods not only in India itself but in Arabia, Turkey and Africa, should flourish while others decay. The lesson is clear enough—that there is no lack of markets for Indian silk manufactures if the merchants have sufficient initiative and acumen to find these markets and manufacture the kind of goods which they require. It is, I think, a fairly evident proposition that it is largely owing to the lack of these essentials of success in business that the silk-weaving industry in the Bombay Presidency is on the whole on the down-grade at the present time.

CHAPTER II.

The Silk Trade of Madras.

RAW SILK.

Imports.

1. Only a small portion of the raw silk used in the Madras Presidency is imported by way of the Madras Ports; most of the foreign silk comes from Bombay and Indian raw silk is received from Bengal and Mysore. The figures for the Railborne Trade are very little guide as to the quantity so received, as the following table will show:—

Imports by Rail into Madras Presidency.

Article and whence imported.	1910-11.	1911-12.	1912-13.	1913-14.	1914-15.
<i>Foreign raw silk.</i>	Mds.	Mds.	Mds.	Mds.	Mds.
Bombay Port	185	43	132	3½	57
Mysore	..	..	..	105	42
Other places	..	3	..	..	..
TOTAL QUANTITY	185	46	132	108½	99
<i>Indian raw silk.</i>					
Mysore	3,571	3,397	1,856	2,650	1,245
Other places	27	7	23	15	11
TOTAL QUANTITY	3,598	3,404	1,879	2,665	1,256

From this table it would appear that comparatively small quantities of foreign raw silk have been received in the Presidency, and no Bengal silk (except such petty quantities as may be included under "other places") is used there. This is altogether incorrect inasmuch as Bengal silk is still being received in very considerable quantities in several of the largest silk centres of the Presidency. The explanation is not far to seek. In Trichinopoly Rs. ½ lakh's worth of Bengal silk is said to be used in a year and Mysore silk is also largely employed. The whole of this amount is imported direct from Bengal and Mysore by passenger train, and consequently none of it appears in the official railborne returns. The latter cannot therefore be accepted as any guide to the quantity or nature of silk used in the Presidency, but the heavy decrease in the reported transactions in Mysore silk may be an indication of a real decrease in the amount consumed, though it requires confirmation from other sources.

Most of the foreign raw silk which is not obtained from Bombay is imported *via* Tuticorin, but imports from Japan are sent to Madras Port. The following table shows the quantity of such raw silk imported into the sea-ports of the Madras Presidency:—

Article and whence imported.	1910-11.	1911-12.	1912-13.	1913-14.	1914-15.
<i>Foreign raw silk.</i>	lbs.	lbs.	lbs.	lbs.	lbs.
China*	1,454	38,000	119,389	87,175	67,736
Japan	..	..	536	4,467	11,028
TOTAL	1,454	38,000	119,925	91,642	78,764

*(Exclusive of Hongkong and Macao.)

In addition to these amounts of raw silk, a very small quantity of waste was imported in 1912-1913, and 4,854 lbs. from France in 1913-1914. Previous to 1910-1911 the import of silk appears to have been altogether negligible. It will be seen that imports from Japan only started in 1912-1913; in three years they have risen in value from Rs. 2,880 to Rs. 55,000, about 14 per cent. of the total import. Reasons have been given elsewhere, however,* for the belief that Japan cannot under present conditions be regarded as likely to become a serious competitor of China in this trade, since only the coarsest kinds of Japanese silk appear to be exported to this country at the present time. It is probable that the comparatively heavy consignments received in 1914-15 should be regarded rather as samples, and the recent rise in prices, combined with the apparent general dissatisfaction with such silk in the Presidency, encourages the belief that a decrease is to be expected in the near future.†

2. It will be noticed that no raw silk is imported from Hongkong and consequently all the silk received from China is from the northern provinces and not from Canton. The coarse South China silks—panjam, mathow and the like,—so largely used in North-West India, do not appear to be employed at all in the Madras Presidency: where silk of this nature is needed, as in the manufacture of sashes at Conjeeveram, winding waste obtained from the silk ordinarily in use is employed for the purpose. The official returns do not show the amount of the various kinds of silk imported, but a list of this nature has been kindly supplied to me by the Madras Customs Office, for the year 1915-16. From this it appears that foreign raw silk of the following kinds was imported during that year in the undermentioned quantities:—

Imports of raw silk into the Presidency of Madras in 1915-16.

Description of silk.	Quantity.	Value.
	lbs.	Rs.
<i>From China.</i>		
Yellow Minchow	27,264	1,44,230
„ Kobin	11,627	58,400
„ Shantung	2,222	12,402
White Lie-Laying	5,228	26,530
Noyang (? Meang)	2,380	10,862
“Yellow Zyanchina” (?)	3,291	11,766
Other kinds	4,206	22,570
TOTAL	56,218	2,86,760
<i>From Spain.</i>		
Yellow raw silk	268	1,340

Just 50 per cent., therefore, of the whole import from China was the kind known as Minchow from the Sz-Chuen province, and over 20 per cent. Kobin (or Kopun or Gubin) from Ngan-whei. The former is used for making the warp in most of the big silk-centres in the Presidency. A considerable amount of various qualities of the white silk from Kiang-su, Lie-laying or Kakaria, is also used at Kumbakonam, Salem, Conjeeveram and other places,

*Vide page 7.

†Since writing the above, I have been informed by the Madras Customs Department that no Japanese silk was imported during 1915-16. This appears to support the conclusion arrived at above.

and Mookchand from the same province is also used in Kumbakonam. The amount shown in the above list is of course only a fractional part of the whole quantity of Chinese silk consumed in the Presidency. What that quantity may be is impossible to estimate, but in Kumbakonam alone a leading silk-merchant put the value of raw silk sold there during the year before the war at Rs. 40 lakhs, and 75 per cent. of this was estimated to be Chinese silk. Similarly at Conjeeveram one of the chief dealers estimated that Rs. 10 lakhs worth of silk was consumed there a year, and that 50 per cent. of this amount was from China. It is equally difficult to make any estimate of the amount of Mysore and Bengal silk in use. In Coimbatore only the former appears to be employed, Chinese and Japanese raw silk having been tried but rejected. In Salem, again, Mysore silk is largely used, being preferred to Chinese by the merchants for the manufacture of *saris*, though it is said that Chinese silk is easier to handle in weaving and is therefore preferred by the weavers themselves. In Conjeeveram, where a great deal of silk-weaving is done, it is said that 10 years ago only Mysore and Bengal silk was used, but now half the total quantity comes from China. On the other hand, it is also alleged that whereas only Rs. 4 or Rs. 5 lakhs of silk was used 10 years ago, Rs. 10 lakhs is used at the present day, and if this is true the use of Indian silk cannot have decreased, in spite of the increase in the use of the Chinese material. In Kumbakonam only one-eighth of the raw silk sold is said to be from Bengal and Mysore, but even this quantity must amount to several lakhs in value, the amount of raw silk sold in that town being very great. In Trichinopoly nearly all the silk used seems to be from Mysore or Bengal, the amount of the latter being estimated at Rs. $\frac{1}{2}$ lakh a year, while in Madura it is estimated that 90 per cent. of the silk used is Chinese and about 8 per cent. Mysore. The amount of Bengal silk used in Madura is very small. It is clear, therefore, that very considerable quantities of Indian silk are consumed in the Madras Presidency, and the figures for import shown in the Railborne Trade returns are probably very much below the real amount imported. According to these returns the import varied from 3,598 maunds, valued at nearly Rs. 22 $\frac{1}{2}$ lakhs, in 1910-1911, to 1,256 maunds, valued at Rs. 8 $\frac{1}{2}$ lakhs, in 1914-15. All but a negligible quantity of this is shown as coming from Mysore. It may legitimately be doubted whether imports of Mysore silk have decreased as heavily as appears from these figures. Recent statements published by the Mysore State, showing railborne exports, put the quantity and value of raw silk exported from that State at a much higher figure, and a very large percentage of the whole amount certainly goes to Madras. Moreover, even these figures can certainly not be taken as complete, for not only is road-traffic not included but also exports by passenger train are not taken into account in the returns, and, as has been said elsewhere, Trichinopoly, to take a single instance, certainly imports supplies of Mysore raw silk by this method. The figures for the Railborne Trade of Mysore in silk are given below for comparison with the table on page 35:—

Exports of Indian raw silk from Mysore State by rail.

Year.	Quantity.	Value.
	Mds.	Rs.
1910-11	5,300	35,28,000
1911-12	4,000	22,50,000
1912-13	2,000	10,92,000
1913-14	5,500	31,72,600
1914-15	4,404*	21,74,737

* NOTE.—Includes 762 maunds of waste valued at Rs. 13,622.

The values here given are however deceptive, silk waste being included and valued at the rate fixed for raw silk, until the third quarter of the year 1914-15. The figures for the year 1915-16 are probably more reliable. During the first three quarters of that period 3,839 maunds of raw silk and 2,338 maunds of waste were exported from Mysore, the value of which, according to the average rate prevailing in the previous years, would be about Rs. 22½ lakhs. If the export during the last quarter of the year was in the same proportion the total for the year must have been about 5,000 maunds of raw silk and 3,000 maunds of waste, worth about Rs. 30 lakhs in all. A very large portion of this must certainly go to the Madras Presidency.

3. As regards Bengal silk, it would be unwise to venture any estimate of the quantity consumed in the Presidency. Although, however, a considerable amount is still in use, the quantity so consumed is almost negligible in comparison with the enormous supplies which reached the Presidency from Calcutta formerly. Figures for the years 1889 to 1898 are given in the Monograph on the Silk Fabric Industry of the Madras Presidency, published in 1899. Therein it is stated that "the supply of raw silk is obtained almost entirely from Calcutta. In other words Bengal silk is largely used by the weavers." This is certainly not the case to-day. An analysis of these figures is given below, side by side with the statistics for imports of Indian raw silk (practically the whole of which is from Calcutta) during 1900-1901 and following years by coastwise trade into the Presidency.

Imports of raw silk from Calcutta.

Year.	lbs.	Rs.
1889	219,288	10,80,835
1890	234,710	11,75,998
1891	273,949	13,72,030
1892	242,377	12,22,828
1893	106,087	4,82,848
1894	105,309	5,21,785
1895	205,733	10,21,603
1896	278,728	13,92,140
1897	119,102	6,07,444
1898	65,825	3,33,634
1899-00	51,492	2,62,504
1900-01	58,729	2,97,710
1901-02	30,424	1,38,412
1902-03	14,024	72,164
1903-04	8,578	42,890
1904-05	9,900	50,300
1905-06	3,166	18,484
1906-07 to 1914-15	Nil	Nil

These figures are eloquent of the failure of Bengal silk. It has already been said, however, that silk from Bengal is still obtained by passenger train and used in some quantity in Trichinopoly, Conjeeveram, Kumbakonam and elsewhere. Nor should it be concluded from these figures that the total quantity of raw silk consumed in the Presidency has decreased. On the contrary, it is beyond doubt that it has considerably increased in the last 10

years in almost every one of the silk-consuming centres except Tanjore. According to the Census Returns the number of persons engaged in silk spinning and weaving in 1911 was 74,764, whereas the total number of silk carders, spinners and weavers, and makers of silk braid and thread, was in 1901 only 55,126. It is true that these figures are not wholly reliable, cotton weavers, who use a little silk for borders, being sometimes apparently included as silk weavers, and *vice versa*. Nevertheless, local enquiries and observations put it beyond question that the use of silk has actually increased in this Presidency. In Kumbakonam and Conjeeveram the amount of silk used is said to be double or more than double what it was 10 years ago, and the former of these places is the largest distributing centre in the Presidency, and the latter probably the largest centre of silk-weaving. In Coimbatore, again, the use of silk is said to have increased, and the largest importers of silk in the Presidency agree that practically in all places this has been the case. In Tanjore, it is true, silk-weaving has disappeared, mercerised cotton having replaced it on the looms, but this affects only some 350 persons, the chief industry of the town being the winding of silk for merchants of Kumbakonam.

The war has, of course, affected the silk industry, and the above estimates must be taken to refer to the period immediately before its outbreak. The effect of the war has been twofold. In the first place, the failure of German and Swiss aniline dyes has caused many looms to cease working. In Trichinopoly alone 500 out of 2,000 looms are said to be idle from that cause. The price of such dyes advanced from 11 or 12 annas a tin to Rs. 13 or more, and dyes now received by the merchants from importers' pre-war stocks are said sometimes to be adulterated, presumably to increase the quantity available for sale. Certain vegetable dyes—lac, cochineal, kamela powder and indigo—are regularly used for reeled silk, but apparently rarely or never for cheap materials, such as spun silk and mercerised cotton. It is likely, therefore, that the use of such materials also is decreasing from lack of cheap dye-stuffs. This scarcity of dyes is naturally causing great uneasiness to all persons connected with the silk industry, though there seems to have existed a general expectation that England would be able to supply an article to take the place of the German stuffs. Recently in the Punjab a rumour that Japan was putting a cheap substitute on the market brought down the prices with a run from Rs. 13 to Rs. 8-8, but the rumour has not materialized. In the second place, the price of all raw silks has advanced very greatly since the beginning of the war, largely as a result of the heavy increase in the demand from America. Indian raw silks—Mysore and Bengal—have also advanced, apparently from sympathy, but not so greatly as the Japanese and Chinese material. This increase in the price has caused an entire cessation of imports of Chinese silk in some centres, as in Conjeeveram, where no such silk has been received for the last four months, and in others a great reduction. In Kumbakonam, for example, one merchant informed me that before the outbreak of war he imported 600 piculs* direct from China and about 20,000 piculs through Bombay, but since the war the amount has fallen by 25 per cent. Similarly in Madura another merchant stated that before the war he sold 100 seers of Chinese raw silk a month, whereas he now sells only 50. Importers have in consequence begun to look about for a cheaper substitute for Chinese silk, and in Kumbakonam the merchant referred to above has imported a very cheap and coarse silk, apparently from Indo-China, and stated that during the preceding month 20 boxes (containing 5½ maunds each) of this kind of silk were received in Kumbakonam. The demand for Bengal and Mysore silk has also apparently increased, though both of these are too high-priced to be taken as a substitute for the cheaper qualities of foreign silk. Thus Malda and Mysore silk are said to cost Rs. 13-8 per Bombay seer (or 72 tolas) in Kumbakonam, whereas the cheap silk mentioned above sells for about Rs. 11, and cheaper qualities of Chinese silk—such as inferior Meang or Kobin—only cost Rs. 12-8 to Rs. 13. The supply of Indian silk, however, even at present appears hardly to be equal to the demand, so that the Indian raw material is not in a position to gain in the market by the fall

* 1 picul = 133½ lbs.

in the demand for the Chinese article. In Trichinopoly, where Indian silk is mostly used, it is said that the demand is not greater than the supply at the present moment, owing to the present high and fluctuating prices and to the lack of dye-stuffs, but that under normal conditions, such as prevailed before the war, double the quantity of Mysore and Bengal silk would be used if it were obtainable. The merchants complain that sometimes when the demand increases the prices immediately rise in proportion, revealing a scarcity of the article and driving the would-be buyers to purchase Chinese or other silk instead.

This is undoubtedly one of the principal causes of the failure of the Bengal raw silk in the Madras market. From enquiries made in the silk centres themselves it appears that this failure is due in the first place not so much to any defect in the silk itself as to lack of supplies pure and simple. Even at the prices ruling before the war more Bengal silk would apparently be readily taken, and if only production could be slightly cheapened there is an enormous and expanding market waiting to receive it, as can be judged from the import figures for the years 1889 to 1892 or 1895 and 1896. There is, of course, a general complaint that Bengal silk is very badly reeled, and one weaving master in Conjeeveram asserted that he would be willing to pay Rs. 5-8 or even Rs. 5-12 a (*Madrasi) seer for Bengal silk for which he now pays Rs. 5, if the silk were re-reeled and the knots eliminated,—and this in spite of the fact that Mysore silk stood only at Rs. 4-8 and Chinese at Rs. 4 or Rs. 4-4. From this it might be concluded that improvement of the method of reeling is necessary before the demand will increase, but such is not the case, because there are in fact two quite distinct kinds of demand for raw silk in the Madras Presidency. In the first place a particular kind of raw silk is required for a warp: this must be fine, even, and strong, and the Chinese “Minchow” seems to fulfil all the requisites, though the best qualities of other kinds of silk are also sometimes used for the purpose. Thus in Salem Shantung re-reeled, costing Rs. 30 per viss (=5 seers) or Rs. 18 a Bombay seer, and the best quality of Mysore (Indubadi), at about the same price, are used for warps, and in Conjeeveram Malda silk at Rs. 15 a seer is employed for the same purpose. Here, as has been said above, a higher price would be given for better-reeled silk because it is wanted for warps. In Trichinopoly on the other hand, Mysore silk, costing (including freight charges, etc.) Rs. 184 per maund of 40 Madrasi seers, or about Rs. 13-8 a Bombay seer, appears to be mostly used for the purpose, and consequently the ordinary quality Malda silk mostly received, which costs Rs. 160 a maund or Rs. 12 a Bombay seer, satisfies the buyers as it appears to be mostly for a weft thread that it is required. In Kumbakonam and in Madura “Minchow” is used almost entirely for warps, Malda being found too weak and Mysore also rather too full of knots for the purpose. In these places, in consequence, an improvement is demanded in the reeling of the Indian silks. The reason for these various opinions is that besides the demand for a suitable thread for a warp there is also an equal demand for silk for the weft and the one absolutely indispensable attribute of this must be cheapness. Thus in Coimbatore, where all warps are of cotton, unless silk is specially ordered by a customer, the silk dealers are perfectly satisfied with Mysore silk as it is, and do not ask for any improvement in the reeling. This is probably the reason why experiments in finer reeling made in Kollegal (in Coimbatore District) failed for lack of a market for the improved silk, because in this district, the warps being mostly of cotton, the present reeling is good enough, and it is not worth while for the dealers to pay a higher price for a better thread for the weft. It has already been seen that in Kumbakonam an exceedingly coarse Indo-China silk seems likely to find favour simply because it is cheap, though it is far too coarse to make a good warp. Even the Chinese “Kobin” is only used for the weft at Salem for the manufacture of good cloth.

4. There are therefore two distinct ways by which the market for Bengal silk and indeed Mysore silk also could be improved. These are (1) cheapening

*1 Madrasi seer=24 tolas and 3 Madrasi seers=1 Bombay seer.

the processes of production and consequently putting the silk on the market at a slightly lower price, and (2) improving the reeling. Of these two methods the latter is by far the more uncertain since the market for such silk will be largely limited to the quantity of silk-warps required, and in many places cotton is being used for the purpose, and moreover such silk will have to conform to a very high standard and will be forced to compete with the best of the Shanghai silks. The other method, if it is possible, offers, in my opinion, a more satisfactory prospect. There is already—at normal times—a greater demand than can be met by the supply, and the more the cost of the article can be cheapened the greater will be the demand to an almost unlimited extent. Prices being equal, the better quality silk or the better reeled will of course be preferred, but for ordinary uses the silk weaving master and dealer is unwilling to pay a higher price for better quality, so long as the lower-priced silk is capable of being used as the weft thread in weaving. It must be noted here also that *finer* reeling is not apparently required. In Conjeeveram Malda is said to be preferred to any other silk and Mysore to rank second, except as regards price. It is owned that Chinese is better reeled, but on the other hand the Indian silk is said to take the dye better and Mysore is alleged to be stronger than the Chinese. Therefore, though the weavers themselves generally prefer to work with Chinese silk, inasmuch as, being better reeled, it is easier to handle, the merchants and weaving masters generally prefer the product of Mysore or Bengal, especially the latter. Mysore silk is said to be, if anything, too thin. It is trebled or quadrupled for the warp and doubled for the weft before use. I particularly questioned the dealers and weavers in this and other places on this subject, and in no case did they answer that finer reeling would be beneficial. In Conjeeveram one of the biggest importers assured me, in fact, that the increase in Chinese raw silk has been due solely to its cheapness and indigenous silk is even now preferred by those who can afford it, as it retains dyes better than the other, and T. L. V. Krishnan, silk merchant of Wariur, Trichinopoly, asserted that finer reeling was not required, “Cossimbazar” silk being even now sometimes *too fine*. Munisami Ayyar of Madura, also, stated that five years ago only Mysore silk was used and that he would use it now if it were only cheaper and *better-reeled*; it was not, however, wanted any *finer*. It seems therefore that no serious change in the present method of reeling is at all advisable; only greater care might be taken with profit in the process, so as to eliminate the frequency of breaks in the thread, which are a cause of complaint among the weavers. T. L. V. Krishnan, the silk merchant of Wariur, Trichinopoly, referred to above, states that the standard varies very greatly in Bengal silk. Mysore silk is generally better reeled than Bengal silk, but that known as “Cossimbazar” is better in this respect than Mysore. This kind of Bengal silk is now said to go chiefly to Benares. This merchant stated that he preferred Bengal to Mysore silk as the latter loses more weight in bleaching, and that he was ready to bear the expense of samples of different qualities being sent to him, so that he could choose what suited him best, having himself written several times and failed to receive a reply. This appears to show either a complete shortage of supplies or a great lack of commercial organization, for although agents are said to come to the Madras centres from Rampur, Malda, etc., it seems to be difficult for a dealer to obtain exactly what he requires. Far more important, however, than anything else is the need for some process for cheapening the methods of production, so as to enable the raw silk to be sold at a cheaper rate, when it should certainly be able to compete successfully with all but the very finest qualities of Chinese or other foreign silk.

Exports.

5. Large quantities of waste silk and cocoons are exported every year from Madras Port to Europe. Though silk is produced in the Kollegal taluk of the Coimbatore district, bordering on Mysore, there is no sericulture elsewhere in the Presidency: the exports may therefore be taken as almost wholly of Mysore silk. The following table, taken from the Railborne Trade Returns of the Mysore State for 1915-1916 (first three quarters), shows that practically the whole amount of waste silk exported from that State goes in

the direction of Bisanatham, i.e., in the direction of Madras, only a small quantity going *via* Harihar, towards Bombay :—

1915-1916.	EXPORTS OF SILK WASTE FROM MYSORE PROVINCE IN THE DIRECTION OF		
	Bisanatham.	Hindupur.	Harihar.
	Mds.	Mds.	Mds.
During Quarter ending 30th June	75½	....	38
" " 30th September.	1,165½	1½	10½
" " 31st December	1,021½	....	28½

Figures for this export trade from 1889 to 1898 are given in the Madras Monograph on the Silk Fabric Industry and an analysis of these is appended together with figures for recent years, taken from the Seaborne Trade Returns, to bring the former up to date :—

Exports of waste silk from Madras

Year.	Great Britain.	Marseilles.	France.	Italy.	Others.	TOTAL VALUE.
	lbs.	lbs.	lbs.	lbs.	lbs.	Rs.
1889	211,723	..	9,078	..	45	2,08,612
1890	223,247	..	..	..	500	2,05,167
1891	167,760	..	4,968	..	3,276	1,59,123
1892	196,735	..	28,865	..	..	1,92,870
1893	202,599	..	27,322	..	..	1,92,460
1894	191,262	..	..	..	..	1,56,863
1895	270,578	18,428	26,238	..	..	2,62,719
1896*	7,019	217,815	..	..	..	1,27,042
1897*	10,060	256,580	..	..	..	1,33,669
1898*	10,250	270,118	..	..	..	1,55,127
1899-00	37,127	240,133	..	..	..	1,65,851
1900-01	45,200	303,388	..	..	..	2,32,135
1901-02	2,196	357,077	..	225	..	2,02,238
1902-03	32,645	408,152	..	..	600	3,30,151
1903-04	660	399,493	..	225	10,395	3,12,777
1904-05	..	272,188	..	..	..	1,68,077
1905-06	..	456,050	..	225	..	2,48,125
1906-07	1,232	371,515	..	2,975	..	2,08,920
1907-08	1,247	276,222	..	83,813	..	2,15,775
1908-09	..	480,876	..	82,812	..	2,73,936
1909-10	2,600	430,680	..	117,020	..	3,51,451

* The writer of the Monograph notes "The diminished exports to Great Britain, and increased exports to Marseilles, must, I conclude, be attributed to the dislocation of steam-boat traffic by plague quarantine regulations, the consignments reaching England by an indirect route." It will be seen, however, that this change of direction has continued to the present day.

Exports of waste silk from Madras—contd.

Year.	Great Britain.	Marseilles.	France.	Italy.	Others.	TOTAL VALUE.
	lbs.	lbs.	lbs.	lbs.	lbs.	Rs.
1910-11	6,977	262,665	..	77,819	..	2,19,248
1911-12	12,847	288,662	..	73,968	2,730	2,17,141
1912-13	6,940	236,522	..	50,824	..	1,78,731
1913-14	17,494	175,772	..	62,800	..	1,75,776
1914-15	7,594	43,989	..	17,606	..	50,575

Most of these exports from 1899-1900 to 1914-1915 are recorded in the Returns as "wild silk" waste. It does not seem possible, however, that they can be other than Mysore mulberry silk waste, for no other province than Mysore sends raw silk to the Madras Ports in any quantity. The Inland Trade Returns (Rail and River borne) for 1913-1914 show that 111 cwt. of Indian raw silk from Madras, and 1,947 cwt. from Mysore were despatched during that year to the Madras Ports, or about 12,500 and 230,500 lbs. respectively. Exports of the same material from Madras Port to the Madras Presidency and Mysore amounted only to 46 cwt. or 5,352 lbs., leaving a net import of nearly 240,000 lbs. Allowing for some inaccuracy in the figures for rail-borne trade this result tallies sufficiently closely with the total quantity of chassam exported by sea during that year (*viz.*, 256,066 lbs.), the whole of which is, however, recorded as "wild silk," no mulberry waste having been exported, according to the Returns, during that period. We shall probably be correct therefore in taking the whole of these so-called "wild silk waste" exports as exports of Mysore (or Kollegal) mulberry silk waste, though what actual difference exists where mulberry silk waste is distinguished from "wild silk" waste in the Returns, it is difficult to say. Assuming, however, that the whole of these exports of chassam are of mulberry silk, we have some guide to the amount of such silk produced in Mysore. It will be seen from the table that though the value of this waste silk has fluctuated between Rs. 1½ lakhs and Rs. 3½ lakhs during the years 1889 to 1913-14 the figure has been generally higher during recent years than previously, from 1905-1906 to 1911-1912 never sinking below Rs. 2 lakhs and rising in 1909-10 to the highest recorded—*viz.*, over Rs. 3½ lakhs. It is true that since that date there has been a steady diminution, but the average yearly value from 1909-1910 to 1913-14 was over Rs. 2½ lakhs, whereas that of the period from 1904-1905 to 1908-1909 was a little under the same amount, and the average for the ten years 1889 to 1898 was only a little over Rs. 1½ lakhs, though there was a considerable increase in the five succeeding years. In 1914-1915 the value of the exports of waste was only Rs. ½ lakh, but this sudden heavy decrease may be confidently ascribed to the effects of the war upon the silk trade, the whole of the export ordinarily going to France, Italy and the United Kingdom. In this context the following excerpt from the "Foreign Railborne Traffic of the Mysore State" for the year 1914-1915 published by the Mysore Economic Conference, may be quoted on the subject :—"During the first half of the year under review, the exports of reeled and raw silk together were 1,733 maunds : as compared with 2,362 maunds in the previous year. The falling off in the second quarter, when the trade was seriously dislocated by the outbreak of war, being more than 50 per cent. In the third quarter . . . the silk trade was still in a very depressed condition, whilst in the fourth quarter a marked improvement is shown and nearly normal conditions in regard to quantity of silk exported were reached. Prices, however, continued to be seriously depressed and are likely to remain so as the demand for silk, which is an article of luxury, has been seriously affected by the war." Nevertheless the export of silk waste by

*By Alfred Chatterton, F.C.G.I., C.I.E., Director of Industries and Commerce.

rail from Mysore during the first three quarters of the year 1915-1916 reached 2,338 maunds or over 190,000 lbs., and if the export during the last quarter was in the same proportion the total export should certainly equal that of 1913-1914 (256,000 lbs). The low figures for 1914-1915 may therefore be disregarded in estimating the present normal output of Mysore silk.

It is frequently asserted that there has been a very great decrease in this output. Thus Mr. K. Subha Rao, Assistant Secretary to the Government of Mysore, General and Revenue Departments, states that the total area under mulberry was in 1913-1914 about 28,233 acres, and estimates the income as at the lowest Rs. 50 lakhs, whereas it is said formerly to have amounted to Rs. 75 lakhs or a crore. Other estimates, however, do not agree with this at all. The following statement, supplied me by Mr. P. G. D'Souza, Secretary, Mysore Economic Conference, puts the area under mulberry cultivation during preceding years at a much higher figure, and there is no good reason for believing that nearly 40,000 acres out of 67,000 went out of mulberry cultivation in a single year.

Statement showing the area under mulberry from 1902 to 1912.

Year.	Mulberry.
	Acres.
1902-03	42,244
1903-04	44,605
1904-05	41,069
1905-06	71,821
1906-07	57,160
1907-08	64,485
1908-09	67,942
1909-10	69,520
1910-11	80,192
1911-12	69,022
1912-13	67,778

N.B.—According to Statistics compiled by Mr. K. R. Srinivasangar.

These figures are supported by the following estimate from the same source, which so far from showing any great decrease of exports in 1913-1914 shows on the contrary a heavy increase incompatible with a great reduction in the area under mulberry cultivation.

Statement showing value of silk exported from the Mysore State.

Year.	Value in Rs. Lakhs.	Year.	Value in Rs. Lakhs.
1904-05	28.82	1910-11	22.70
1905-06	39.12	1911-12	} Not available.
1906-07	37.60	1912-13	
1907-08	48.17	1913-14	37.726
1908-09	38.39	1914-15	21.61
1909-10	34.37		

N.B.—According to Statistical Abstract prepared by Mr. K. R. Srinivasangar.

These estimates are, it is true, confessedly only approximate, and in so far as they are founded on the railborne trade returns must be regarded as unreliable for reasons already given. There is no reason, however, to prefer the lower estimate, and it must be confessed that very few facts are really available to guide us to a reliable estimate of the silk-output. Mr. Chatterton, Director of Industries and Commerce, states that he has no evidence that there has been any marked fluctuation in the output of silk in Mysore during recent years, and certainly, though there does seem to have been rather less Mysore silk used in the Madras Presidency, its chief market, there is nothing to confirm the view that a very heavy decrease has occurred. The figures for the export of waste silk by sea from Madras seem, indeed, to be the only guide, and from these (as has been seen above) it does not appear that the industry is at all in a state of jeopardy.

Exports by sea of raw silk and cocoons are of no great value. Both are mainly to France. Below is given a table of such exports, taken from the figures given in the above mentioned monograph for the years 1889 to 1898, and extracted from the Annual Sea-Borne Trade Returns of the Presidency for the remaining period.

Exports of raw silk and cocoons from the Madras Presidency.

YEAR.	RAW SILK (VALUE IN RUPEES).				COCOONS (VALUE IN RUPEES).			
	Great Britain.	France.	Others.	Total.	Great Britain.	France.	Others.	Total.
1889	760	15,010	..	15,770	2,565	5,000	..	7,565
1890	15,772	28,146	..	43,918	3,872	..	..	3,872
1891	828	300	..	1,128	13,920	489	..	14,409
1892	640	1,400	..	2,040	2,205	3,350	..	5,555
1893	..	..	1,050	1,650	8,070	16,207	..	24,277
1894	..	128	1,500	1,628	1,611	686	1,012	3,309
1895	..	..	..	..	1,789	..	..	1,789
1896	..	20,187	192	20,379	2,083	2,559	..	4,642
1897	..	..	4,107	4,107	459	1,148	..	1,607
1898	..	..	1,250	1,250	..	4,957	..	4,957
1899-1900	..	..	..	..	..	..	..	..
1900-01	..	..	..	..	..	9,731	..	9,731
1901-02	..	..	..	..	5	11,411	..	11,416
1902-03	..	..	..	..	1,500	19,980	..	21,480
1903-04	..	6,720	..	6,720	1,125	15,075	450	16,650
1904-05	..	..	..	..	..	17,787	..	17,787
1905-06	..	..	..	..	..	24,788	..	24,788
1906-07	..	3,375	..	3,375	1,280	4,957	..	6,237
1907-08	..	..	..	..	11,172	4,066	..	15,238
1908-09	..	..	..	..	..	960	4,543	5,503
1909-10	..	..	..	..	6,046	937	..	6,983
1910-11	..	..	..	..	2,849	5,524	2,082	10,455
1911-12	..	..	..	..	..	15,356	3,255	18,611
1912-13	..	..	..	..	..	7,009	..	7,009
1913-14	..	..	..	..	..	11,950	3,730	15,680
1914-15	..	..	..	..	..	2,230	270	2,500

From these figures it is plain that the raw silk export was at the best a very small and uncertain one, and has ceased entirely of recent years. The export of cocoons, also, is of very fluctuating value: there seems however to be a regular trade in these articles with France. These figures include both mulberry and wild silk, which are differentiated in the Returns (*vide* above page 43). It seemed best to amalgamate the figures for reasons given above. Probably by far the larger portion, if not indeed all, of the raw silk and cocoons exported were in fact Mysore mulberry silk, as there is no trace of any other province sending wild silk to Madras for export to Europe, whereas it is certain that Mysore mulberry cocoons are shipped to France and Italy.

6. Exports by rail to other provinces are of more importance, as will be seen from the following figures:—

Exports by rail from Madras of Indian raw silk.

	Maunds.	Rs.
1910-11	237	1,43,245
1911-12	270	1,48,167
1912-13	169	93,475
1913-14	387	2,14,250
1914-15	297	1,93,545

Most of this silk is shown as going to Bombay Port, though a considerable quantity is also recorded as exported to Mysore. The chief exporting blocks are South Carnatic, Deccan, North Carnatic, and Madras Port, in that order. The South Carnatic includes the silk-centres of Chidambaram, Kumbakonam, Mayavaram in South Arcot, and the Tanjore district: the Deccan includes Bellary, Dharmavaram in Anantapur district, and other centres: and the North Carnatic block includes the great weaving centre of Conjeeveram. What portion, if any, of this export is waste silk it is impossible to say as the figures for waste and reeled are not given separately in the railborne trade returns. Exports of foreign raw silk by rail are also mostly to Bombay Port and Mysore, but they are of very small value and do not require further consideration. A small quantity of Indian raw silk was also formerly exported by coasting trade to Calcutta (*viz.*, 560 lbs. valued at Rs. 3,200 in 1899-1900, and 462 lbs. valued at Rs. 2,900 in 1900-1901), and in 1901-02 300 lbs. at Rs. 2,000 and 1903-1904 336 lbs. at Rs. 672 to Burma. These exports have, however, entirely ceased. To judge by their registered values the first three of the above-mentioned consignments were reeled silk; of the nature of the last-mentioned, valued at Rs. 2 a lb., there is no indication.

Silk substitutes.

7. Before leaving the subject of the raw material a few words must be added on the use of substitutes for silk—*viz.*, artificial silk and mercerised cotton. Artificial silk is treated in detail elsewhere and does not concern the Madras Presidency, where no such material appears to be used. Mercerised cotton, however, is imported in considerable quantities either direct from England or from merchants of Bombay and Madras. Imports of mercerised cotton yarn into the Madras Ports amounted in 1914-1915 to 81,134 lbs., valued at Rs. 1,63,474, of which 69,974 lbs. at Rs. 1,51,349 came from the United Kingdom, and the remainder from Germany. Imports from the latter country must have entirely ceased and I found none of the German material in use in the Presidency. Japanese mercerised cotton is, however, largely used and evidently reaches the Presidency *via* Bombay. Figures for previous years are not available, as the article was not separately recorded in the Returns, but the use of mercerised cotton is said to be increasing in the Presidency. In Conjeeveram, Salem, and Trichinopoly none is used, or only a very small quantity where a white thread is necessary in the weaving of silk. In Madura, Coimbatore, and Kumbakonam, however, a certain amount is used,

and large quantities are consumed on the looms of Tanjore. In Coimbatore it is generally used for borders, unless a special order is received for borders of silk, just as cotton and silk are ordinarily used for the body of the fabric unless orders are given for silk alone. In this town both the English and the Japanese articles are in use. In Madura the English material is mostly used, but not in large quantities, the dyes on English mercerised cotton are found to be relatively fast, whereas the Japanese material will not retain the dye at all. In Kumbakonam Rs. 10,000 worth is said to be purchased yearly, but only a small proportion of this (estimated at Rs. 500 worth) is actually used in that town itself for a white thread in silk borders, the remainder mostly going to Tanjore. Both Japanese and English are imported and mercerised cotton is said to have supplanted spun silk in the market. The Japanese article, which is said to be frequently dyed in Bombay, is alleged to be inferior to the English, but to be cheaper. The reported prices are—English undyed Rs. 13-4 (per bundle of 5 lbs.), Japanese undyed Rs. 10-4, English dyed Rs. 15, Japanese dyed Rs. 11 to Rs. 12. The prices vary, however, according to quality and in this case the English article appears to be of considerably better quality than the Japanese. In Tanjore a great quantity is used, mostly for the manufacture of *saris* for a particular market. There are said to be at present 350 persons engaged in this industry, but this is a mere guess. The weavers were formerly engaged on silk, but the mercerised cotton industry has now been going on for nine or ten years, and goods to the value of Rs. 5,000 a year are said to have been produced since the outbreak of war, formerly treble that amount having been sold. The weaving is in most of the regular silk patterns, even the "Solid-border" *saris* (for which three shuttles are used) being manufactured, and gold thread is plentifully used. The chief market is said to be to Indian Christians in the Presidency and in the Straits Settlements, the goods being used for special occasions and not being washed. Dyed Japanese material is mostly used, so that washing is practically out of the question. The weaving is admittedly far too good for the material, *saris* ornamented with gold lace selling for as much as from Rs. 40 to Rs. 150 for 7 yards. Without a gold lace border they may be purchased for from Rs. 6 upwards. It is indeed a cause for regret that the silk-weavers of Tanjore have adopted this cheap and shoddy substitute for real silk, since the material is certainly not worth the fine weaving and gold thread put into it. So long, however, as the market remains the Tanjore merchants will naturally continue to supply it, and the weavers will continue to work with this material. Elsewhere in the Presidency, however, mercerised cotton does not appear to have any hold upon the market and there does not seem to be any fear that it will offer a serious menace to the silk industry.

SILK MANUFACTURES.

Foreign Imports.

8. Silk goods of foreign manufacture are not very largely used in the Madras Presidency. The total value of imports by sea into Madras Ports of silk manufactures (excluding yarns, noils and warps, which have been discussed elsewhere) amounted in 1914-1915 to just under Rs. 1 lakh. As will be clear from the following table the greater part of this import trade is in pure silk piece-goods, goods of silk mixed with other materials having apparently been imported, however, in some quantity in 1912-1913 and 1913-1914.

Imports of silk manufactures (excluding yarns, noils and warps) by sea into Madras (value in Rs.).

	Piece-goods.	Goods of silk mixed with other materials.	Other kinds (thread for sewing, etc.).	TOTAL.
1905-06	86,257	1,128	4,322	91,707
1906-07	71,060	3,174	4,463	78,697

Imports of silk manufactures (excluding yarns, noils and warps) by sea into Madras (value in Rs.)—contd.

	Piece-goods.	Goods of silk mixed with other materials.	Other kinds (thread for sewing, etc.).	TOTAL.
1907-08	44,236	5,757	3,189	53,182
1908-09	69,195	2,461	3,832	75,488
1909-10	79,027	490	8,221	87,738
1910-11	1,10,518	61	4,680	1,15,259
1911-12	1,08,305	5	7,098	1,15,408
1912-13	1,17,409	16,973	4,859	1,39,241
1913-14	1,34,793	9,665	7,679	1,52,137
1914-15	89,865	2,630	6,723	99,218

During the first five years of this period more than 50 per cent. of the piece-goods imported came from the United Kingdom, presumably supplying the Presidency Town itself. During the latter half of the decade rather less has been imported from England and rather more from Japan, which in 1912-1913 supplied Rs. 45,694 out of the total Rs. 1,17,409, or almost exactly the same amount as came from the United Kingdom. A considerable portion of the remainder generally reaches Madras from the Straits Settlements. The other figures are unimportant, except for the mixed goods received in 1912-1913 and 1913-1914. These came chiefly from Germany, France, and England, and their decrease in 1914-1915 is due to the total cessation of imports from the two first-named countries, presumably on account of the war. A certain amount of foreign manufactured silk also reaches the Madras Presidency from Bombay by rail and coastwise. The Returns for the Railborne Trade show that only a few hundred rupees' worth of such articles are ordinarily despatched by goods train from Bombay, though in 1910-1911 the figure stood at nearly Rs. 8,000. The bulk of this trade must, however, be sent by passenger train and is consequently not registered. In any case no very large quantity of foreign manufactured silk is used in the Presidency. In Trichinopoly a certain amount of Japanese silk is sold to Mohamedans. It is said that it has been coming in for the last ten years, and that the fine weaving and finish of the articles, combined with the range of patterns, which cannot easily be copied, and their cheapness, puts them beyond local competition. In Madura also Japanese silk goods are sold, but not in any considerable quantity. Piece-goods of cotton and artificial silk come from the United Kingdom, but only in a minute quantity. There does not seem to be any likelihood, therefore, of foreign manufactures ousting Indian-made silk fabrics from the market, the former only supplying a limited demand for silk of a particular quality or finish which cannot be supplied from the local market.

Indian Imports.

9. Indian-made goods from silk-centres outside the Presidency appear to be rather more in demand, but the import of such is not a large one. In 1911-1912 the railborne imports of Indian manufactures amounted to Rs. 37,330, mostly from Mysore. This is not a regular line of trade, however, small quantities of such articles coming in one year from the Punjab, and in another from the United Provinces, by rail, and from Bombay or other provinces by coasting vessels, these last being mostly goods of silk and cotton. In Trichinopoly Surat-made silk cloth and printed silk from Calcutta is sold, but in the main the local looms appear to satisfy the demands of the Presidency. In former years the imports by coastwise trade, mostly from Bengal, Bombay or Goa, reached a fairly considerable sum. Between 1896 and 1902

their average value was about Rs. $\frac{1}{4}$ lakh, but in the succeeding decade it sank to a negligible amount. During the last three years (1912-13 to 1914-15), however, there has been some increase, especially in 1913-14, when goods valued at Rs. 22,180, mostly from Bombay Ports, were received by coasting trade.

Exports.

10. The export trade is a very much more extensive one. Mention has already been made of the trade between Tanjore and the Straits Settlements in mercerised cotton goods. The following table will give an idea of the export trade by sea as a whole :—

	1910-11.	1911-12.	1912-13.	1913-14.	1914-15.
	Rs.	Rs.	Rs.	Rs.	Rs.
SILK MANUFACTURES.					
<i>Silk Piece-goods.</i>					
To Ceylon	394	295	3,608	5,186	871
„ Straits Settlements	13,251	5,769	3,850	10,387	1,280
„ Federated Malay States . . .	12,389	5,878	2,576	17,428	23,752
„ Natal	16,820	31,801	32,131	22,413	19,843
„ Other places	313	419	659	2,384	243
TOTAL	43,167	44,162	42,824	57,798	45,989
<i>Goods of silk mixed with other materials.</i>					
To Ceylon	9,111	3,398	480	4,566	15,479
„ Straits Settlements	13,330	13,246	9,044	39,196	14,485
„ Federated Malay States . . .	4,260	7,582	25,285	25,425	9,065
„ Natal	12,465	30,230	8,614	17,880	5,159
„ Other places	2,720	2,842	2,500	396	4,695
TOTAL	41,886	57,298	45,923	87,463	48,883
<i>Other sorts</i>	50	31	50	..	180
TOTAL OF SILK MANUFACTURES . .	85,103	1,01,491	88,797	1,45,261	95,062

Exports of silk manufactures to foreign countries are, therefore, on the increase. The heavy consignments of both pure silk and mixed goods to the Malay States are noteworthy. This market was apparently only discovered in 1909-1910, but since that year exports thereto have been steadily increasing. Similarly, exports to Natal appear to have begun about 1907-1908, and already it is normally the biggest purchaser of pure silk goods, and in 1911-1912 took more than 50 per cent. of the total export of mixed goods also. The increase in the export trade from Madras by sea may be judged from the fact that in 1905-06 the figure reached only Rs. 17,264, and the average for the five years 1905-06 to 1909-10 was only Rs. 33,257. The export trade within British India, on the other hand, shows a very serious decrease. This trade is mainly by coastwise with Burma, and in the course of the last 15 years has, as the

following table will show, sunk from a value of several lakhs of rupees to a few thousand :—

Exports of Indian silk manufactures coastwise from Madras ports.

	PIECE-GOODS.		GOODS OF SILK MIXED WITH OTHER MATERIALS.		OTHER SORTS.	TOTAL.
	To Burma.	Others.	To Burma.	Others.		
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1899-1900 . . .	89,533	320	1,50,841	10,184	60	2,50,938
1900-01 . . .	3,53,579	915	2,35,793	8,650	..	5,98,937
1901-02 . . .	2,62,242	1,673	1,86,908	..	..	4,50,823
1902-03 . . .	73,906	520	29,740	..	390	1,04,556
1903-04 . . .	78,699	420	..	50	67	79,236
1904-05 . . .	46,182	750	15,435	210	110	62,687
1905-06 . . .	23,424	886	10,148	297	..	34,755
1906-07 . . .	9,477	638	1,221	990	30	12,356
1907-08 . . .	21,989	965	1,080	..	128	24,162
1908-09 . . .	7,184	95	197	..	..	7,476
1909-10 . . .	15,228	179	48,264	..	194	63,865
1910-11 . . .	4,890	..	31,466	..	160	36,516
1911-12 . . .	2,056	225	20,188	..	10	42,479
1912-13 . . .	22,452	205	15,032	..	8	37,697
1913-14 . . .	3,625	3,706	21,918	298	400	29,947
1914-15 . . .	920	4,205	3,816	..	..	8,941

This decrease more than balances the rise in exports to other countries, and I know of no satisfactory explanation for the comparative failure of the Burma market and the change of taste in that province. The place of Madras silk-goods has not been taken by local manufactures, for according to the census figures the number of silk spinners and weavers in the province fell from 34,029 to 18,621 between 1901 and 1911, and the figures for cotton-weavers also show a heavy decrease. Foreign imports of mixed goods, however, into Burma show a very marked increase, and these have apparently replaced the goods formerly obtained from Madras. Without local enquiries it is impossible to discover the cause of this reversal of public taste, or in what respect, if any, the Madras goods are less satisfactory than the foreign, or, indeed, whether the supplies from Madras have not merely been transferred to another market, and sufficient of such goods no longer being available the Burmese market is forced to turn to other sources of supply. The fact remains that the exports of Madras manufactures to that province are no longer of anything approaching their old importance.

Recorded transactions by rail in Indian manufactures are negligible during recent years, except in 1911-12, when 59 maunds valued at Rs. 38,000 appear to have been imported (part from the Punjab to Madras Port and part from Mysore to the Deccan), and 24 maunds valued at Rs. 17,000 to have been exported from the South Carnatic to Mysore. Ordinarily, however, manufactured silk is sent by passenger train and does not appear in the Railborne Trade Returns. Silk cloth manufactured at Coimbatore goes to the Bombay Presidency and is sold in Poona and other places; and silk turbans and other articles are exported from Trichinopoly to Secunderabad and elsewhere. Most of the silk goods made in Trichinopoly however are sent by passenger train to Madras for distribution, and no further information is available as to their ultimate destinations.

WEAVING IN MADRAS.

11. It has already been said that according to the census figures the number of persons engaged upon silk spinning and weaving in the Presidency largely increased between 1901 and 1911. This is confirmed by the fact that it is stated on all sides that the amount of silk consumed in most of the large centres has increased during the same period. The most important of such centres are Kumbakonam and Mayavaram in the Tanjore district: Conjeeveram in Chingleput: Trichinopoly, Madura, Salem and Coimbatore. In Tanjore, as has been said, silk weaving has died out, though a very large amount of silk-winding takes place there. The most important importing centre is Kumbakonam, from which place the other centres largely draw their supplies of raw silk. The importers of that town receive foreign material either (in a few cases) direct from China, or (ordinarily) from merchants in Bombay or Madras. The material is paid for either immediately or within ten days of receipt, and is issued to the smaller merchants or employers of weavers. In this case credit is generally given, sometimes for several months, but the silk is of course sold at such a price as will allow for interest on the period for which credit is given. The raw material is sometimes issued just as it is received, but in other cases it is cleaned, bleached and dyed before selling. Thus the Japanese raw silk imported is dyed and made up into balls (*umdar*), two of which weigh $5\frac{1}{2}$ seers (i.e., 6 seers of raw silk as received), before sale. One importer keeps 15 twisting machines and 12 pirn-winding machines, worked by women, by which the silk is prepared for the local market. This same importer also advances silk yarn to the weavers themselves and buys the woven cloth from them. Ordinarily, however, the weavers are little more than servants of the small employers, who pay them a fixed price for a certain quantity of a particular kind of weaving, finding them in all the necessary material. Very frequently, in towns, the looms are on the employers' premises and the weavers come daily to work, as at a factory. The village-weavers come in to the towns to fetch the material and weave it at their own houses. It is the general rule for the weavers to take large advances from their employers, which leave them almost continuously in the employers' debt. This system prevails all over the Presidency. In Conjeeveram, for example, the merchants buy from the importers and get the silk prepared for weaving: it is then made over to the weaving community on the usual terms. The number of such merchants or employers of weavers is very great: in Coimbatore alone, for instance, there are said to be one hundred. Men of this position may employ from ten to two hundred or more weavers. The amount earned by the weavers varies according to the nature of the weaving and the speed with which they work. Generally it is said to amount to from 8 annas to Re. 1 a day, but I am rather doubtful whether the latter sum is ever reached, though this is said to be the case in a factory in Salem where six Ampthill looms are in use for weaving saris valued at from Rs. 100 to Rs. 160. Elsewhere in Salem, however, the weavers apparently make at the outside 8 to 10 annas a day. In another factory in Kumbakonam, on the other hand, where the owner has set up seven Jacquard looms, the weavers are reported to earn from 8 to 12 annas a day, where before the installation of these looms they were able to earn 8 annas a day. If this is the case the employment of such looms has been of little or no advantage to the actual weavers. In Trichinopoly they are said to earn about Rs. 10 a month for weaving silk ornamented with gold lace, though a very skilled worker may make as much as Rs. 15. The weavers can, of course, purchase their own materials and weave them into cloth at their own houses, selling the woven article in the bazar. This system also prevails in some places side by side with the ordinary method, and in Trichinopoly a weaver is said to be able to earn as much as Rs. 20 a month in this way. On the other hand he may earn only Rs. 5 or Rs. 6, since he is unable to wait for a good price to be offered and must sell for whatever is given. Thus in Madura a silk-cloth merchant informed me that he bought both from employers of weavers and also from weavers themselves in the bazar, but that he paid less to the latter. In this way the weaver is heavily handicapped in any attempt to break away from the prevailing system and better his position. There are, however, two sides to the question of the weaver and the small employer. On the one hand, the employer is generally very much in the nature of a middleman. He generally does not himself import the raw material but buys it from the actual

importer, who usually resides in the same town. He may, it is true, get the silk prepared for weaving by giving it out to winders and dyers, to whom he pays about 8 annas a seer each for the process; frequently however, this also is done by the importers themselves. In such cases the employer merely buys the silk ready prepared and makes it over to the weavers, getting himself however all profit which may accrue from an improved market or other sources. I have frequently found such employers entirely lacking in initiative (though perhaps this is more commonly the case in the Bombay Presidency than in Madras) and, not being generally entirely dependent on their trade, they are often very unwilling to introduce any improvements or do their work otherwise than in the way "their fathers did it." Rather than change their old-fashioned methods they appear to be content to let the industry die out completely. This is certainly not nearly so much the case in Madras as in Bombay, but none the less the small employer is frequently a serious drag on any attempt to improve the conditions of the weavers or of the industry generally. I believe that the weaver himself, once he can be convinced that a proposed improvement will really enable him to earn more, is generally ready to adopt the new method. I am afraid this is not generally true of the small employer, who from lack of interest or lack of initiative will very often allow competitors to outstrip him rather than adopt a fully-demonstrated improvement. On the other hand, there is another side of the picture. The weaver, as a class, is said to be extravagant, careless, and very unreliable. They will not work at all until they have received a large monetary advance, and having received it they are said to require the eye of the employer to be constantly upon them, as cases of weavers absconding with their advances are reported to be the reverse of infrequent. The employer is consequently forced to protect himself and cover possible losses by reducing the rate of pay to a minimum and appropriating anything in the nature of extra profit himself. Similarly, any attempt to better the weavers' position by the establishment of a union or co-operative society has to contend against the disadvantage that it is by the nature of things unable to make large advances. In Conjeeveram owing to the zeal and energy of Mr. P. Ramachandra Sastriar, the Secretary, a co-operative union has been started and was registered as "The Big Conjeeveram Urban Weavers' Union" at the end of 1905. The number of members of this Union was in 1915 about 300, of which more than two-thirds were weaver-members. All of these are, however, cotton-weavers: the silk-weavers of little Conjeeveram or Reddipet have so far resisted all attempts to persuade them to join. The population of the town was in 1911 53,864, of which about a fifth are said to be weavers (cotton and silk: the silk-weavers are given in the Census returns as numbering about 8,500), so that the percentage of weavers of any kind who have joined the Union is still very small. The object of the Union as stated in the By-laws is as follows:—

"The object of the union is the improvement of the hand-loom industry and of the economic condition of the weavers residing in places named in by-law 2. For the purpose of attaining this object, it shall be competent to the union to raise the money required for the union from weavers and others, by issue of shares and by borrowing by way of deposits or otherwise; to purchase such raw materials and appliances as may be required for the industry and retail the same either for cash or credit to the weaver members residing in those places; to grant loans to them; to purchase and hold in common or let on hire improved appliances connected with the industry; to purchase or receive for sale the finished products of members' looms and sell the same to the best advantage and to do such other acts as may be conducive to the attainment of the general object of the union."

The following further details are taken from the By-laws. Any weaver over 18 years of age residing in the specified area and any non-weaver over 18 years of age residing in the Districts of Chingleput and Madras may, on his paying for one or more shares, be admitted as a member. The share money may be paid in instalments and the liability of each member is limited to the share capital subscribed by him. The capital of the Union is nominally Rs. 50,000, divided into 10,000 shares of Rs. 5 each. The admission fee is 2 annas per share, and 3,000 shares are reserved for allotment to weavers, preference being given in the allotment of shares to weaver-applicants. The Board of Directors is competent

to make advances for weaving purposes to a limited amount and to lend money for the repayment of prior debts, limited to Rs. 50 as the total amount payable to any single member. One fourth of the net profits are carried each year to the reserve fund and the balance is distributed as dividends and bonus on a fixed scale. It is interesting to observe the reasons given for the fact that in 1907 many members broke away from the Union, for these same reasons largely account for the comparative unsuccess of the Union among the cotton-weavers, and the total failure to bring in the silk weavers. These reasons are given as follows:—

- "(1) The Union professed to help the weavers with loans to pay off their old debts, recovering them gradually from them later on. This the society *could not do*. Elsewhere they could get whatever money they wanted, no matter on what terms.
- (2) The Union professed to provide the members with yarn and appliances at favourable rates, but could not do so. It laboured under the same difficulties as the weavers had been suffering under for want of funds.
- (3) The Union paid fixed prices and held back from the sums so payable instalments in repayment of such advances as had been made previously. This withholding of instalments was rigorously observed whether or not further advances were made, however much they were needed. Elsewhere, much laxity is allowed in repayments, and further advances can be got whenever desired. Also the whole of the prices less some trivial deductions are paid into their hands, so that it is available to be spent in any manner they pleased.
- (4) The Union demands a certain standard of quality in cloths to be maintained, and also correct measurements. Elsewhere any article could be passed off, whatever its quality or measure be."

Since August 1915 there has been a Reddipet Silk Weavers' Co-operative Society. This already numbers 50 members. It is doubtful, however, how far this society will benefit the weavers. It is a substitute for the employer in so far as it will give out loans, but there is apparently nothing to ensure that such loans are spent upon weaving purposes and not upon marriage expenses or other calls of the same nature. Were it not for the system of advances and the inability of the Co-operative Union to free the weavers from the clutches of the money-lenders by enabling them to pay off their previous debts, a Union like that of Big Conjeeveram might be a great success. At present, as has been said above, the weavers, when they bring their products to the market, do not ordinarily receive the proper price for their goods. It may be the case, it is true, that such goods are inferior, as is sometimes stated by the employers, but the fact remains that this inferiority must certainly be due to the weavers' knowledge that in all probability they will not get what their goods are worth, a knowledge which can only tend to produce careless and slovenly work. By such a Union as that of Conjeeveram the weaver-members have always a market for their goods—viz. the Union itself, and though it is not necessary that every small employer should cease to give out work to weavers, at least he would be compelled by the competition of the articles sold by the Union, to pay fair rates for what he receives. The opposition of the small employers as a class is therefore to be taken into account, and unless and until the weavers can be released from the continuous state of debt in which they ordinarily live, it is hardly possible for a Union to number more than a fractional part of the weaver-community among its members. Even if this could be achieved, a great amount of persuasion must inevitably be necessary before the weavers will join the Union in any quantity, since under the present conditions they obtain almost unlimited advances for any purpose from their employers, whereas under Union conditions they can only receive the wages due to them and the profit accruing from their labour. In forming any society of this nature, therefore, it is primarily necessary to find out the extent of indebtedness prevailing among the community of weavers, and the amount of advance which they ordinarily receive. If this is very large, considerable funds and even greater powers of persuasion will be necessary to make a success of anything in the nature of a Co-operative Union.

12. Before leaving the subject of conditions of weaving in Madras, the following remarks by Mr. Chatterton on the hand-loom industry, extracted from the Census Report of 1911 (Chapter XII—"Occupation," part II—"Industrial Occupation,") may profitably be quoted, although it refers primarily to the weaving of cotton :— "Through efforts fostered by Government there has been a marked development in the use of the fly-shuttle slay, which increases the output of each loom on an average by not less than 50 per cent. It is estimated that the total number is not less than 10,000, and indeed it is put at a very much higher figure than this by merchants engaged in the trade. A review of all the evidence available leads to the conclusion that the hand-loom industry is holding its own, and that the general increase in prosperity is leading to an increased demand for its finer products." "The condition of the hand-loom weavers is generally assumed to have steadily deteriorated owing to the effect of competition, and of indirect evidence there is plenty in support of this idea. The weavers themselves complain that their condition has become steadily worse, that they have to work harder and that now the coarse weavers, even by the most unremitting toil, are only able to make a bare livelihood." Mr. Chatterton then, after giving figures for the industry, goes on to say, "I think, therefore, we may safely accept the following conclusion. That in the last 40 years the number of hand-loom weavers has remained practically stationary, but that owing to stress of competition they now turn out a larger amount of finished goods than was formerly the case; that is to say, the majority of them have to work harder to make a bare living. One might also add that their lot would probably be greatly improved if they could be induced to accept outside assistance, which can only be effectively rendered by the establishment of small hand-loom weaving factories. The individual weaver suffers because he is still trying to carry on a complex series of operations without recognition of the advantages of sub-division of labour." To this it may be added, however, that where in the silk-industry such small factories exist—i.e., where small merchants employ a number of weavers under the present system—the condition of the weavers does not appear to be an enviable one, and the remedy appears rather to lie in the weavers assisting themselves by combining together to obtain the full fruits of their labour, than in their being combined under a single employer for the purpose of increasing his profits. The difficulties which lie in the way of such a scheme, however, have been exemplified in the case of the Conjeeveram Weavers, Union.

CHAPTER III.

The Silk Trade of the Punjab and North-West Frontier Province.

RAW SILK.

Imports.

1. The Punjab receives practically the whole of its supplies of raw silk from China *via* Bombay and Karachi. A certain quantity is, however, imported from Yarkand and Bokhara by transfrontier routes, and a large amount of silk apparently passes through the Punjab on its way from Kashmir to the sea-coast. It is extremely difficult to arrive at a correct estimate of the amount actually consumed in the Punjab, owing to the confusion that exists with regard to the registration of this latter trade. Before 1906-07 the figures for the external land trade of the Punjab are of very little use, owing to frequent changes of the system of registration and the difficulties experienced in effecting it. In 1907 registration of the trade with Kashmir completely ceased, Kashmir being made a separate block in the returns of the Inland Trade of the Punjab. Before that date at least a certain portion of that trade was registered in the External Land Trade Reports of the North-West Frontier Province. After that date the bulk of the Kashmir trade ceased to be registered at all, for the Internal Trade Returns take account only of Railborne Trade, and the Kashmir trade is not railborne. The trade with Ladakh (Kashmir) and with Tibet was confused in 1907 and in that year registration of trade with Tibet ceased. Towards the end of the year, however, it was restarted, and in the following year the various trade-routes were first differentiated in the Returns. Until 1912-13 trade with Ladakh was registered on two routes, *viz.*, Sultanpur or Kulu and the Nachar Bhabeh and Baralacha Passes; after that date trade with Tibet only was registered by these routes and the figures for the trade with Central Asia *via* Ladakh (and apparently for part of the trade with Kashmir itself in silk) were obtained from Leh (in Ladakh). It is therefore almost impossible to disentangle the figures for the Kashmir trade (which merely passes through the Punjab on its way to the coast) from those for the trade with Yarkand and other places, silk from which is consumed in the province. The following table has been obtained by extracting the figures for the silk import trade given in the Returns for the External Land Trade of the North-West Frontier Province and combining them with those given in the similar Returns for the Punjab. It will serve to show how impossible it is to get a complete view of the trade during the last 10 years :—

Year	Imports of Raw Silk from	Into	Quantity in Mds.
1906-06 . . .	Kashmir	N.-W. F. P.	68
	"	Punjab .	3,954
	Ladakh	" .	234
1906-07 . . .	Kashmir	" .	4,691
	Ladakh	" .	115
1907-08 . . .	"	" .	181
1908-09 . . .	North and East Afghanistan <i>via</i> Khyber	N.-W. F. P.	43
	Ladakh <i>via</i> Sultanpur or Kulu	Punjab .	67
1909-10 . . .	" " " "	" .	116
1910-11 . . .	" " " "	" .	93
	North and East Afghanistan <i>via</i> Khyber	N.-W. F. P.	9

Year.	Imports of Raw Silk from	Into	Quantity in Mds.
1911-12 . . .	Ladakh <i>via</i> Sultanpur or Kulu	Punjab .	42
1912-13 . . .	" " " "	" .	59
1913-14 . . .	Central Asia <i>via</i> Sultanpur or Kulu	" .	61
	" " " Kashmir	" .	1,047
1914-15 . . .	" " " "	" .	1,138
	" " " Sultanpur or Kulu	" .	3

From this table it is clear that the total exports of raw silk from Kashmir into the Punjab have not been registered since 1906-07, the figures for 1913-14 being apparently incomplete, for the quantity of Indian raw silk exported from the Punjab during that year was 2,975 maunds. The figure for 1914-15 may be complete, since only 979 maunds were exported from the Punjab during 1914-15. Furthermore, the figures given before 1907-08 must include (presumably) "waste" in "raw silk," but there is nothing to indicate in what proportion. I have unfortunately been unable to obtain reliable figures of the amounts annually exported from Kashmir, which might have aided greatly in clearing up the present confusion.* From a letter of the Deputy Commissioner of Rawalpindi, however, sent in the year 1904 to the Director of Agriculture, it appears that Kashmir raw silk goes by road to Rawalpindi and thence generally to Amritsar. It is said sometimes to return to Rawalpindi in the form of manufactured silk, but practically no Kashmir raw silk appears to be used in Amritsar at the present day. The bulk of the Kashmir silk must therefore be loaded at Rawalpindi (or some other station on the Punjab frontier) and transported direct to Karachi or Bombay Port. In the Returns for the Railborne Trade of the Punjab (which include the railborne trade of the North-West Frontier Province) we must expect to find a considerable amount of raw silk exported, which is not balanced by any similar import, although the Punjab is practically not a producing province. This is apparently the explanation of the large amount of silk recorded as "Indian Raw," which is annually exported to Karachi. The following figures, taken from these Returns, will illustrate this:—

Imports and Exports of Raw Silk by Rail.

Year.	IMPORTS IN MDS.			EXPORTS IN MDS.		
	Foreign.	Indian.	TOTAL.	Foreign.	Indian.	TOTAL.
1905-06 . . .	4,367	308	4,675	..	1,611	1,611
1906-07 . . .	5,635	852	6,487	5	2,520	2,525
1907-08 . . .	4,856	394	5,250	2	4,121	4,123
1908-09 . . .	3,945	412	4,357	16	2,443	2,459
1909-10 . . .	4,774	187	4,961	..	2,443	2,443
1910-11 . . .	4,167	798	4,955	..	3,344	3,344
1911-12 . . .	4,812	312	5,124	4	3,238	3,242
1912-13 . . .	3,952	418	4,370	6	6,333	6,339
1913-14 . . .	4,312	128	4,440	5	2,975	2,980
1914-15 . . .	4,681	226	4,907	..	979	979

* Since writing the above, figures have been received for production in Kashmir during the last 10 years. These are given in the appendix at the end of this chapter. Mr. McNamara, Director of Sericulture, Kashmir State, writes—"The silk and cocoons are exported to France, and the silk waste therefrom they are railed down to Karachi, where they are shipped to Marseilles and London." No record is kept of the silk which enters Kashmir and is again re-exported.

Almost the whole of these exports of Indian raw silk are to Karachi, from the territory between the Jhelum and Indus, which includes Rawalpindi. This quantity may therefore be taken as Kashmir silk. From the Sea-borne Trade Returns it appears that a large quantity of raw silk waste and cocoons is shipped annually from Sind to Europe. The amount so exported normally exceeds the amount received in Sind by rail, and I am unable to suggest the source of the balance. Thus in 1913-1914 it appears from the above table that 2,975 maunds of raw silk were exported from the Punjab by rail. Of this amount 2,280 maunds were consigned to Karachi, which also received 99 cwt. from other places, 97 of which were from "Kashmir."* This gives a total of about 199,000 lbs. of Indian raw silk imported into Karachi. The total export by sea in that year, however, was 107,261 lbs. of raw silk, 112,408 lbs. of waste, and 40,764 lbs. of cocoons, or roughly 260,000 lbs. in all. It is obvious that a certain portion of the annual export of Kashmir silk escapes registration. The raw silk is shipped practically wholly to France, and the waste to the United Kingdom, Italy, and a small quantity to France. It will be noticed that these exports which stood, according to the Railborne Trade Returns, at 6,333 maunds in 1912-13, dropped to 2,975 in 1913-14. This is balanced by a similar fall in the amount exported by sea, the figure for the former year being 679,641 lbs., valued at Rs. 27½ lakhs, and for the latter year only 260,433 lbs., valued at rather over Rs. 12½ lakhs. This is explained (in the Report of the Maritime Trade of Sind 1914) as wholly due to a fire which occurred in the Kashmir State Silk Filature Factory in August 1913, when the factory was practically demolished and a large stock of cocoons, collected during the previous three or four months, was destroyed.

A large amount of Kashmir raw silk, silk waste, and cocoons, therefore, passes through the Punjab on its way to Karachi Port, and at least a considerable percentage of this appears to escape registration when it enters that province, although most of it is recorded on the export side. To estimate, therefore, the quantity of silk actually consumed in the province it will be necessary to eliminate, so far as possible, the whole of this trade. This cannot be done with complete success, for some quantity of Yarkand silk seems to enter the Punjab, along with Kashmir silk, and this Yarkand silk is used largely on the looms of the province. Any estimate, therefore, based upon the available figures of the total consumption of silk in the Punjab, must at the best be a very uncertain one, and will require to be confirmed from actual observations in the various silk-centres before it can be accepted as more than a very general indication of the state of the trade.

2. The following table is taken from "The Dictionary of the Economic Products of India:—

Balance-sheet of the recorded transactions with the Punjab in 1888-89.

Imports.	Quantity in lbs.	Exports.	Quantity in lbs.
By Transfrontier Routes . . .	10,192	By Transfrontier Routes—	
By Rail and River, etc.—		(a) Indian Produce . . .	336
(a) Indian Produce . . .	111,127	(b) Foreign Produce . . .	..
(b) Foreign Produce . . .	357,307	By Rail and River—	
TOTAL .	478,626	(a) Indian Produce . . .	14,850
		(b) Foreign Produce . . .	660
Deduct Exports .	15,846	TOTAL .	15,846
Net Imports .	462,780		

* The figure is so given in the Report of Inland Trade for India (1913-14). I do not know how this amount is differentiated from the bulk of the Kashmir silk, which reaches Sind *via* Punjab and is registered as consigned from that province.

Similar tables for 1913-14 and 1914-15 will read as follows:—

Balance-sheet of the Punjab trade in raw silk during 1913-14.

Imports.	Quantity in lbs.	Exports.	Quantity in lbs.
By Transfrontier Routes—		By Transfrontier Routes—	
(a) Punjab	91,409	(a) Punjab	..
(b) North-West Frontier Province	..	(b) North-West Frontier Province	7,012
By Rail—		By Rail—	
(a) Indian	10,560	(a) Indian	245,437
(b) Foreign	356,240	(b) Foreign	412
TOTAL	458,209	TOTAL	252,861

Balance-sheet of the Punjab trade in raw silk during 1914-15.

Imports.	Quantity in lbs.	Exports.	Quantity in lbs.
By Transfrontier Routes—		By Transfrontier Routes—	
(a) Punjab	94,132	(a) Punjab	..
(b) North-West Frontier Province	..	(b) North-West Frontier Province	22,595
By Rail—		By Rail—	
(a) Indian	18,645	(a) Indian	80,767
(b) Foreign	386,182	(b) Foreign	..
TOTAL	498,959	TOTAL	104,362

In these cases, however, it would clearly be misleading to reckon the total consumption of raw silk in the province by deducting the exports from the imports as given above, for at least a considerable portion of the imports from Kashmir appear to have escaped registration as explained above. The only method by which a general idea of the quantity of silk actually consumed could be obtained, would be to omit the figures for Indian silk on the export side of the account and deduct on the import side the amount registered as received *via* Kashmir, which is apparently mostly Kashmir silk. This in 1913-14 amounted to 1,047 maunds and in 1914-15 to 1,138 maunds. The tables, as corrected thus, will be as follows:—

Balance-sheet of the Punjab trade in raw silk during 1913-14.

Imports.	Quantity in lbs.	Exports.	Quantity in lbs.
By Transfrontier	5,032	By Transfrontier	7,012
By Rail—		By Rail—	
(a) Indian	10,560	(a) Indian	..
(b) Foreign	356,240	(b) Foreign	412
TOTAL	371,832	TOTAL	7,424
Deduct Exports	7,424		
Net Import	364,408		

Balance-sheet of the Punjab trade in raw silk during 1914-15.

Imports.	Quantity in lbs.	Exports.	Quantity in lbs.
By Transfrontier	247	By Transfrontier	23,595
By Rail—		By Rail—	
(a) Indian	18,645	(a) Indian	..
(b) Foreign	386,182	(b) Foreign	..
TOTAL	405,074	TOTAL	23,595
Deduct Exports	23,595		
Net Import	381,479		

This amount (*viz.*, something under 400,000 lbs. of raw silk) may be taken as the quantity actually consumed in the province. The figure given above for 1888-89 is rather higher, as are those given in the Monograph on the Silk Industry of the Punjab, published in 1899, for the years 1889-90 to 1898-99, calculated on the same basis as the above tables:—

	Rs.
1889-90	4,74,080
1890-91	4,28,320
1891-92	5,63,280
1892-93	4,22,320
1893-94	4,82,720
1894-95	4,61,760
1895-96	5,71,520
1896-97	5,70,480
1897-98	5,46,840
1898-99	5,91,520

If these figures are correct, it appears that considerably less silk is used by the province than was formerly the case. This is probably correct: it is generally stated in the silk-centres of the province that less weaving is done now than in former years, and the census figures support this conclusion. The total number of weavers and spinners of silk in 1911 is given as 13,302, whereas the number of silk carders, spinners and weavers, and makers of silk braid and thread was in 1901 13,370. It is therefore probably a fact that the amount of weaving done in the province has been decreasing during the last 10 or 15 years. A comparison of the figures for the years 1888-89 and 1913-14 will show that the import of foreign raw silk is now much what it was then (though it appears to have risen considerably between 1889 and 1898) and that it is in the import of the Indian material that the decrease is manifested. It is certainly the fact that at the present day hardly any Indian raw silk is used in the silk centres of the Punjab. This used not to be the case. Geoghegan, writing in 1880,* mentions the following sources of supply of raw silk, *viz.*, Kokand, Bokhara, Balkh, Khulm, Akcha, Shibberghaum, Andkho, Cashmere, Bengal, and China *via* Bombay. Twelve kinds of silk are mentioned as being imported from Bengal, the prices varying from Rs. 2-8 to Rs. 5

*"Silk in India" by J. Geoghegan, page 93.

a seer, and the following figures are quoted as purporting to give the importations into the Punjab in maunds of 100 lbs :—

Sumbut year.	Khorasan.	Bengal.	TOTAL.
(1841) 1899	709	1,615	2,324
1900	1,825	926	2,751
1901	1,090	973	2,063
1902	66	700	766
1903	980	667	1,647
1904	701	304	1,005
1905	..	232	232

The low figures for the (Sumbut) years 1902 and 1905 are explained as due to the Punjab wars. If these figures are trustworthy two conclusions can be drawn, viz., (1) that Bengal silk was at that time very largely used in the province, and (2) that the import of such silk was even at that time manifesting a very serious decline. Figures for the imports in 1852 are also given, as follows :—

From—	Rs.
China	24,66,605
Bengal	13,35,951
Other Countries	34,45,448

but reasons are appended for the belief that there is some radical error in these figures, the silk trade being valued only at £200,000. In the same work Mr. Cope is quoted as the authority for the following estimates :—At Amritsar the import of Bokhara silk in 1857 amounted to 675 maunds, of which 250 maunds were re-exported. The local manufacture employed 2,205 persons, yielding goods valued at nearly Rs. 3½ lakhs. The same city also imported 1,148 maunds of Bengal silk at Re. 1-8 to Rs. 2-8 per seer, all but 80 maunds being consumed in the city, and producing goods valued at nearly Rs. 4 lakhs. Jullundhar is said to have imported 800 maunds yearly, of which 75 maunds were woven on the spot, and the rest re-exported. Of the total supply $\frac{5}{8}$ are said to have come from China *via* Bombay, $\frac{2}{8}$ from Bengal and $\frac{1}{8}$ from the westward. It will be noticed that the price of the Bengal silk is very low, and Geoghegan concludes that only the worst kind of Bengal silk was imported into the Punjab. This may in part account for its failure in that province. Imports by rail of Chinese raw silk from Bombay during the year 1870-1871 are given as follows :—

To—	lbs.
Amritsar	35,424
Jullundhar	25,584
Delhi	4,674
Lahore	574
Mooltan	328
TOTAL	66,584

During the same year Amritsar sent to Bombay 21,156 lbs., and Multan 574 lbs. of raw silk presumably imported from Turkistan or Afghanistan. Liotard,* writing in 1883, adds the following observations and figures :—

“.....The raw material continues to be obtained from Central Asia, Kashmir, Bengal, and China, and to be manufactured in Multan, Lahore, Bahawalpur, Amritsar, Jullundhar, and Delhi. Amritsar seems to be losing its position as one of the chief centres of the Silk trade in the Punjab. The

two following tables show the figures of the sale and local consumption of silk and of floss and waste silk used in the district from 1869 to 1881 :—”

Sale and Local Consumption of raw silk at the Amritsar City from 1869 to 1875.

Years.	GROSS SALE.		LOCAL CONSUMPTION.		REMARKS.
	Weight.	Value.	Weight.	Value.	
	Mds.	Rs.	Mds.	Rs.	
1869	2,768	18,39,360	50	64,000	
1870	2,370	15,16,032	55	71,400	
1871	2,026	12,96,640	60	76,800	
1872	2,480	16,54,400	45	58,600	
1873	2,346	14,83,056	50	64,000	
1874	2,372	15,18,080	100	1,28,000	
1875	3,112	20,55,680	125	1,60,000	
1876	4,202	26,89,280	100	1,28,000	
1877	4,052	25,93,280	100	1,28,000	
1878	1,975	12,64,000	75	96,000	The falling off was due to the closure of the route to Bokhara owing to the Afghan war and to the prevalence of sickness during the year 1881. The figures of 1882 and 1883 are not available.
1879	1,737	11,11,680	55	70,400	
1880	2,372	15,18,080	50	64,000	
1881	1,486	10,85,440	30	38,400	

Quantity of floss and chussam silk used in the City of Amritsar and adjoining villages.

Years.	GROSS SALE.		LOCAL CONSUMPTION.		REMARKS.
	Weight.	Value.	Weight.	Value.	
	Mds.	Rs.	Mds.	Rs.	
1869	1,325	12,61,000	150	1,02,000	
1870	1,130	11,24,900	160	1,08,800	
1871	1,100	10,48,000	165	1,12,200	
1872	1,075	10,01,000	150	1,02,000	
1873	1,045	9,95,600	150	1,02,000	
1874	1,050	10,14,000	150	1,02,000	
1875	1,195	11,12,600	165	1,12,200	
1876	1,145	10,63,600	50	34,000	
1877	1,150	10,82,000	50	34,000	
1878	1,075	10,10,000	45	30,600	
1879	1,285	12,48,800	45	30,600	
1880	1,500	1,44,000	40	27,200	
1881	600	5,88,000	25	17,000	The figures of 1882 and 1883 are not available.

* “Memorandum on Silk in India,” Part I, pages 45, 46.

During the last quarter of a century imports from the westward appear to have steadily decreased while imports from China *via* Bombay have steadily risen. Meanwhile the imports of Indian silk have dwindled almost to nothing. It has already been seen that in 1888-89 (*vide* table on page 57) these amounted to 111,127 lbs., whereas in 1913-14 they had fallen to 10,560 lbs. The following table will show the sources of this import trade :—

Railborne imports of Indian raw silk into the Punjab.

Whence imported.	1911-12.		1912-13.		1913-14.	
	lbs.	Rs.	lbs.	Rs.	lbs.	Rs.
Karachi	19,720	92,065	18,397	85,898	3,630	15,858
Bengal	3,052	12,605	3,052	24,012	2,722	21,501
United Provinces . .	..	..	11,056	53,600	..	..
Others	2,970	12,115	1,980	9,314	4,208	22,286
TOTAL	25,742	1,16,785	34,485	1,72,824	10,560	59,645

I am unable to suggest what kind of silk it is that was imported during these years from Karachi and other places, and from the United Provinces in 1912-13. Bengal silk appears to be known as "Ghungru" or "Desouri," and the latter is said to be used as a warp with a weft of Yarkand silk in Amritsar, but I found none whatsoever in use and was told that none had been received for the last seven or eight years. Similarly, "desouri" was known in Peshawar, but was said not to be used now-a-days, and none seems to be received in Multan. Mysore silk is unknown, it appears, in this province, so that the nature of the small quantities of silk mentioned in the above table must remain doubtful. It is sufficiently clear, however, that foreign raw silk is now almost universally used throughout the Punjab.

3. The Monograph on the Silk Industry of the Punjab gives a list of the classes of silk imported for manufacture in 1899. These are as follows :—

1. *Wardan*.—A name applied to best Central Asian silk. Price Rs. 12 to Rs. 18 according to quality and place of sale.
2. *Mai, Mayee or Phul*.—A name chiefly given to China silk imported from Bombay *via* Amritsar. Price Rs. 11 to Rs. 17.
3. *Akhcha*.—From Balkh. Rs. 15 a seer at Peshawar.
4. *Attyan*.—A China silk imported from Bombay. Rs. 15 a seer at Peshawar.
5. *Nawabi*.—From Bokhara. Rs. 12-8 at Kohat and Rs. 14 at Peshawar.
6. *Lab-i-abi*.—Produced in the country bordering on the Oxus and in Samarkand. Sells for Rs. 14 a seer in Peshawar.
7. *Shahr-i-sabzi*.—A Samarkand silk.
8. *Waran*.—A Bengal silk. Sells for Rs. 13 or less according to quality.
9. *Namkani*.—A Central Asian silk. Sells for Rs. 13 a seer at Peshawar.
10. *Charkhi*.—A Bokharan variety. Rs. 11 or Rs. 12 a seer.
11. *Ghungru*.—A Bengal silk from Rampur. Sells for Rs. 8 to Rs. 11 according to quality.
12. *Báf Kandahári* and *Báf Yarkandi*.—Sells at Amritsar at Rs. 12 and Rs. 12-8 a seer.
13. *Kakra*.—A Hongkong silk. Rs. 11 a seer.
14. *Sultáni*.—A Hongkong silk. Rs. 11 a seer.

15. *Behrámpuri*.—Produced in Gurdaspur District. The outturn is said to be 2 or 3 maunds per annum. The silk sells at Rs. 13 a seer at Amritsar.
16. *Dukhi*.—A Bokhari silk used in embroidery. Sold at Rs. 11 a seer in Peshawar.
17. *Kattai*.—A China silk imported *via* Bombay.
18. *Dutára, Ektára, Láni Maktúl, Kattar*.—Bengal silks from Balli. Sell at Rs. 7 to Rs. 9 a seer.
19. *Manchu*.—A Hongkong silk.
20. *Maithra*.—Hongkong silk. Rs. 3-8 to Rs. 5-2 a seer according to place of sale. A rough silk used on the frontier for embroidery.
21. *Sika or Sikha or Sikhapuri*.—Imported from Singapore. Rs. 4 or Rs. 4-10 a seer. A coarse silk used down country and on the frontier for embroidery.
22. *Shishmahal or Shishmal*.—A Hongkong silk of inferior quality costing about Rs. 3 to Rs. 4 a seer.
23. *Arewá*.—A coarse Yarkandi silk costing about Rs. 4 a seer.
24. *Chap, Gora, Láni Maktúl, Láni Chapperi, Kachar, Khámbandi, Ládwá, Lambi Bandi, Radha Nagri, Ateran*.—These are all Indian silks of inferior quality, costing from Rs. 4 a seer downwards, and used in making azarbands, etc.
25. *Dari*.—Silk mixed with flax from Italy.

Since that date there have been considerable changes in the kinds of silk imported into the Punjab. Now-a-days many of the kinds mentioned in this list appear to be unknown even by name, and others are known by name but are no longer used in the province. Nos. 1, 3 to 10, 13, 16, 17, 19, 22, 24 and 25 in the above list belong to these categories; in the case of most of these even their name has apparently been forgotten. *Báf Kandahári* is also, it appears, no longer imported. Of the remaining kinds the Bengal silk (*Ghungru*) is known by name, but is very little used at the present day. In Multan it is said that Bengal silk is known as *ektára, dutára*, etc., according to the number of threads, so that *ektára*, etc., do not appear to be different varieties of silk from that which is called *Ghungru*, but different qualities of that kind of silk. The silk is said to be a good one but only coarse qualities reach Multan, and that only every three or four years. In Amritsar, as has been mentioned above, no such silk has apparently been imported for several years. *Behrámpuri*, or Gurdaspur silk, is still produced in small quantities, but it is said to be too fine for the ordinary coarse local weaving, though there is said to be some demand for silk of this quality in Lahore. Two persons in Amritsar deal in this silk, which is sold at Benares but the outturn in 1915 was said to be only four maunds. Sheikh Ghulam Sadiq, of Amritsar, employs some 15 basins there for the reeling of this silk, but this industry is unimportant from the trade point of view, inasmuch as the reelers are only temporarily employed for that purpose and are ordinarily employed in the adjoining carpet-factory. If produced in sufficient quantity, however, there would certainly be a market for this silk in France;—at present the outturn is far too limited for any European concern to take it up.

Sultáni is still used occasionally, but very seldom, in Amritsar and in Multan. Its price is said to be Rs. 11 to Rs. 13 according to quality, but I was informed that it could only be used for *Dariai* and not (like *Mai Phul*) for other articles. I have not been able to find it actually in use, however, anywhere in these provinces, so that I am unable to vouch for the correctness of this information, or to suggest what kind of China silk is really meant, "*Sultáni*" being evidently only a local appellation. The only remaining kinds mentioned in the Monograph are *Mai, Mayee or Phul, Maithra, Sikha, Arewá* and *Báf Yarkandi*. All of these are still in use. Under the name *Mai, Mayee* and *Báf Yarkandi* are included two kinds of Chinese silk,—*viz.*, Meang and Hoing, or *Phul* are included two kinds of Chinese silk,—*viz.*, Meang and Hoing, the former being known as *Mai* or *Mai-phul* and the latter as *Phul*. The local names are apparently corruptions of the Chinese names, variations being

mayung and *fuyung*, which are nearer the originals, Hoing being also known as *wooying*, *hoying*, and so on. Both these kinds of silk are in very common use in the Punjab and North-West Frontier Province, being apparently the only Shanghai silks imported. They are yellow varieties from North China, and are used in greater quantity in Amritsar than any other kind of raw silk except that from Yarkand. In Multan *Mai-phul* (Meang) is the kind of silk most commonly employed, Hoing being also used in large quantities. In Amritsar the price of these silks is said to have risen recently from Rs. 15 to Rs. 19; in Multan it is given as only Rs. 13 (presumably before the rise in price), an inferior quality being probably in use. Meang is also known as "Achka," i.e., H. K. or Hsing Kee, a chop of Meang containing four qualities. The sample which I obtained in Multan was of No. 4 quality, which explains the comparative lowness of price. The "Gold Moon" chop of Hoing is the kind which appears to be most in use in that city. In Peshawar the only kind of Shanghai silk in use is imported from Amritsar, and costs Rs. 18 for a Peshawari seer (i.e., Rs. 14 a seer). This silk is Lie-Meang, or low quality Meang, and is very coarse and uneven. *Methra* (*Maithra*) and *Susa* are different qualities of the coarse Canton silk known as panjam, and imported from Hongkong. They cost Rs. 4 to Rs. 4-8, and Rs. 4 per seer respectively, and are sold in Amritsar in large quantities, always being dyed there before sale. They go chiefly to Peshawar, Rawalpindi, etc., where they are used for the manufacture of turbans, lungis, etc., and as thread for embroidery. *Sikka* (or *Sikka*) is also much used. It is a coarse yellow silk from Singapore, and costs, in Amritsar, Rs. 3 to Rs. 7 according to quality.

The only remaining kinds mentioned in the Punjab Monograph are *Báf Yarkandi* and *Arewá*. Both of these come from Yarkand. There are at least four kinds of Yarkand silk found in Amritsar, viz., (1) *kotha* (known as *Báf Yarkandi* in Multan). This is used most of all and costs Rs. 10 to Rs. 12 a seer. (2) *táni* (i.e., warp) so called because it is supplied ready warped. It is used less than *kotha* and costs Rs. 17 a seer. (3) *wattal*, costing Rs. 13 a seer. It is the same as *kotha* but of superior quality and twisted. (4) *arewá*, a kind very little used. It formerly cost Rs. 8 a seer, but is now said to sell at Rs. 7. Altogether Yarkand silk to the value of Rs. 6 lakhs or Rs. 7 lakhs is estimated to be sold in Amritsar every year. Of the total amount of Yarkand and Chinese silk sold three-quarters are said to be the former and only one quarter the latter kind. The popularity of the Yarkand silk is ascribed to the fact that it is very easy to use, as it unwinds at once and without difficulty, and contains very little waste. *Báf Yarkandi* is also very largely used in Multan and in Peshawar. In Peshawar it costs Rs. 15 a seer, being obtained from Amritsar. The whole of it is said to be windable, containing no absolute waste.

Besides these kinds, Bokhara silk is still used in considerable quantity in Multan, where the price has fallen from Rs. 26 to Rs. 20 per seer. It is a silk of a dirty white colour, very similar in appearance to the Yarkand variety, but much finer and softer than *Báf Yarkandi*, and is used both for warp and for weft. In Amritsar this silk is not much in demand, owing to its high price, and it is said not to have been supplied there for many years. In Peshawar, also, it appears to be very little used now for the same reason, in fact the only kinds of silk commonly in use in that town are (1) China silk (Lie-Meang), (2) *Báf Yarkandi*, and (3) *tuti* or spun silk from Switzerland. The nature of the import trade in Bokhara and Yarkand silk will be considered later.

Spun silk is used in great quantity in these provinces, being distributed from Amritsar. The kinds imported and the purposes for which they are used have, however, been fully dealt with elsewhere,* and nothing more need be added in this place, except to state that the demand for ready-made warps seems to be on the increase.

4. In addition to silk, silk substitutes are extensively used in the Punjab. Artificial silk imported from Bombay goes in large quantities to Amritsar, but is apparently not used in Multan or in Peshawar. It is known as

* Vide page 18.

"*Chamak*," from its appearance, and costs Rs. 7 per lb., the price having risen from Rs. 4 on account of the war. Details of this trade will be found on page 86. Mercerised cotton is used in most of the weaving centres. In Amritsar it is greatly employed for suitings and is obtained either from Japan or from England *via* Bombay. The latter is said to have ceased to arrive, on account of the war, but was formerly obtained from Graham & Co., Glasgow, in warps at Rs. 7 a bundle. The Japanese material (from the Fujigasu Spinning Co.) at Rs. 12-8 for 5 seers,* is, however, said to have been more generally used. Mercerised cotton, purporting to be English but re-labelled by the Bombay agents, is now being received. This is greyish in colour and for that reason preferred to the Japanese material, but otherwise it is said not to be superior, and it is conjectured locally that this also is Japanese material, sold as English because Re. 1 or Rs. 2 more was obtained for the real English article. In Multan also, both Japanese and English mercerised cotton is found. It is called "*naqli*" and is imported from Bombay both white and dyed. A *táni* (warp) of 58 yards is said to cost Rs. 5, and plain mercerised cotton cloth sells at seven annas a yard. The dye is found not to be fast. The merchants of Peshawar obtain it from Amritsar, but it is only used for making *azárbands* and *pandris*. Its price is reported to be Rs. 13 a Peshawari seer (i.e., Rs. 10-8 a standard seer) for the white yarn, and Rs. 14 a Peshawari seer (i.e., Rs. 11-8 a standard seer) dyed, but this must be a mistake, unless prices have risen recently to an enormous extent, for according to the values assigned in the Customs returns the price in 1914-15 averaged from about Re. 1-8 to about Rs. 2-8 a lb. In spite of the very general use of these substitutes, however, they are not at present used in anything approaching the same amount as silk; in Amritsar, for example, Yarkand silk is estimated to be sold in far greater quantity than any other kind, and after Yarkand Shanghai silk (*Meang* and *Hoing*). After these two, the other kinds are sold in the following order of quantity:—(1) Canton silk (*Methra* and *Susa*); (2) Singapore silk (*Sikka*); (3) spun silk (*tuti*); (4) mercerised cotton; and (5) artificial silk. A reference to the Seaborne Trade Returns, however, (*vide* pages 85 and 86) will show that the imports of the two last mentioned articles are by no means inconsiderable.

5. The trade in Yarkand and Bokhara silk is carried on in the following ways. Yarkand and Khotan silk is brought on ponies to Amritsar *via* the Gilgit route and Kashmir by up-country merchants, who purchase it locally in Eastern Turkestan, where it is produced. They deposit the silk with one of the three or four firms of commission agents in the town and receive an advance of 50 per cent. to 75 per cent. of the value. Merchants of Amritsar and other towns come to these agents, accompanied by one of the local brokers, and with the help of these the price is settled. The agents are said to receive Rs. 2-0-6 per Rs. 100 value, or about 2 per cent. commission, the brokers getting about 1 per cent. In both cases it appears to be the sellers who pay the commission, the merchants paying nothing to the brokers. The number of middlemen appears to be unnecessarily large in these transactions. It is stated, indeed, that the brokers are indispensable, for if a merchant tried to buy his material without their aid, he would fail to obtain it when he needed to sell, and these brokers are said to keep themselves up-to-date in knowledge of prices, the state of the market, and all details of the trade. There certainly appears, however, to be an opening for co-operation here among the merchants or employers of weavers for the elimination of unnecessary commissions. Yarkand silk is said to arrive once a year—generally about December and January—and is never brought on order. A few Indian merchants of Hoshiarpur go themselves to Yarkand to buy the silk there.

This is said to be the system in vogue in Amritsar. In Multan Bokhara silk is apparently brought by Pathans to the *dalals* or brokers (of whom there are about 50). They leave the material with these brokers and obtain the price when they return in the following year. No mention is made of any advance, but some amount must obviously be obtained. The *dalals* receive brokerage not only from the Pathans, but also from the merchants, who are said to pay $\frac{1}{2}$ per cent. Yarkand silk is brought similarly, though the

* If this is correct, prices have risen about 100 per cent.

Amritsar system is also reported to be in vogue. Bokhara silk is also received in Peshawar down the Khyber route. It is not much worked in that town, however, and is mostly exported in bulk to Amritsar and Multan. China and other silks are obtained from Bombay by the employers of weavers, or factory-owners, through their agents in that city.

Industrial Methods.

6. Having obtained their raw material by one of these methods the merchants or employers of weavers make it over to the weavers themselves. In Amritsar City a kind of factory system is followed. There are about a dozen factory-owners,* each employing from 15 to 200 looms. The weavers generally work in the factories, being as usual paid by the piece. They are said to make 8 to 10 annas a day, receiving, it is alleged, Rs. 30 to Rs. 32 per 100 yards. The weavers who live in the district, on the other hand, beyond the limits of the city, come in to the merchants or employers for yarn and take it away to their villages, where they manufacture it into cloth. The number of weavers in Amritsar City is estimated at about 600, although 10 years ago there were as many as 1,700 persons so employed. In addition to these about 100 persons are now said to be engaged on dyeing, and a certain number must also be employed for twisting and other preparatory processes. If we compare the number of persons, however, said to have been employed in 1851 on the local manufacture, viz., 2,205, it is clear that the silk-manufacturing industry of Amritsar has very seriously declined.

In Multan the factory system does not seem to prevail, at any rate to the same extent as in Amritsar. Here there are said to be about 20 merchants who give out the silk yarn to the weavers, paying from Rs. 12 to Rs. 20 for 40 yards (30 Multani yards) of woven cloth. The weavers work in their own houses, some of them even employing servants for the purpose, and they make 12 annas to Re. 1 a day. They take advances from their employers when they receive the yarn, sometimes amounting to practically the whole value of their work. Thus one weaver, who had received spun silk for manufacture, was to get Rs. 12 for 50 yards of 27 inches, and had taken an advance of Rs. 11 at the time of obtaining the raw material. Under this system the weavers appear to be better paid than under the factory system prevailing in Amritsar. There are 400 to 500 persons employed in weaving in Multan City, 60 to 80 other persons being employed on twisting, and about 50 on dyeing. In Peshawar City only 40 persons are said to be engaged on weaving, and only about 50 persons on other processes of silk manufacture, viz., dyeing, twisting, etc. These persons are employed by the proprietors of the looms and of the dyeing-vats, the weavers receiving 4 annas a yard, thereby earning 6 to 8 annas a day.

In Multan German aniline dyes are used. The dyers formerly received 14 annas a seer, but now, owing to the great rise in the price of dyes, they get as much as Re. 1-12 or Rs. 2 a seer. In Amritsar I found Swiss dye in use for dyeing *daryai* of Yarkand silk. This cost formerly 11 or 12 annas a tin, but owing to the war the price rose as high as Rs. 13. Recently, on account of a rumour that cheaper dyes were arriving from Japan, the price fell to Rs. 8-8 a tin. Very large sums have consequently been made by the fortunate owners of stocks of dye-stuffs at the outbreak of the war. Dyes are exempted from octroi-duty in Amritsar, it being found that far more of this material was being used there than in Lahore. The cost of dyeing has risen here also from Re. 1 or less to Rs. 2 a seer.

On most of the looms in the Punjab only coarse weaving appears to be done. In Amritsar, still the centre of the silk trade, it is said that the weavers are now incapable of anything else. The dyes used are very frequently not fast and the raw material, as has been seen, is to a considerable extent inferior silk or silk substitutes. The dyes are largely used for ribands or other articles of the same nature which are not ordinarily washed, and it is possible that the degeneration of weaving has followed upon the use of

* There appears to be no specific name for such persons. A similar owner of a carpet-factory is, however, termed a *karkhandar*.

inferior dyes. There is a great demand for the coarse cloth which is commonly woven, and the finer qualities are now almost all supplied from other provinces or from foreign countries. The outturn of cloth is, however, still considerable. One factory in Amritsar is said to manufacture Rs. 6 or Rs. 7 lakhs' worth of silk goods, exporting them to other cities in the Punjab, such as Sialkot, Gujranwala and Rawalpindi, or to Peshawar. The Kashmir Weaving Co. manufactures silk cloth to the value of Rs. 11,000 or Rs. 12,000 annually, though this has fallen to Rs. 7,000 or Rs. 8,000 recently. In Multan one kind of silk is generally used for the warp and another for the weft. No goods are ever manufactured, apparently, with warp and weft both of China silk. Cloth made of a Bokhara warp with a weft of Hoing sells for Rs. 2-2 to Rs. 3 a yard; made of a spun-silk warp and a Hoing weft it fetches Rs. 2 a yard; and articles manufactured from a spun-silk warp with a Bokhara weft realize Re. 1-5 or 1-6 a yard. Spun silk is also combined with cotton, or mercerised cotton alone is used. In Peshawar all the weaving is of plain cloth, handkerchiefs, and the like, the patterns being very simple, a standard check or similar design. Lungis appear always to be woven with a weft of Chinese silk on a warp of cotton, and the price is only 14 annas to Re. 1 a yard. A handkerchief of Chinese silk fetches about Re. 1.

This degeneration of local weaving is certainly not due to any lack of a demand for finer silk manufactures. A reference to the figures for imports of silk goods into the province will dispose at once of such an assumption. From these it will be seen that a very large quantity of manufactured silk is brought into the Punjab, which the local silk industry is, under the present conditions, unable to supply. Certain steps have, of course, been taken on behalf of the weaving industry. Schools have been established, but not apparently with any considerable amount of success. In Multan there is a weaving master receiving Rs. 30 a month from the Municipality. He was sent to the Ludhiana school for training and has been employed for the last couple of years. In the school there are two ordinary pit-looms and the common appliances for winding, etc. Only plain weaving can be taught, though the Municipality is, I believe, intending to supply the school with better looms. In this school the sons of artisans are taught free of charge. I am not able to see any particular use for a school of this nature. All that can be taught in the school could apparently be learnt equally well—and perhaps better—in the boys' homes, where their fathers are continually at work on looms of the same kind. It really appears that the boys are sent to the school rather to keep them out of mischief than for any other purpose. Could it be proved to the weaving community that there is an enormous demand for various kinds of fine silk, and could they be shown by qualified instructors at a suitably-equipped school how to manufacture silk cloth of that nature, the advantage of the institution would be at once apparent. It is, of course, a matter for the decision of the local authorities, but I should imagine that were such a school established, its benefits would be more appreciated if a fee were charged for the instruction received, when once it had been demonstrated, by actual manufacture and sale of the articles, that profit was to be made by the new method. It would of course require careful consideration of the market, and expert advice as to the best appliances for manufacturing the required articles, before it would be possible to demonstrate successfully that goods now received from abroad could be manufactured locally, but it is only after such consideration and with such advice that any serious effort can be made to regenerate weaving in these provinces. Were such a regeneration successfully accomplished, however, it would still remain to be seen whether the weaving community would gain by the change, or whether all enhanced profit would go to the employer or factory-owner. In the Madras Province, where improved looms have been established, there does not appear to have been much appreciable gain to the weavers themselves, and where the factory system prevails, as in Amritsar City, it is probable that the result would be the same. Where, however, as in Multan or in Amritsar district, the weavers take the yarn to their own houses for manufacturing upon their own looms, an improved loom, increasing the output or lessening the amount of labour required, should certainly enhance the profits of the weaver himself. A co-operative society of weavers, upon the lines of that of Conjeeveram in the Madras Presidency, might be successful

in securing the profits of an improved system of weaving for the weaver himself, besides allowing readily of the introduction of such improved methods, but there are very considerable difficulties attending any such enterprise, as will be seen by a reference to the portion of this report which deals with that society.

Exports.

7. Exports of raw silk from the Punjab are with the exception of the Kashmir silk trade, of no great importance. Exports of foreign raw silk never amount to more than a few maunds a year, and in four out of the last 10 years no such silk was exported at all. The quantity of Indian raw silk exported during the last 10 years is as follows :—

Exports of Indian raw silk by rail.

Year.	Quantity in mds.	Value Rates Assigned in Rs. lakhs.
1905-06	1,611	Over 4½
1906-07	2,520	" 7½
1907-08	4,121	" 14
1908-09	2,444	" 8½
1909-10	2,433	" 8½
1910-11	3,344	Nearly 11½
1911-12	3,238	Over 11
1912-13	6,333	" 22
1913-14	2,975	" 10½
1914-15	979	" 3½

The destination of nearly the whole of this export is Karachi; thus in 1911-12 3,145 maunds out of 3,238 maunds, and in 1912-13 6,225 maunds out of 6,333 maunds, were consigned to that Port. In 1913-14 the export was more distributed. Out of 2,975 maunds, 2,280 went to Karachi, 425 to Kashmir and 147 to Bengal. Presumably the last item indicates an export of Kashmir silk: it was consigned from the territory between the Jhelum and the Indus, and therefore in all probability from Rawalpindi. The export to Kashmir was from the adjoining territory between the Sutlej and the Jhelum, and may have been despatched from Lahore, Amritsar, Gurdaspur or Jammu. It would be interesting to know whether this consignment indicates the beginning of a demand in Bengal for Kashmir silk. It would be unsafe, however, to attach too much importance to these figures, which are certainly not always entirely trustworthy, or to make an assumption of this nature upon such grounds alone.

The following amounts of raw silk have been exported during the last nine years over the North-Western Frontier by road :—

Exports of raw silk from the North-West Frontier Province by road.

Year.	To NORTH AND EAST AFGHANISTAN.		To DIR, SWAT AND BAJAUR.		To BUNER.	TOTAL.	
	By Khajuri Kach.	By Tochi.	By Darband.	By Konsh.	By Saidgi.		
	Mds.	Mds.	Mds.	Mds.	Mds.	Mds.	Rs.
1906-07	..	22	..	..	..	22	6,600
1907-08	..	17	..	..	..	17	5,100
1908-09	..	2	..	..	..	2	500
1909-10	..	10	..	..	..	10	2,400
1910-11	..	19	..	..	..	19	4,560
1911-12	..	31	18	7	..	56	15,250
1912-13	..	67	11	8	..	86	22,450
1913-14	..	85	..	..	..	85	21,250
1914-15	5	273	..	7	1	286	73,800

There has therefore been a very considerable increase in this export trade, which consists probably of Chinese raw silk.* Improvements in the system of registration may be partially responsible for the increase, but the trade carried by the Tochi route appears to be steadily growing and the high figure reached in 1914-15 is especially noticeable. Kabul is said to import Chinese raw silk from Peshawar and this trade must be included in the above figures.

The transfrontier export trade of the Punjab in raw silk is of no particular interest. There was a small export to Kashmir until 1906-07, but since that date this trade has either ceased or has escaped registration under the new system.

SILK MANUFACTURES.

8. The Punjab draws very heavily upon foreign countries for its supply of manufactured silk. From the middle of last century until recent years the import of foreign goods seems to have steadily increased, while local produce declined. The import of Indian manufactured goods has also steadily decreased within the last 10 years, falling from 1,763 maunds, valued at Rs. 12½ lakhs, in 1905-06, to 217 maunds, valued at Rs. 2 lakhs, in 1913-14, and only 4 maunds in 1914-15. During the same period foreign imports have remained steady until 1914-15, when (presumably on account of the war) they fell from 1,907 maunds in 1913-14 to 877 maunds in 1914-15. The following table, giving the imports of silk piece-goods into the Punjab by rail during the last 10 years, will illustrate these remarks :—

Imports of silk piece-goods into the Punjab by rail.

Year.	FOREIGN.		INDIAN.		TOTAL.	
	Mds.	Rs. lakhs.	Mds.	Rs. lakhs.	Mds.	Rs. lakhs.
1905-06	1,544	5½	1,763	12½	3,307	18
1906-07	1,248	4½	1,553	10½	2,801	15½
1907-08	2,278	24½	594	4½	2,872	28½
1908-09	1,406	5½	269	2	1,675	7½
1909-10	1,849	6½	251	2	2,100	8½
1910-11	2,128	7½	643	6½	2,771	13½
1911-12	1,992	6½	817	11	2,809	17½
1912-13	1,510	4½	614	5	2,124	9½
1913-14	1,907	6½	217	2	2,124	8½
1914-15	877	3	4	..	881	3

The values given above are those assigned in the Railborne Trade Reports. They cannot be accepted implicitly, for the variations from year to year are so great as to raise considerable doubt as to their accuracy. However, according to these values the average yearly import of silk goods into the Punjab amounts to about Rs. 13 lakhs. It will be noticed that in 1905-06 and 1906-07 the Indian silk imports outweighed the foreign, whereas since that date they have in no case reached half the amount of the latter. The foreign imports are nearly all from Bombay, a small quantity only being received from Karachi and Calcutta. The accompanying table shows the

* This is confirmed by subsequent enquiries. The Political Agent, Tochi, reports that the raw silk exported to Afghanistan via the Tochi route is China silk of poor quality from Amritsar.

sources of the foreign silk imports into the Punjab by rail, during the last five years :—

Imports of foreign silk piece-goods by rail.

Whence Imported.	1910-11.	1911-12.	1912-13.	1913-14.	1914-15.
	Mds.	Mds.	Mds.	Mds.	Mds.
Bombay	2,085	1,666	1,306	1,403	771
Karachi	41	120	191	487	67
Sind	..	110	..	..	..
Calcutta	2	96	..	..	35
Others	..	..	13	17	4
TOTAL	2,128	1,992	1,510	1,907	877

A similar table is appended for imports of Indian goods :—

Imports of Indian silk piece-goods by rail.

Whence Imported.	1910-11.	1911-12.	1912-13.	1913-14.	1914-15.
	Mds.	Mds.	Mds.	Mds.	Mds.
Karachi	415	86	460	107	..
Calcutta	101	536	59	45	..
Bengal	81	87	..	..	..
Bihar and Orissa	..	..	78	59	..
United Provinces	26	32	..	..	..
Bombay	20	71	..	..	..
Others	..	5	17	6	4
TOTAL	643	817	614	217	4

It will be seen that since the constitution of the province of Bihar and Orissa in 1912, this province has taken the place of Bengal. It appears, therefore, that the imports purporting to come from both these provinces are from the same source, *viz.*, Bihar and Orissa, and presumably consist of tasar silk cloth manufactured in Bhagalpur or other weaving districts in that province. Calcutta still supplies a small quantity of manufactured silk, which in 1911-12 reached the considerable figure of 536 maunds, valued at over Rs. 8½ lakhs. The whole of this amount went to Delhi, which city, indeed, ordinarily receives the bulk of the imports, both Indian and foreign. As regards silk manufactures, therefore, the centre of trade appears to have shifted from Amritsar to Delhi, though the former still retains its old position as the centre of the trade in the raw material. The trade in manufactured silk is, however, still very considerable in Amritsar. One merchant of that place (B. Ganga Ram Radhakishen) stated that he imported Rs. 5 or Rs. 6 lakhs' worth of piece-goods annually from Bombay. He purchases direct from the importers of that city and through them receives both Chinese and Japanese piece-goods, besides importing from Bengal and Benares. He states that he sells Rs. 2 lakhs' worth of Chinese goods, and an equal quantity

of Japanese, in addition to Indian manufactures worth Rs. ½ lakh from Bengal, and the same amount from Benares. According to this merchant, although the Chinese goods are the best the Japanese are sold in the greatest quantity, though the latter frequently do not come up to sample. The most valuable asset of the Japanese goods is their finish. It is said that plain Benares silk and plain Japanese silk of the same quality cost Re. 1-4 and Re. 1-12 a yard respectively, but that in spite of the higher price the Japanese article is preferred, solely on account of its superior finish. This is the case even though the Benares article is popularly supposed to be pure silk, whereas the Japanese goods are under suspicion. Benares silk is however sold in very considerable quantities, especially schappe and plain silk at Rs. 20 for 12 yards, which is said to be much used instead of the locally-woven *daryai*. Benares *khappans* (cloth for covering the bodies of the dead) are also sold in Amritsar. They are made of stiff thick silk and cost Rs. 3 for 3½ yards.

In Multan Japanese silk cloth sells at 12 annas to Rs. 2-8 a yard, according to quality. It is imported *via* Bombay. Handkerchiefs of Japanese silk can be purchased in the bazar for as little as 3 annas each. Delhi is, however, the chief centre of this trade. In that city no weaving now appears to be done, but very large quantities of imported silk goods are sold. In 1913-14 out of a total import by rail of 2,124 maunds of silk piece-goods into the Punjab, 1,286 maunds went to Delhi City, 753 maunds (or practically the whole of the remainder) going to the territory between the Sutlej and the Jhelum, which includes Amritsar, Lahore, and Multan. In 1912-13, when the total import into the Punjab was exactly the same as in 1913-14, the proportions were very similar. The leading merchants in Delhi appear to specialize, *i.e.*, one imports only European piece-goods, another only Japanese and Chinese, and a third only Benares goods. It will therefore be convenient to treat each of these lines of import separately.

1. *European piece-goods.*—The largest trade is in mixed goods from France, but there is also considerable demand for plain or embroidered satin and damask from Switzerland, France, and Italy. Silk flowered grenadines are imported from Switzerland. These are made of cotton embroidered with silk flowers, and sell at Re. 1-4 per yard of 50 inch width. Many kinds of cheap French mixed goods are sold:—cotton shot with silk costs 13 annas per yard of 32 inch width, cotton striped with silk 9 annas per yard of 18 inch width, and plain green silk sells at 12 annas for a yard of 13 inch width. Green silk cloth from Switzerland is made in 16 inch widths and costs Re. 1 per yard. Austrian mixed goods are also sold: these are of cotton embroidered with flowers of cheap silk and imitation gold thread. Their price is from Rs. 3-8 to Rs. 6-4 for a piece of 2½ yards by 48 inches.

2. *Chinese and Japanese goods.*—The Japanese manufactures are mostly conspicuous for gaudy patterns and brilliant finish. All kinds are imported, from plain cloth (generally of bright colour) to silk embroidered with flowers and with printed colours, but almost without exception the cloth is finished with a gloss and smoothness which appear to appeal particularly to the public taste in the Punjab. The only goods from the Bombay Mills which I found in Delhi were *saris*, and these are not much in demand, the ordinary wear being petticoats (*lenga*), which are generally made from Japanese, European, or sometimes Benares cloth. The goods from the Mills are said to cost more and to have less sheen. Dull effects are considered common, brighter colours and pronounced patterns being therefore preferred. It is said that Japanese cloth is dyed with brilliant colours in the Bombay Mills and that this kind of cloth is much in demand. For men's clothes Chinese plain cloth (apparently manufactured from wild silk) is very popular, and much worn by all classes. This sells for Re. 1-8 a yard of 27 inches in one quality and Re. 1-2 a yard of 20

inches in a second quality. The 20 inch width is not liked, however, though it is a width apparently largely manufactured in China and imported into this country in considerable quantities. Widths of 27 and 36 inches are preferred in the Punjab, and there seems to be an opening here for some enterprising firm to put an Indian tasar cloth upon the market of the same quality and at the same price, but in the desired widths.

3. *Benares dupetas* and *pod* (cloth for petticoats) are sold in large quantities in Delhi, especially when embroidered with gold lace. These appear to be the only kinds of Indian silk manufactures which are largely in demand in that city.

9. Peshawar is the market for manufactured silk from Meshed, in Persia. This kind of silk is said to be very strong and durable, but is always in plain colours and is consequently becoming less popular in competition with the ornate and variegated Japanese piece-goods. Meshed silk cloth costs Rs. 2-4 a yard (24 inch width), *lungis* (turbans) of 7 yards selling for Rs. 15. It is generally taken by road into Baluchistan, and thence despatched by parcel post to Peshawar, or it is sent to Bombay and Karachi and thence received by post. Bokhara silk cloth is also received in Peshawar. This is also always in plain colours and costs Re. 1-4 a yard (14 inch width). An imitation of this cloth is manufactured in Benares for the Peshawar market and is sold for Re. 1-2 a yard. Both Bokhara silk cloth and Meshed cloth were formerly woven out of raw silk from Bokhara and Persia, but the high price of Bokhara raw silk has practically prohibited the manufacture of the former, and in the case of Meshed silk the Peshawar weavers found themselves unable to compete with the Persian and have given up the attempt. Japanese and Chinese piece-goods are now much in demand in Peshawar. Plain and flowered Shanghai silk, and cloth of mixed cotton and silk, are greatly used, while Japanese piece-goods of all kinds—flowered paj, gauze, etc.—are extremely popular, owing to their variety and cheapness. The price of these is from Re. 1-8 to Rs. 6 a yard and 50 or 60 shops are said to deal in these goods in Peshawar alone. The designs are alleged to have been copied by the Japanese manufacturers from samples of cotton goods which used to be supplied by Manchester. It is stated that Japanese goods are distrusted in the market, and it is undoubtedly the case that, as I have myself frequently found, the embroideries upon Japanese silk goods are made of artificial and not of real silk. This distrust does not, however, prevent them from appealing very strongly to the popular taste.

10. From these remarks it will be clear that Indian silk manufactures have been largely driven out of the market in the Punjab and North-West Frontier Province by the Japanese articles. This seems to be due to a variety of causes. The cheapness of the Japanese goods is, of course, strongly in their favour, but this does not appear to be by any means the chief cause of their popularity. The real cause would rather seem to be the lustre and finish of the Japanese articles and their immense range of colour and design. Hardly any of the Indian manufactures are gaudy enough for the popular taste in these provinces, and if this market is to be recaptured by home industries effort must be made to supply it with the kind of silk which appeals to the popular taste. That the market is worth capturing there can be no doubt: the value of the foreign piece-goods annually exported into the Punjab, by rail and post, must be very great. Very little, if any, of the silk goods at present made in any of the silk centres of India, however, is of the kind now most in demand in these provinces, and to supply that market it will practically be necessary to constitute a new industry in India. How far these Japanese goods are the product of hand-looms or how far they are factory-made, it would require a knowledge of the Japanese industry to determine, and without such a knowledge it certainly cannot be said whether such articles can be supplied in India at the same price as the Japanese goods. Under present conditions there does not appear to be much hope of supplanting the Japanese goods in the public favour. Meanwhile the local weaving industry has shown itself quite unable to adapt itself to the change in the popular

demand and appears to be rapidly dying out. It is possible, though perhaps not altogether likely, that the present increase in demand for silk substitutes will disappear, as it disappeared after a very short life in the Madras Presidency: there is very little chance, however, of any change in the present taste for lustre and finish, and unless and until goods of Indian manufacture can rival the Japanese articles in these points, there is very small likelihood of an increase in the demand for Indian manufactured silk in these Provinces.

11. The export trade in silk manufactures is small, the whole amount carried by rail averaging during the last 10 years, according to the value rates assigned, less than Rs. 1 lakh annually. It consists mainly of small consignments of piece-goods to the United Provinces and elsewhere. The following tables show the total exports by rail during the last 10 years, and details as to the provinces of consignment for the last five years:—

Exports of silk piece-goods from the Punjab by rail.

Year.	Foreign.	Indian.	TOTAL.	
			Mds.	Rs.
1905-06	2	24	26	16,370
1906-07	2	36	38	23,297
1907-08	3	377	380	2,19,532
1908-09	2	174	176	1,03,049
1909-10	15	186	201	1,27,166
1910-11	30	153	183	1,27,936
1911-12	5	59	64	41,329
1912-13	43	88	131	1,06,828
1913-14	8	59	67	45,199
1914-15	2	110	112	70,586

Exports of Indian silk piece-goods by rail.

Whither exported	1910-11.	1911-12.	1912-13.	1913-14.	1914-15.
	Mds.	Mds.	Mds.	Mds.	Mds.
Bombay Port	87	..	..	..	..
United Provinces	30	..	67	..	50
Madras	..	25	..	..	..
Sind	..	..	..	..	53
Karachi	..	..	..	28	..
Others	36	34	21	31	7
TOTAL	153	59	88	59	110

There is also a small export trade by transfrontier routes both from the Punjab and the North-West Frontier Province. From the latter, goods are exported by way of Khajuri Kach to Afghanistan. In 1903-04 an export of 22 maunds, valued at Rs. 17,600, is mentioned in the Trade Returns, but from that year until 1911-12 no further trade of this nature is recorded. From

1911-12 to 1913-14 only 28 maunds, valued at about Rs. 14,500, were registered, and in 1914-15 again no such export was recorded. Exports across the Punjab frontier are larger. A small trade with Kashmir, Ladakh, and Chinese Tibet was registered between 1903-04 and 1912-13. The system of registration was then changed, and figures for the trade with Central Asia were obtained from Leh, including for the first time trade which passed *via* Kashmir and the Rawalpindi route. That a considerable amount of exports had previously escaped registration is proved by the fact that in 1913-14 25 maunds of silk manufactures are reported to have been exported over the frontier *via* Kulu or Sultanpur, and 231 maunds *via* Kashmir, of a total value of nearly Rs. 4 lakhs. In 1914-15 exports *via* Kashmir amounted to 477 maunds, valued at over Rs. 2½ lakhs, and a small quantity was sent to Chinese Tibet. The nature of the silk manufactures exported in this way I have not been able to determine.

12. A table is appended showing the sources of the import and the destinations of the export trade in 1914-15 so far as they are available. It cannot, however, be regarded as complete, for not only is the import of raw silk by road from Kashmir to Rawalpindi probably not wholly registered, but also a considerable margin must be left for silk imported and exported by passenger train or by postal service. The table will, however, give a general idea of the silk trade, though the figure for imported silk manufactures would undoubtedly be very much higher were any record available for the goods carried as parcels by passenger train or by post.

Silk trade of Punjab and North-West Frontier Province, 1914-15.

IMPORTS.			EXPORTS.		
Nature of silk and whence imported.	Maunds.	Rs.	Nature of silk and whence exported.	Maunds.	Rs.
<i>Indian Raw Silk.</i>			<i>Indian Raw Silk.</i>		
By Rail—			By Rail—		
From—			To—		
Bombay	36	13,161	Karachi	831	2,81,056
United Provinces	85	34,200	United Provinces	95	32,261
Kashmir	37	12,167	Other places	53	18,142
Other Places	68	35,326			
TOTAL	226	94,854	TOTAL	979	3,31,459
<i>Foreign Raw Silk.</i>			<i>Foreign Raw Silk.</i>		
By Rail—			By Rail—	<i>Nil</i>	<i>Nil</i>
From—			By Road—		
Bombay	4,292	17,23,730	To—		
Karachi	386	1,46,784	North and East Afghanistan	278	71,450
Other places	3	1,197	Dir, Swat, and Bajauri	7	2,100
By Road—			Buner	1	250
From Ladakh	1,141	4,55,915			
TOTAL	5,822	23,27,626	TOTAL	286	73,800
TOTAL OF RAW SILK	6,048	24,22,480	TOTAL OF RAW SILK	1,265	4,05,259

Silk trade of Punjab and North-West Frontier Province, 1914-15—contd.

IMPORTS.			EXPORTS.		
Nature of silk and whence imported.	Maunds.	Rs.	Nature of silk and whence exported.	Maunds.	Rs.
<i>Indian Piece-goods.</i>			<i>Indian Piece-goods.</i>		
By Rail—			By Rail—		
From all places	4	4,204	To—		
			Sind	53	32,963
<i>Foreign Piece-goods.</i>			United Provinces	50	30,758
By Rail—			Other places	7	4,208
From—			<i>Foreign Piece-goods.</i>		
Bombay	771	2,65,634	By Rail—		
Karachi	67	22,812	To all places	2	2,657
Calcutta	35	13,414	By Road—*		
Other places	4	1,445	To—		
By Road—			Ladakh	477	2,87,505
From Ladakh	3	3,965	C. Tibet	2	1,000
TOTAL OF PIECE-GOODS	684	3,11,474	TOTAL OF PIECE-GOODS	591	3,59,091
TOTAL VALUE OF SILK	..	27,33,954	TOTAL VALUE OF SILK	..	7,64,350

* (Indian or Foreign.)

APPENDIX.

Statement showing Silk, Waste and Cocoons produced in Kashmir during the last 10 years.

Year.	Silk (lb)	Waste (lbs.).	Green cocoons (Maunds).
1963 (1905-06)	115,748	74,989	21,409
1964 (1906-07)	132,760	98,179	28,421
1965 (1907-08)	129,045	71,461	23,490
1966 (1908-09)	184,221	95,902	36,428
1967 (1909-10)	168,168	97,607	40,407
1968 (1910-11)	215,740	125,244	37,565
1969 (1911-12)	181,056	129,969	37,487
1970 (1912-13)	94,978†	73,850†	37,921½
1971 (1913-14)	53,597†	24,727†	33,672½
1972 (1914-15)	96,879†	73,043†	33,861

† The decrease in output of Silk and Waste from 1912-13 was due to a disastrous fire which took place in July 1913, causing the destruction of about 35,000 maunds of green cocoons and the loss of buildings containing 1,272 Reeling Basins.

CHAPTER IV.

The Silk Trade of India: Summary and Conclusion.

Raw silk exports.

1. In the preceding pages the trade of Bombay, Madras and the Punjab has been reviewed in detail. An attempt will now be made to give a general idea of the present state of the silk trade of India as a whole. In Table II of Appendix B will be found the figures for the exports of Indian raw silk, chassam or waste, and cocoons out of British India from 1889-90 to the present time. From this table it will be seen that it is a mistake to suppose that there has been a steady decline in such exports during the last quarter of a century. Until 5 years ago (1909-10) the variations in the amount exported were normal, and in that year the figure (*viz.*, over 2 million lbs.) was higher than it had been since 1889-90. The following table will show at a glance that instead of having decreased the total export has increased in quantity during the last 40 years, and even previous to that the figure for 1864-65 to 1873-74 is subject to some reduction, re-exports of foreign raw silk being included for the years 1864-65 to 1867-68:—

Exports of raw silk from India.		
Average for 10 years—		lbs.
1864-65—1873-74	.	2,065,272
1874-75—1883-84	.	1,401,025
1884-85—1893-94	.	1,744,109
1894-95—1903-04	.	1,717,601
1904-05—1913-14	.	1,740,023

It will be noticed, however, that the figure for reeled silk (the most valuable part of the export), though it rose in 1906-07 and the following year higher than it has reached for a great number of years, has since then been steadily decreasing, and for five years has been lower than at any other time in the last quarter of a century. The value of the total export has correspondingly decreased, in spite of a fairly steady average in chassam and cocoons, though the former of these also shows a decrease from the very high figure reached in 1909-10 (nearly 1½ million lbs.). The average value of the whole export is given in the following table:—

Average value of export of raw silk from India.		
For 5 years—		Lakhs. Rs.
1889-90 to 1893-94	.	60
1894-95 to 1898-99	.	52½
1899-1900 to 1903-04	.	63½
1904-05 to 1908-09	.	58½
1909-10 to 1913-14	.	42½

It is therefore only within the last five or six years that there has been any serious decrease in the whole export trade, less than ten years ago (*i.e.*, in 1906-07 and 1907-08) the value having been well above the average of the last twenty-five years. Within those few years, however, the decrease has been starting. The export of reeled silk fell in 1913-14 to considerably less than half what it was in the preceding year, and less than two-ninths of the amount exported in the years 1906 to 1908. The export of chassam was steadier, but reached a lower figure than any recorded during the preceding ten years, and the total export (1,203,098 lbs.) was the lowest since 1881-82 (when it stood at 1,117,026 lbs.). The value (Rs. 24½ lakhs) was less than half the normal figure during the last 25 years. In 1914-15 the fall was even greater. Only 516,282 lbs. of raw silk were exported from the whole of India during

that year—the lowest figure reached for a century. Since 1856, in fact, the amount has never sunk to as little as double that figure, and during the last ten years (with the single exception of 1913-14) it has regularly been more than three times the amount exported in 1914-15. The figure for that year cannot, however, be taken as any indication of a permanent decrease in the export trade. The fact that exports to France, which usually takes 70 per cent. of Indian raw silk, decreased by 524,901 lbs. proves almost conclusively that the war is responsible for the surprisingly low figure reached during that year. None the less, there has been, during the last five years, a steady fall, though it was only in 1913-14 that the decrease was of a really startling nature. The fall during that year, however, is also capable of explanation, which proves that it was due in the main to temporary causes. As has been stated elsewhere, there was a serious fire in the Kashmir State Filature in August 1913, very heavy damage being sustained. In consequence of this, exports of Kashmir silk *via* Karachi were very much reduced in quantity, and the Sea-borne Trade Returns for Sind show that exports of raw silk from that province fell from 679,641 lbs., valued at nearly Rs. 27½ lakhs, in 1912-13, to only 260,433 lbs., valued at rather more than Rs. 12½ lakhs, in 1913-14. The decrease in the quantity exported from this single source of supply, therefore, amounted to nearly 420,000 lbs. in quantity and Rs. 15 lakhs in value. The addition of these amounts to the actual figures for the export of raw silk from the whole of India during that year would raise them to about 1,600,000 lbs. and nearly Rs. 40 lakhs, which are very little less than the figures for the preceding year. While, therefore, it must be admitted that a decrease has become manifest in the exports of the last few years, the abnormally low figures for 1913-14 and 1914-15 are not in the main due to the circumstances, whatever they may be, which are causing this decrease, but to the particular causes shown above.

2. Table III of Appendix B shows the share borne by each of the maritime provinces in this export of raw silk, during the last 15 years. The export from Madras may be taken as almost wholly Mysore silk, while the share of Sind is equivalent to the share of Kashmir silk. It will be seen that until 1908 exports from Bombay were heavy, whereas practically no silk was exported from Sind, but after that year exports from Sind have been large while those from Bombay have shown a heavy decrease. From this it may be concluded that Kashmir silk was until that date mostly consigned to Bombay Port, but since then has been exported from Sind. The exports from Bombay from 1908 to the present time are probably largely Kashmir, but perhaps partly Mysore silk. Exports from Burma are small and unimportant, except in 1912-13 and 1913-14, when they amounted to 29,211 lbs. and 24,543 lbs. respectively, as against 5,758 lbs. during the year 1911-12.

From the totals given in column 7 of the table it is clear that the decrease in raw silk exports has been almost entirely due to the fall in the amount exported from Bengal. Excluding the share of that province, exports have steadily risen from 348,354 lbs. in 1899-00 to 1,071,534 lbs. in 1912-13. The fall in 1913-14 has already been explained as due to the fire in the Kashmir Filature. Apart from this, Kashmir silk (as represented by the exports from Bombay before 1908 and from Sind after that year) has shown a steady increase, from about 56,000 lbs. in 1899-00 to about 700,000 lbs. in 1912-13. In the latter year it was actually considerably larger than the export from Bengal. Mysore silk (as represented by exports from Madras) has been subject to continuous fluctuations, rising to 571,840 lbs. in 1908-09 and falling to 360,481 lbs. two years later. It recovered slightly in 1911-12 but fell again to 301,978 lbs. in 1912-13 and even lower in the following year. It has been shown, in the chapter on the Madras Presidency, that exports from Madras now entirely consist of chassam and cocoons, exports of raw silk having ceased in 1906-07. The value of these being very small as compared with raw silk, in the exports of Mysore silk gain an exaggerated importance when given in quantity instead of in value. To correct this, another table is given (Appendix B, Table IV). This is identical with Table III, except that instead of quantity in lbs., value in Rs. has been given. From this it will be seen that

Bengal, which in 1899 accounted for practically the whole of the export, sent little more than a quarter (from the point of view of value) in 1912-13. This table also shows that the export from Bombay and Sind is even more important in value than in quantity, having risen from well under half a lakh in 1899 to nearly Rs. 28 lakhs in 1912-13. During the same period the value of the whole export (excluding Bengal) has risen from Rs. 2 lakhs to nearly Rs. 30 lakhs, Bengal exports having fallen from Rs. 67½ lakhs to Rs. 11½ lakhs. The export of Bengal silk has therefore decreased in value even more heavily than in bulk, and especially during the last five years. In 1909-10 and 1910-11 the Bengal export was still more than 50 per cent. of the whole both in quantity and in value. In the following year the share of Bengal remained greater than that of Sind in total bulk, but owing to the fact that more reeled silk was exported from Sind, the value of the latter's export surpassed that of Bengal. In 1912-13 the share of Sind was not only greater than that of Bengal in quantity, but was more than double that of Bengal in reeled silk and consequently in total value. In spite of the heavy fall in exports of Kashmir silk in 1913-14, and in spite of the fact that the share of Sind was reduced in consequence to less than half that of Bengal, nevertheless the value of Kashmir silk exported from Sind was over Rs. 12½ lakhs as against Rs. 9 lakhs from Bengal, owing to the fact that the latter sent out only half the amount of reeled silk exported from Sind. It is clear therefore that the cause of the decline must be looked for in Bengal.

As regards Madras, it must be remembered that exports of chassam or waste represent a proportionate amount of reeled silk used in this country, and that if such exports remain steady a decrease in the export of reeled silk is not to be regretted, since it only implies that the raw silk which was formerly exported is now used at home. If, however, exports of chassam and of reeled silk are both found to be decreasing it is a probable conclusion that production is on the wane. It will therefore be necessary in order to judge correctly of the present state of production, to consider the exports of chassam and reeled silk separately. For Mysore, such figures have already been given elsewhere (*vide* pages 42 and 45). From those tables it will be seen that exports of chassam did not decline when exports of reeled silk ceased; on the contrary they have been distinctly larger since that date. It is therefore a justifiable conclusion that the production of Mysore has *not* declined, but that more reeled Mysore silk is now used in this country than was formerly the case. Exports from Burma are recorded as being entirely wild silk waste. The proportions of chassam and reeled silk in the exports from Bengal, Sind and Bombay are given in Table V of Appendix B, exports from the two latter ports being combined, as they are both probably composed almost entirely of Kashmir silk. From this table it appears that whereas exports both of reeled silk and chassam from Bengal have decreased, those from Sind and Bombay have both steadily risen. It may therefore be concluded that production in Bengal has declined, while production in Kashmir has increased. But another fact, of equal importance, may be deduced from these figures. It will be noticed that whereas reeled Bengal silk fell in 1912-13 to less than one-seventh, and in 1913-14 to hardly more than one-fourteenth, of what it was 15 years ago, chassam has only decreased by about 50 per cent. during the same period. This chassam implies a proportionate quantity of reeled silk, which as it was not exported must have been consumed in the country. The state of production in Bengal must, therefore, be judged rather from the export of chassam than from that of reeled silk, and the smaller decrease in the former proves beyond doubt that production in Bengal has not diminished on anything approaching the same scale as reeled silk exports. The fall has however been serious enough, as judged by the exports of chassam, these having, as may be seen, decreased by nearly 50 per cent. in the last 15 years. In Table VI is given a list of the exports of raw silk, chassam and cocoons, from Calcutta, extracted from the Silk Exports Lists published monthly by D. N. Bosu. As the quantity is reckoned in bales it is impossible to make an exact comparison between these and the official figures, but they corroborate each other as to the heavy decline in exports from Calcutta. A bale of silk contains about 150 lbs., and a bale of chassam about 300 lbs.

A few words must be added as to the destination of the raw silk which leaves India. From the table given in Appendix B (Table VII) it will be seen that France takes the bulk of these exports. The demand from the United Kingdom appears to be declining, while the quantity exported to Italy is never very large and fluctuates considerably from year to year. The same is true of the demand from the United States. In the case of these countries, any increase in export to them from India probably results more from the partial failure of other sources of supply than from any regular demand for Indian material, and this is certainly the case as regards the export of cocoons to Italy. Belgium, Ceylon, and Egypt have occasionally taken considerable supplies—mostly of waste—from India, and Turkey in Asia used to be a fairly regular, though a small customer. Exports to that country have now however almost ceased for a number of years past.

3. The decrease in exports of Indian silk manufactures has been even more noticeable than that of raw silk. In the case of the latter, it has already been shown that although Bengal silk has steadily fallen, other kinds of Indian silk have partially replaced it. In the case of manufactures, both Bombay and Bengal have shown a marked decrease, though the latter has been the most affected, the former having exhibited an upward tendency during the last eight years. Madras exports were very low between 1904 and 1908, but since then have been steadily rising, reaching in 1913-14 a higher figure than any since 1900. Exports from Madras are, however, comparatively small, amounting at the most to less than Rs. 1½ lakhs, and averaging during the last five years less than Rs. 1 lakh. The increase in these exports, therefore, has but little effect in staying the steady decline in exports from India as a whole. Exports from Sind and Burma are insignificant, and consequently there is nothing to replace the exports of Bengal and Bombay. Table VIII of Appendix B shows the exports from India for the last 30 years. It will be noticed that the decline has been practically unbroken during that period. In 1893-94 exports from Bengal amounted to over Rs. 18 lakhs, from Bombay over Rs. 5 lakhs, and from Madras nearly Rs. 1 lakh. Ten years later, in 1903-04, exports from Bengal had fallen to Rs. 6 lakhs, and from Bombay to less than Rs. 1½ lakhs, while those from Madras were still over Rs. ¾ lakh. In 1913-14 Bengal exports were valued at less than Rs. 2 lakhs, Bombay at over Rs. 2¼ lakhs, and Madras at nearly Rs. 1½ lakhs. The very small total reached in 1914-15 is, of course, partly due to the war. It cannot, however, be altogether ascribed to this cause, for Bombay and Madras exports were far less affected than those of Bengal. The last mentioned amounted to less than Rs. 1 lakh, showing a fall of about the same amount, whereas Bombay and Madras exports fell only to rather over Rs. 1½ lakhs and rather under Rs. 1 lakh respectively. This will be seen clearly from Table IX, which gives separately the exports from these ports, according to the official figures, during the last fifteen years, and Table X, which gives the exports of silk piece-goods from Calcutta during the last twenty years, as shown in the monthly Exports Lists of D. N. Bosu to which reference has been made above.

The export formerly consisted almost entirely of silk piece-goods, but mixed goods have recently shown a tendency to increase, while piece-goods have heavily fallen. The United Kingdom is still the largest importer, but whereas in 1893 she received over Rs. 13 lakhs' worth of piece-goods, in 1913-14 the amount was only a little over Rs. 1½ lakhs. Mixed goods now go mostly to Tunis and Aden, which countries receive articles averaging over Rs. ½ lakh a year each. The Straits Settlements and Natal also import some quantity of these goods, and these countries and Aden take (after the United Kingdom) most of the exports of silk piece-goods. France, Arabia, Persia and Turkey, which formerly imported large quantities of Indian manufactures, now take very little. Details of the countries of final destination and the amount exported to each will be found in Table XI of Appendix B. Exports to Ceylon, the Straits Settlements, and the Malay Peninsula, as also to Natal and North Africa, which combined amounted to more than two-fifths of the total quantity in 1913-14, were despatched almost entirely from Madras. The heavy consignment to Aden was sent by Bombay, as was also the bulk of the exports to France and to Arabia, while those to the United

Kingdom and the United States came from Calcutta. It is clear, therefore, that the countries which are now showing a tendency to increase their imports of such goods from India are mostly those which are supplied from Madras, and these markets (Tunis, Tripoli, Algeria, Natal, etc.) are probably still capable of considerable enlargement.

Imports by Sea. Raw Silk.

4. Table XII gives the total imports of raw silk into India by sea during the last 26 years. It will be seen that these have, during that period, only once been less than 1½ million lbs. and only six times less than 2 millions. On one occasion (1895-96) the figure has been over 3 millions, and in 1912-13 was over 3½ million lbs. On the whole there has been a slow though fairly steady increase, as the following averages will show:—

	lbs.
Average Import for 10 years ending—	
1859-60	1,322,049
1878-79	2,066,657
1888-89	2,082,077
1898-99	2,482,148
1908-09	1,868,838
Average Import for 5 years ending—	
1913-14	2,566,729

Whether any of these imports recorded as raw silk were really silk waste, and if so how much, cannot be determined, as the figures for waste were not separately recorded until April 1912. Since that date, however, Bombay imported 104,315 lbs. of waste in 1912-13, a small quantity also going to Madras; 73,558 lbs. in 1913-14, both Bengal and Madras also receiving small amounts during that year; and 130,252 lbs. in 1914-15. The bulk of the raw silk goes to Bombay Port, as will be seen from the following table:—

Imports of raw silk.

	1909-10.	1910-11.	1911-12.	1912-13.	1913-14.
	lbs.	lbs.	lbs.	lbs.	lbs.
Share of—					
Bombay	1,980,548	1,844,646	1,807,463	2,906,167	2,018,901
Burma	344,687	271,832	393,089	549,750	453,171
Madras	..	1,454	38,000	119,925	91,642
Sind	3,378	1,722	553	2,995	6
Bengal	1,572	2,145	..	..	..
TOTAL	2,330,185	2,121,799	2,239,105	3,578,837	2,563,720

The sources of this import into Bombay, and the changes which have taken place in its nature have been fully discussed elsewhere. The Madras imports have also been reviewed. The small quantities received by Sind and Bengal ports are comparatively unimportant, but it may be noted that the former receives most of its supplies from Southern Russia. These amounted in 1910-11 to 1312 lbs. (Rs. 10,496), in 1911-12 to 541 lbs. (Rs. 5,410), and in 1912-13 to 1,858 lbs. (Rs. 15,560), but no imports from that country have been subsequently recorded. Russian-Turkistan also sent a consignment of 1,137 lbs. (Rs. 10,801) in 1912-13. Imports into Burma are in quantity and

value second to, though a long way behind, those of Bombay. They are received mostly from Shanghai, Hongkong and the Straits Settlements:—

Imports of raw silk into Burma by Sea.

Imports from	1909-10.	1910-11.	1911-12.	1912-13.	1913-14.
	lbs.	lbs.	lbs.	lbs.	lbs.
China (excluding Hongkong and Macao).	204,269	60,083	153,190	302,458	272,259
Hongkong	31,856	81,121	110,975	118,703	56,751
Straits Settlements	103,073	117,588	125,119	96,930	92,108
Siam	..	..	3,645	23,730	29,920
Indo-China, etc.	..	..	160	..	..
Japan	5,489	13,040	..	7,929	2,133
TOTAL	344,687	271,832	393,089	549,750	453,171
	Rs.	Rs.	Rs.	Rs.	Rs.
China (excluding Hongkong and Macao).	9,98,928	3,18,916	9,43,777	17,16,602	14,89,227
Hongkong	1,90,847	4,44,743	6,54,603	8,20,951	3,97,514
Straits Settlements	5,32,321	5,89,795	6,43,136	4,67,676	4,34,360
Siam	..	..	14,580	85,310	1,03,012
Indo-China, etc.	..	..	99?	..	..
Japan	28,776	64,852	..	44,650	16,361
TOTAL	17,50,872	14,18,306	22,57,089	31,44,189	24,40,474

Silk Manufactures.

5. The value of the manufactured silk goods imported into India by sea during the last thirty years is given in Table XIII. The increase is here very noticeable, such goods having nearly trebled in value during that period. The chief countries of consignment are given in Table XIV and the value of the imports from each at intervals of five years during the last two decades. It will be seen that very great changes have taken place during that period. In 1893-94 the United Kingdom and Hongkong between them supplied Rs. 120 lakhs worth of goods, out of a total value of Rs. 182½ lakhs, and France supplied half of the remainder. Japan's goods were valued at only Rs. 2 lakhs, being surpassed by Shanghai, Belgium, Italy, the Straits Settlements and Germany. In 1913-14 Japan sent goods worth nearly Rs. 14½ lakhs, Hongkong goods had fallen to Rs. 25 lakhs, while Shanghai had risen to Rs. 38½ lakhs. Meanwhile the consignments from the United Kingdom had fallen to less than Rs. 28 lakhs; French goods, at Rs. 24½ lakhs, remained fairly steady; while Italy and Germany showed large increases, rising to Rs. 19 lakhs and Rs. 22½ lakhs respectively. Thus Japan and China were responsible for Rs. 208 lakhs out of Rs. 310 lakhs or two-thirds of the whole, and the United Kingdom, instead of supplying more than a third, as it did twenty years ago, supplied only about one-twelfth of the total import.

The following table shows the proportions of the different kinds of goods included under the head "Silk Manufactures," at intervals during the 15 years from 1870 to 1885, and from 1898 to 1913.

Imports of silk manufactures into India by Sea.

	Thread for sewing.	Silk Piece-goods.	Goods of silk mixed with other materials	Yarns, noils and warps.	Other sorts.	TOTAL.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1870-71 . . .	..	40,77,712	1,56,874	..	20,682	42,55,268
1875-76 . . .	14,400	67,79,189	2,92,050	..	3,022	70,88,661
1880-81 . . .	10,273	1,17,51,443	17,34,714	..	7,408	1,35,03,838
1885-86 . . .	56,136	94,42,414	15,73,325	..	18,585	1,10,90,430
1898-99 . . .	41,101	89,24,006	34,14,673	..	12,38,154	1,36,17,934
1903-04 . . .	26,741	1,21,16,081	33,67,271	..	28,24,627	1,83,34,720
1908-09 . . .	13,706	1,45,55,830	43,05,915	38,66,884	71,392	2,28,13,727
1913-14 . . .	20,115	1,91,84,760	69,52,575	45,81,705	2,74,140	3,10,13,295

Silk yarns, noils and warps were not differentiated in the returns until 1905, and consequently must have been included under the heading "Other Sorts." It will be noticed that goods under this head rose from Rs. 20,000 in 1870 to Rs. 28½ lakhs in 1903, evidently in consequence of this inclusion. The very heavy increase in mixed goods is also noteworthy. While silk piece-goods rose during these forty-three years from Rs. 40½ lakhs to nearly Rs. 192 lakhs, mixed goods increased from Rs. 1½ lakhs to Rs. 69½ lakhs. The shares taken by the various provinces will give some indication of the extent to which these different kinds of goods are used in each. Imports into Bombay have already been dealt with in detail, and inasmuch as Bombay Port supplies not only the Presidency but a large portion of India, the nature of the demand in the Presidency cannot be directly deduced from the nature of the import. The very large increase in the import into Bombay of yarns, noils and warps for the use of the Presidency and the Punjab is, however, particularly noticeable. In the Burmese import the most noticeable feature is the small amount of mixed goods as compared with piece-goods of pure silk, as is clear from the following table :—

Imports of silk manufactures into Burma by Sea.

	Silk Piece-goods.	Goods of silk mixed with other materials.	Yarns, noils and warps.	Thread for sewing.	Other sorts.	TOTAL.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1909-10 . . .	48,06,711	2,32,161	2,545	4,263	42,066	50,87,746
1910-11 . . .	43,97,123	3,53,065	229	5,071	10,772	47,66,260
1911-12 . . .	52,41,039	2,66,046	8,852	2,974	10,984	55,38,895
1912-13 . . .	64,10,688	5,16,038	20,157	4,129	77,816	70,28,828
1913-14 . . .	54,55,707	6,67,536	31,167	2,530	55,273	62,12,222

In Bengal, on the other hand, mixed goods are a great deal more in demand than articles of pure silk :—

Imports of silk manufactures into Bengal by Sea.

	Silk Piece-goods.	Goods of silk mixed with other materials.	Yarns, noils and warps.	Thread for sewing.	Other sorts.	TOTAL.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1909-10 . . .	4,21,875	7,71,240	40,830	3,300	29,070	12,66,315
1910-11 . . .	4,71,357	13,42,946	77,426	2,759	31,110	19,25,598
1911-12 . . .	3,48,098	6,97,135	72,059	3,560	35,536	11,56,388
1912-13 . . .	2,80,949	6,91,816	96,169	7,268	42,987	11,19,189
1913-14 . . .	2,63,152	8,73,505	1,52,479	2,966	76,940	13,69,042

The silk piece-goods imported into Burma are almost wholly Japanese. These amounted in 1909-10 to nearly Rs. 46½ lakhs out of Rs. 48 lakhs, and in 1913-14 to nearly Rs. 51½ lakhs out of Rs. 54½ lakhs. Of the remainder, imports from Hongkong have risen from less than Rs. ½ lakh in 1909-10 and 1910-11 to over Rs. 1½ lakhs in 1913-14, and imports from the rest of China average about Rs. ¼ lakh. Goods from the United Kingdom have increased from about Rs. ¼ lakh to nearly Rs. ½ lakh in these five years, and imports from the Straits Settlements average about Rs. ½ lakh. Mixed goods come to Burma mostly from the United Kingdom, having risen from Rs. 1 lakh in 1909-10 to Rs. 4¼ lakhs in 1913-14. German goods of this nature average Rs. ½ lakh or over, and about the same quantity is often received from Belgium. Considerable supplies of this kind of article were also received in 1913-14 from Hongkong and the Straits Settlements. Yarns, noils and warps are now received by Burma almost entirely from Germany and Belgium, the latter being perhaps of Swiss manufacture. Calcutta, on the other hand, receives almost the whole of its import of these articles from Japan, a smaller quantity coming also from Italy. This has only been the case during the last two or three years: before that, Italy supplied the major portion of the import and Japan's consignments were very small. The supply of mixed goods and piece-goods into Bengal shows greater variations and may be given in tabular form :—

Import into Bengal.

Goods of silk mixed with other materials.

Country whence imported.	1910-11.	1911-12.	1912-13.	1913-14.	1914-15.
	Rs.	Rs.	Rs.	Rs.	Rs.
United Kingdom . . .	1,02,224	72,096	87,151	3,60,282	41,425
Germany . . .	2,74,590	96,920	1,01,710	1,10,226	11,490
Belgium . . .	47,561	1,315	7,338	53,042	..
France . . .	7,03,869	4,72,589	4,32,669	2,09,051	1,19,502
Italy . . .	1,70,195	46,191	46,167	1,21,570	2,07,228
Other countries . . .	44,507	8,024	16,781	19,334	7,833
TOTAL . . .	13,42,946	6,97,135	6,91,816	8,73,505	3,87,475

Import into Bengal—contd.

Silk piece-goods.

Country whence imported.	1910-11.	1911-12.	1912-13.	1913-14.	1914-15.
	Rs.	Rs.	Rs.	Rs.	Rs.
United Kingdom	97,402	1,27,760	1,23,653	1,10,783	1,12,030
France	1,25,325	26,422	34,875	8,024	13,184
Hongkong	24,960	30,112	13,118	24,162	29,790
China (excluding Hongkong)	15,001	44,642	16,296	20,860	23,651
Japan	1,77,104	1,00,694	74,955	74,354	38,456
Other countries	31,565	18,464	18,052	24,969	7,223
TOTAL	4,71,357	3,48,094	2,80,949	2,63,152	2,24,343

The United Kingdom, therefore, seems to be holding its own in this market, both as regards mixed goods and silk piece-goods. France shows a very heavy decline, and the German mixed goods are not markedly on the increase. The most unusual feature is, however, the continuous decline in the import of Japanese silk goods, while the imports from that country have increased in almost every other port in India. From the comparative insignificance of these imports as a whole, it may be presumed that country-made silk goods are still mostly worn in Bengal. There has been no very great increase in the total quantity of silk goods imported into the province, as the following figures will prove:—

Average import of silk manufactures into Bengal.

	Rs.
From 1899-1900 to 1903-04	10,80,000
From 1904-05 to 1908-09	12,80,000
From 1909-10 to 1913-14	13,60,000

Previous to 1900 imports were, indeed, actually greater:—thus in 1893-94 they amounted to Rs. 13 lakhs; and the average for the five years ending 1888-89 amounted to over Rs. 12½ lakhs in piece-goods alone, other goods in addition, to the value of several lakhs of rupees, being received every year. The demand for foreign silk goods in Bengal does not, therefore, seem to be very great, nor does it appear that any increase is to be expected. In Burma, on the other hand, while the present import does not appear to be as great as it was thirty years ago, nevertheless an upward tendency has been clearly visible during the last few years. From 1885-86 to 1888-89 the average import of pure silk goods amounted to about Rs. 62½ lakhs. In 1893-94 it had fallen to a little under Rs. 56½ lakhs. The averages for more recent years are:—

	Rs.
Average from 1899-1900 to 1903-04	nearly 38½ lakhs.
Average from 1904-05 to 1908-09	over 47 "
Average from 1909-10 to 1913-14	nearly 56½ "

It has been stated elsewhere that imports of Indian manufactures from Madras into Burma by coasting vessels have very seriously declined of recent years, and it may be assumed that these increasing supplies from Japan have been gradually replacing the Madras goods in that market. Imports into

Sind closely resemble those received by Bombay and do not need detailed consideration. They consist ordinarily of mixed goods to the value of Rs. 2 to Rs. 3 lakhs, chiefly from Germany, and from Rs. 1 to Rs. 2 lakhs of silk piece-goods, mostly from Japan, the United Kingdom and France. The value of imported warps, etc., rose from about Rs. 45,000 in 1910-11 and 1911-12 to over Rs. 2 lakhs in the two following years. These are received from Switzerland, Italy, the United Kingdom, Germany and France. The chief features of the trade of this port in silk are (1) the increasing import of mixed goods, especially from Germany, until 1914-15: (2) the decline in piece-goods, and especially of the Japanese import in these articles, which fell from over Rs. 1½ lakhs in 1910-11 and over Rs. 1½ lakhs in the following year, to less than a lakh in 1912-13, only Rs. 31,000 in 1913-14, and only about Rs. 5,000 in 1914-15. Meanwhile the import of such goods from the United Kingdom has remained steady.

To sum up, the outstanding points of the present import trade of India in silk manufactures are (1) the phenomenal increase in imports from Japan in silk piece-goods: (2) the increase of such goods from Shanghai, which however is only a recovery of the position held by imports from Hongkong in former years: (3) the heavy fall in imports from the United Kingdom, which however must be qualified by the remark that a rising tendency has been apparent during the last few years: (4) a great increase in the mixed goods supplied by Germany, and in articles of all kinds from Italy: (5) the growing demand for mixed goods and for yarns, noils and warps; and lastly (6) the small quantity of articles of any of these kinds imported into Madras and Bengal, and the noteworthy fact that imports into the latter province do not manifest any serious increase.

Mercerised Cotton Yarn.

6. Before leaving the subject of imports into India by sea, an attempt must be made to estimate the extent to which substitutes for silk have a hold upon the market. The total import of mercerised cotton yarn into British India amounted in 1914-15 to over 1½ million lbs. The principal sources of supply were, as will be seen from the accompanying table, Japan and the United Kingdom.

Imports of mercerised cotton yarn into British India, 1914-15.

From	Into Bombay Ports.		Into Madras Ports.		Into Karachi.		Into Calcutta.		TOTAL.	
	lbs.	Rs.	lbs.	Rs.	lbs.	Rs.	lbs.	Rs.	lbs.	Rs.
United Kingdom	731,688	12,53,678	69,974	1,51,349	103,085	1,82,023	1,150	2,050	905,847	15,89,100
Foreign	..	..	..	..	..	..	..	..	300	300
Japan	794,636	10,85,068	..	..	..	..	300	300	794,936	10,85,068
Germany	200	268	11,160	12,125	..	..	..	..	11,360	12,388
Switzerland	3,600	3,782	..	..	49,934	52,400	..	..	53,534	56,182
Italy	..	..	..	..	8,000	8,476	..	..	8,000	8,476
TOTAL	1,530,524	23,42,741	81,134	1,63,474	160,969	2,42,999	1,450	2,350	1,773,877	27,51,484

It is unfortunate that there is no record, previous to 1914-15, to show the quantity of this article imported, but in view of its growing use in several provinces it may be assumed with some certainty that there has been a considerable increase in recent years. The cheapness of the article, combined with its strength as compared with any kind of artificial silk, renders it the most acceptable silk-substitute on the market. It must be noted also that alone of silk-substitutes it enters this country free of duty. There is, it is true, an excise duty on all cotton manufactures, but raw cotton and cotton twist and yarn are exempt from customs duty, and mercerised cotton is classed under the latter head. In view of the fact that the import duty on all kinds of silk and silk substitutes is now 7½ per cent., it is a question whether mer-

mercerised cotton should not also be subject to a similar duty, since it is undeniably used as a substitute for silk. At present it gains an advantage which recommends it in the market even more highly than would otherwise be the case, and the popularity of cloth manufactured from this material, both among Europeans and Indians, is likely to lead to the institution of new concerns, like the "Vijay Weaving Works" of Ahmedabad, solely devoted to the manufacture of this kind of cloth. So far as I am aware, no cotton yarn is mercerised in this country, but the process is a very simple one and apparently the necessary machinery could easily be obtained. If there is no obstacle in the way there can be little doubt that a factory of this nature would find a ready market for the mercerised yarn produced by it. As has been seen, the value of this kind of yarn imported into India amounted in 1914-15 to over Rs. 27½ lakhs, which is good evidence of the extent to which it is used in this country, and there is very small fear of the consumption of this article decreasing. Details of the use of this material in India have been given elsewhere, but it may be remarked here that to judge from the small quantity received by Calcutta the use of it is not extensive in Bengal. It will remain to be seen whether the imports into Calcutta increase in the future.

Artificial Silk Yarn.

7. It has been stated elsewhere that no separate figures are published in the Sea-borne Trade Returns of the imports of artificial silk yarn into India, and there seems to be some doubt as to the right head under which they should be classed. In Bombay such imports are said to be recorded under "Haberdashery," and in Madras under "Articles not otherwise specified," though in any case they pay a duty of 7½ per cent. From unpublished records kept by the various Customs Offices, however, it appears that the amount imported is small. During the eleven months from April 1914 to February 1915 the total value of such imports into Bombay amounted only to Rs. 1,52,260. Similarly the imports into Karachi for one year amounted in value to Rs. 64,000. No artificial silk is used in the Madras Presidency and imports of this material into the Madras Ports are *nil*—or at any rate entirely negligible. A small quantity reaches Calcutta, as the following table will show:—

Imports of artificial silk yarn into Calcutta.

Year.	From United Kingdom.		From Italy.		TOTAL.	
	lbs.	Rs.	lbs.	Rs.	lbs.	Rs.
1912-13 . . .	73	681	..	..	73	681
1913-14 . . .	488	945	660	868	1,148	1,813
1914-15 . . .	..	..	..	..	..	..
1915-16 . . .	851	573	..	..	851	573

According to the values here assigned the price of this article has fallen from over Rs. 9 per lb. in 1912-13 to less than 11 annas per lb. in 1915-16. This can hardly be correct, especially as elsewhere in India the price is universally said to have risen since the outbreak of war. The quantities imported are, however, very small and the exact value is unimportant. From these figures it appears that the total imports of this material into India cannot amount to more than from Rs. 2 lakhs to Rs. 2½ lakhs a year, and this is probably a fairly generous estimate. Of this amount 75 per cent. is said to go to the Punjab, where it is used in some quantity at Amritsar and Ludhiana. The source of supply is said to be France and Switzerland, but most of the import into Calcutta seems to be from the United Kingdom, and

it is possible that this is the source also of the Bombay and Karachi supplies. In Amritsar the price is said to have risen from Rs. 4 to Rs. 7 per lb.; in Bombay itself the figures are put at Rs. 2-2 and Rs. 6. It is not used in Benares. It is said that a very small quantity—estimated at Rs. 1,000 value a year—used to be received there from Switzerland, but it was found very weak and useless when wetted and in consequence none at all is now used. It is therefore practically only in the Punjab that it is employed in any quantity, and the natural defects of the article and the small total import into India lead to the conclusion that there need be no fear of its becoming a serious competitor of natural silk. These defects are its loss of strength when wetted, and the fact that it is said to be almost impossible to dye it a uniform colour. Under such circumstances, though a small quantity may be used for embroideries, or for the weaving of particular classes of articles—ribands and the like,—there is not likely to be any great demand for it for the purpose of regular weaving, and as a substitute of real silk it is not of any great importance.

Re-exports.

8. A certain portion of the silk imported into India, both raw and manufactured, is regularly re-exported to other countries. The following table shows the average quantity of raw silk disposed of in this way:—

	Lbs.
For five years ending 1874-75	125,746
For five years ending 1879-80	175,868
For five years ending 1884-85	160,196
For five years ending 1889-90	109,272
For five years ending 1894-95	116,593
For five years ending 1899-1900	75,922
For five years ending 1904-05	73,072
For five years ending 1909-10	80,943
For five years ending 1914-15	35,825

In 1914-15 the total amount was only 14,305 lbs., as against 21,371 lbs. in 1913-14, but this decrease cannot be attributed wholly, or even mainly, to the influence of the war, since the quantity re-exported in 1911-12 was only 17,014 lbs., though it rose again in 1912-13 to 56,155 lbs. It appears therefore that India is rapidly losing her place as a distributing centre for raw silk. The trade was never, however, of great value. From 1889 to 1893 the total re-exports amounted to from Rs. 3½ lakhs to Rs. 4 lakhs: they are now valued at Rs. ¾ to Rs. 1 lakh. Re-exports of silk manufactures are of considerably greater value, and in these an increase is apparent. Table XV of Appendix B gives the figures for the last quarter of a century. It will be seen that the total amount, after remaining steady until 1896-97, then experienced a sudden drop, again remaining fairly steady until the last two years, when the figure has again risen to its old level. On the whole, therefore, the increase in re-exports of manufactures has more than counter-balanced the decline in raw silk, and the extent of that increase can be judged from the fact that the average yearly value in the five years 1885-86 to 1889-90 was only Rs. 4,85,000, whereas during the years 1909-10 to 1913-14 it was over Rs. 7 lakhs. Practically the whole of this trade is borne by Bombay Port, only a small and variable portion of the trade in re-exports of raw silk falling to the share of Karachi and Rangoon, and in silk manufactures to Calcutta and Madras, in addition to the ports above-mentioned. Raw silk so re-exported generally goes chiefly to the United Kingdom, but to judge from the assigned values, this must be almost entirely silk waste. What really appears from the values to be reeled silk, goes principally to Muskat Territory and to Aden and its dependencies. Re-exports of manufactures are mainly silk piece-goods, the quantity of mixed goods disposed of in this way being comparatively small. These piece-goods are almost entirely exported from Bombay, and go chiefly to Muskat Territory, which in 1912-13 and 1913-14 received over

one-fifth of the total re-exports of this nature. Considerable quantities are also received by Natal, Zanzibar, British East Africa, and other places within the British Empire. The accompanying table shows the total re-exports of silk manufactures in 1913-14, and the principal countries of final destination, and for the sake of comparison the same details are given for 1893-94, to show the direction of the trade twenty years ago.

Re-exports of silk manufactures (including yarn).

Exports to	1913-14.	1893-94.
	Rs.	Rs.
United Kingdom	25,545	5,449
Gibraltar	55,185	65,349
Bahrein Islands	61,935	....
Ceylon	87,240	86,015
Straits Settlements	24,960	15,049
Natal	98,100	16,729
Zanzibar and Pamba	1,02,255	63,861
East African Protectorate	60,210	....
Aden and Dependencies	12,405	19,954
Malta	5,010	36,297
Mozambique . . . . .	....	18,833
Egypt	9,585	97,830
Mauritius . . . . .	....	15,666
France	15,300	15,355
Italy	31,650	1,759
Muskat Territory	1,85,355	....
Arabia	4,440	63,127
Persia	75,750	1,36,770
Turkey in Asia	24,915	25,102
Japan	30,480	....
Portuguese East Africa	25,560	....
German East Africa	21,315	....
Tunis and Tripoli	10,305	....
China	14,100	12,474
Other places	23,760	11,158
GRAND TOTAL	10,05,380	7,06,777

Transfrontier Trade.

9. Trade between British India and foreign countries by land routes is carried on over the frontiers of Burma, Assam, Bengal, the Punjab, and the North-West Frontier Province. Details of the two last-mentioned provinces have been given elsewhere. Of the Burma trade the most noticeable feature is the growing importance of imports, and particularly of imports of raw silk. The countries with which this trade is carried on are Western China, Siam,

and the Shan States. The following tables give details for the years 1904-05, 1909-10 and 1913-14 :—

Frontier Trade of Burma.

Imports from	1904-05.		1909-10.		1913-14.	
	Raw.	Manufactured.	Raw.	Manufactured.	Raw.	Manufactured.
W. China	Mds. 1,115	Rs. ..	Mds. 790	Rs. 735	Mds. 2,597	Rs. ..
S. Shan States	4	92,446	75	40,660	178	47,026
S. Siam	11	1,27,090	6	2,18,705	..	6,25,033
N. Siam	2	1,99,705	..	52,500	..	1,61,597
TOTAL QUANTITY IN MDS.	1,132	195	871	103	2,775	269
TOTAL VALUE IN RS.	4,56,600	4,10,241	3,87,751	3,12,600	12,64,030	8,33,656

Exports to	1904-05.		1909-10.		1913-14.	
	Raw.	Manufactured.	Raw.	Manufactured.	Raw.	Manufactured.
W. China	Mds. ..	Rs. 4,475	Mds. ..	Rs. ..	Mds. ..	Rs. ..
N. Shan States	1	81,651	23	1,12,112	..	35,415
S. Shan States	65	4,58,274	96	2,98,978	47	5,77,419
N. Siam	27	1,65,674	40	2,55,855	69	1,08,317
S. Siam	..	43,084	..	1,20,786	..	60,900
Karruni	..	22,764	..	19,139	..	46,721
TOTAL QUANTITY IN MDS.	93	575	159	601	116	491
TOTAL VALUE IN RS.	46,287	7,75,922	87,617	8,06,870	59,736	8,28,772

On the Burmese frontier, therefore, imports of silk exceed exports at the present time, but no information is available as to the nature of the raw silk imported. On the Bengal and Assam frontiers the import trade is very small, and consists almost entirely of manufactured silk. Occasionally, however, small imports of raw silk have been recorded from Nepal, but as to the nature of this silk also no information is available. The trade by these routes is as follows :—

Frontier Trade of Assam.

Imports from	Manufactured.	Manufactured.	Manufactured.	Manufactured.
	1904-05.	1909-10.	1913-14.	1914-15.
	Rs.	Rs.	Rs.	Rs.
Manipur	687	....	....	....
Bhutan . . . . .	....	....	3,689	3,160
TOTAL	687	....	3,689	3,160

Frontier Trade of Assam—contd.

Exports to	1904-05.		1909-10.		1913-14.		1914-15.	
	Raw.	Manu- factured.	Raw.	Manu- factured.	Raw.	Manu- factured.	Raw.	Manu- factured.
	Mds.	Rs.	Mds.	Rs.	Mds.	Rs.	Mds.	Rs.
Bhutan	103	15,674	68	11,762	1,257	3,76,768	1,304	4,40,004
Towang	..	8,468	..	1,116	2	2,343	2	1,515
Aka and Dafia Hills	..	10,425	..	..	..	..	..	548
Abor, Mishmi, etc., Hills	..	330	..	1,500	..	..	..	..
Manipur	..	330	..	..	..	..	..	..
Hill Tipperah	..	500	..	..	..	..	..	..
TOTAL QUANTITY IN Mds.	103	..	68	..	1,259	..	1,306	..
TOTAL VALUE IN Rs.	15,403	35,727	9,266	14,378	2,99,679	3,79,111	3,12,575	4,42,087

The enormous increase in exports, both of raw and manufactured silk, to Bhutan during the last two years is remarkable. The increase in 1913-14 is ascribed by the Director of Land Records and Registration partly to the fact that large purchases were made for the Maharaja of Bhutan. The still higher figure for 1914-15 appears to show that the cause is not merely a temporary one; it is ascribed to the fact that the Bhutias were encouraged to visit the plains in larger numbers on account of the high prices prevailing for ponies and the larger demand for cattle.

Details of the Bengal frontier trade follow :—

Frontier Trade of Bengal.

Imports from	1904-05.	1909-10.	1913-14.	1914-15.
	Manufactured.	Manufactured.	Manufactured.	Manufactured.
	Rs.	Rs.	Rs.	Rs.
Nepal	..	..	..	..
Tibet	2,500	4,080	1,800	..
Bhutan	1,607	..	60	..
TOTAL	4,107	4,080	1,860	..
Exports to	1904-05.	1909-10.	1913-14.	1914-15.
	Manufactured.	Manufactured.	Manufactured.	Manufactured.
	Rs.	Rs.	Rs.	Rs.
Sikkim	11,619	11,410	450	..
Nepal	19,255	2,373	..	360
Tibet	32,061	26,820	96,297	36,247
Bhutan	15,857	..	2,651	1,760
TOTAL	78,792	40,603	99,398	38,367

10. It is now possible to estimate the total amount of silk imported into and exported from India by all routes. The tables which follow explain themselves. They give all exports and imports of raw silk for the years 1904-05 and 1913-14, and show that the balance in favour of imports has risen very greatly between those dates.

Balance-sheet of Indian Trade in raw silk, 1904-05.

Imports.			Exports.		
	lbs.	Rs.		lbs.	Rs.
<i>Sea-borne.</i>			<i>Sea-borne.</i>		
Into Bombay	1,580,881	58,56,879	Foreign Re-exports—		
„ Burma	263,839	13,88,375	From Bombay	52,757	1,39,813
„ Sind	7,388	64,599	„ Sind	1,765	8,916
„ Madras	4,823	27,955	TOTAL	54,522	1,48,729
„ Bengal	1,778	3,313			
TOTAL	1,858,709	73,41,121	Indian Raw—		
<i>Transfrontier.</i>			From Bengal	408,376	31,74,131
Into Burma	93,390	4,56,600	„ Bombay	97,942	10,75,050
„ Assam	..	..	Indian Chassam—		
„ Bengal	..	..	From Bengal	427,319	3,96,061
„ North-West Frontier	24,997	60,600	„ Bombay	43,536	68,512
„ Punjab	153,262	14,69,275	„ Madras	272,188	1,68,077
TOTAL	271,649	19,86,475	„ Burma	8,312	8,307
GRAND TOTAL	2,130,358	93,27,596	Indian Cocoons—		
Deduct Exports	1,418,478	51,99,594	From Bengal	62,800	62,050
Balance	711,880	41,28,002	„ Madras	23,190	17,787
			TOTAL	1,343,663	49,69,975
			<i>Transfrontier.</i>		
			From Burma	7,672	46,287
			„ Assam	8,497	15,403
			„ Bengal	..	..
			„ North-West Frontier	3,052	14,800
			„ Punjab	1,072	4,400
			TOTAL	20,293	80,890
			GRAND TOTAL	1,418,478	51,99,594

N.B.—Maunds have been reduced to lbs. at the rate of 1 maund=82½ lbs., both here and elsewhere, unless otherwise stated.

Balance-sheet of Indian Trade in raw silk, 1913-14.

Imports.			Exports.		
Sea-borne.	lbs.	Rs.	Sea-borne.	lbs.	Rs.
Raw Silk—			Foreign Re-exports—		
Into Bombay . . .	2,018,901	96,67,845	From Bombay . . .	20,261	99,541
„ Burma . . .	453,171	24,40,483	„ Sind . . .	1,110	3,580
„ Sind . . .	6	9	TOTAL . . .	21,371	1,03,121
„ Madras . . .	91,612	4,81,306	Indian Raw—		
Waste—			From Bengal . . .	52,961	4,65,055
Into Bombay . . .	73,558	1,10,473	„ Sind . . .	107,261	10,63,485
„ Bengal . . .	660	870	Indian Chassam—		
„ Madras . . .	4,854	4,295	From Bombay . . .	71,380	76,300
TOTAL . . .	2,642,792	1,27,05,281	„ Bengal . . .	444,680	3,63,813
Transfrontier.			„ Sind . . .	112,408	1,38,325
Into Burma . . .	228,937	12,64,030	„ Madras . . .	256,066	1,75,776
„ Assam . . .	..	..	„ Burma . . .	24,543	22,059
„ Bengal . . .	..	..	Indian Cocoons—		
„ North-West Frontier . . .	..	..	From Bombay . . .	2,932	3,364
„ Punjab . . .	91,410	4,91,221	„ Bengal . . .	74,271	88,280
TOTAL . . .	320,347	17,55,251	„ Sind . . .	40,764	62,005
GRAND TOTAL . . .	2,963,139	1,44,61,032	„ Madras . . .	15,832	15,680
Deduct Exports . . .	1,344,960	29,57,968	TOTAL . . .	1,203,098	24,74,142
Balance . . .	1,618,179	1,15,03,064	Transfrontier		
			From Burma . . .	9,570	59,736
			„ Assam . . .	103,909	2,99,679
			„ Bengal . . .	..	..
			„ North-West Frontier . . .	7,012	21,250
			„ Punjab . . .	..	40
			TOTAL . . .	120,491	3,80,705
			GRAND TOTAL . . .	1,344,960	29,57,968

It will be seen that exports by transfrontier routes, which amounted to 20,000 lbs. in 1904-05, had risen to 120,000 lbs. in 1913-14, in consequence of the great increase in the Assam trade to which reference has been made already. It is also noticeable that the total exports have only fallen by about 70,000 lbs. in these nine years, but that their value has decreased from almost Rs. 52 lakhs to Rs. 29½ lakhs. This is almost entirely due to the decline in exports of raw silk and the substitution of chassam and cocoons. It is noteworthy also that imports by transfrontier routes are on the increase, having risen from Rs. 4½ to Rs. 12½ lakhs in Burma. Imports over the Punjab frontier have, it is true, fallen by nearly Rs. 10 lakhs, but it cannot be doubted that this is largely due to the accident in the Kashmir Filature. The full result is that the net import of raw silk into India is now more than twice as great in quantity and nearly three times as great in value, as it was only nine years ago. This is considerable enough to rouse anxiety as to the tendency of production in India, but if we compare the conditions prevailing at a still earlier date, we find that the present increase is thrown into an even stronger light. Imports by sea were in 1889-90, it is true, even greater than in 1904-05, but exports by sea amounted during the former year to over 2 million lbs., as

against less than 1½ million in 1904-05. A balance sheet for the year 1889-90 will be as follows:—

Balance-sheet of Indian trade in raw silk, 1889-90.*

	Imports.	Exports.
Seaborne—	lbs.	lbs.
Foreign raw silk	2,360,467	116,261
Indian raw silk	..	2,089,762
Transfrontier	45,024	3,584
TOTAL	2,405,491	2,209,607
Deduct Exports	2,209,607	
Balance	195,884	

During the last quarter of a century, therefore, imports of raw silk from all sources have risen from less than 2½ million lbs. to nearly 3 millions, exports have fallen from 2,200,000 to 1,340,000 lbs., and the net import into India has increased from less than 200,000 lbs. to over 1½ millions.

Balance-sheets for the trade in silk manufactures follow:—

Balance-sheet of Indian Trade in manufactured silk 1904-05.

Imports.		Exports.	
Sea-borne.	Rs.	Sea-borne.	Rs.
Into Bombay	1,49,15,721	Foreign Re-exports—	
„ Burma	42,87,810	From Bombay	5,84,882
„ Bengal	14,35,025	„ Burma	9,305
„ Sind	3,34,593	„ Bengal	4,673
„ Madras	2,08,353	„ Sind	2,262
TOTAL	2,11,81,502	„ Madras	820
Transfrontier.		TOTAL	6,01,942
Into Burma	4,19,241	Indian—	
„ Assam	687	From Bombay	1,34,749
„ Bengal	4,107	„ Bengal	5,76,390
„ North-West Frontier	..	„ Burma	4,471
„ Punjab	..	„ Sind	..
TOTAL	4,24,035	„ Madras	14,992
GRAND TOTAL	2,16,05,537	TOTAL	7,30,602
Deduct Exports	22,24,895	Transfrontier.	
Balance	1,93,80,642	From Burma	7,75,922
		„ Assam	35,727
		„ Bengal	78,792
		„ North-West Frontier	..
		„ Punjab	1,910
		TOTAL	8,92,351
		GRAND TOTAL	22,24,895

*Vide "Dictionary of the Economic Products of India" (G. Watt), para. 2168, from which the figures for transfrontier trade have been taken.

Balance-sheet of Indian Trade in manufactured silk 1913-14.

Imports.		Exports.	
	Rs.		Rs.
<i>Sea-borne.</i>		<i>Sea-borne.</i>	
Into Bombay	2,26,05,030	Foreign Re-exports—	
„ Burma	62,12,222	From Bombay	9,34,929
„ Bengal	13,69,042	„ Burma	12,531
„ Sind	6,60,681	„ Bengal	19,043
„ Madras	1,66,316	„ Sind	37,482
TOTAL	3,10,13,291	„ Madras	1,387
<i>Transfrontier.</i>		TOTAL	10,05,372
Into Burma	8,33,656	Indian—	
„ Assam	3,680	From Bombay	2,31,275
„ Bengal	1,860	„ Burma	956
„ North-West Frontier	..	„ Bengal	1,90,310
„ Punjab	2,448	„ Sind	300
TOTAL	8,41,653	„ Madras	1,45,261
GRAND TOTAL	3,18,54,944	TOTAL	5,68,102
Deduct Exports	32,49,981	<i>Transfrontier.</i>	
Balance	2,86,04,963	From Burma	8,28,772
		„ Assam	3,79,111
		„ Bengal	99,398
		„ North-West Frontier	4,000
		„ Punjab	3,65,226
		TOTAL	16,76,507
		GRAND TOTAL	32,49,981

In some respects the changes in this trade resemble those which have taken place in the case of raw silk: there are, however, certain noteworthy differences. In the first place, exports over the frontiers have so increased that they were in 1913-14 nearly double the value of those recorded in 1904-05. It is also noticeable that such exports are the most important item on that side of the balance-sheet, and consequently, in spite of a decrease in seaborne exports of Indian manufactures, exports as a whole have increased by over Rs. 10 lakhs. On the other hand, imports over the frontier have also increased from Rs. 4½ to nearly Rs. 8½ lakhs, and imports by sea from under Rs. 2,12 to over Rs. 3,10 lakhs. The net import has therefore risen by nearly Rs. 1,00 lakhs, and adding the values of raw and manufactured silk, the net import, which in 1904-05 amounted to Rs. 2,35 lakhs, now amounts to over Rs. 4,00 lakhs, the gross import of silk of all kinds being in 1913-14 over Rs. 4,63 lakhs in value.

The Silk Industry.

11. It would be unsafe to draw conclusions as to the present state of production in this country from the great increase in the imports of raw silk. This increase may be for the purpose of replacing indigenous by foreign silk upon the looms, or it may imply an increase in the amount of weaving which takes place in the country. On the other hand, the fall in production may

have been greater than the rise in imports, and less weaving may now be done than was formerly the case. Estimates of production cannot, at the best, be very satisfactory and actual figures as to the output of Bengal and Mysore silk are impossible to obtain. For making such estimates practically the only materials available are the figures for the area under mulberry cultivation and the census figures. The latter are, of course, no direct guide as to the production of silk, but they supply information, more or less reliable, concerning the present and past state of the weaving industry. From a recent mulberry census taken in Bengal, the area under mulberry now appears to be as follows:—

Districts.	Quantity of mulberry lands given up within the last five years.	Quantity of old mulberry lands.	Quantity of new mulberry lands.
	Acres.	Acres.	Acres.
Murshidabad	2,121	3,028	96
Birbhum	133	932	26
Rajshahi	621	365	330
Malda	1,751	13,459	311
TOTAL	4,626	17,784	763

From this it appears that in these four districts the present area under mulberry cultivation is 18,547 acres, whereas about five years ago it was 22,412 acres. In addition to this, mulberry is also grown in certain other districts, though to a smaller extent. Although no recent mulberry census has been taken in these districts, the area was, according to enquiries made in 1910-11, somewhat as follows:—

	Acres.
Midnapur	400
Hoogly (Arambagh)	60
Burdwan (Kalna)	85
Nadia	50
Bogra	55

or in all about 650 acres. If we allow for some decrease during the last five years in these districts also, the total area under such cultivation in Bengal was in 1910-11 about 23,000 acres, and is now about 19,000 acres. Figures for Mysore have been given elsewhere (*vide* page 44). If that estimate is at all correct, the area under mulberry cultivation in that State was in 1909-10 about 69,500, and in 1912-13 over 67,000 acres. One estimate puts the present area at only 32,000 acres, but, as has been pointed out elsewhere, the available evidence does not support the conclusion that there has been so heavy a fall during the last two or three years. The estimated production of raw silk (excluding chassam), based upon the mulberry area, will be as follows:—In 1909-10 the area in Bengal was about 23,000 acres, which should have produced some 115,000 maunds of cocoons, or 700,000 lbs. of raw silk. Mysore, with nearly 70,000 acres, should have produced about 2,000,000 lbs. There was also some production in the Punjab, but no figures are available for the year in question, and the amount of raw silk produced can only have been very small. The total quantity of raw silk must have been, therefore, according to such an estimate, about 2,700,000 lbs. In 1914-15 the area in Bengal was about 19,000 acres, which ought to give 100,000 maunds of cocoons, or 570,000 lbs. of raw silk. In the Punjab 500 oz. of seed were distributed, from which the outturn cannot have been more than 5,000 lbs. As regards Mysore, if we accept the low estimate (*viz.*, 32,000) of acreage, the outturn would be about 960,000 lbs. If, however, we accept a higher estimate (say 50,000 acres) the outturn would be about 1,500,000 lbs. It will, perhaps, be

safe to estimate the production of Mysore at from one to one-and-a-half million pounds. Adding the Bengal output, we get a total of from one-and-a-half to two million pounds of raw silk. The decrease between the years 1909-10 and 1914-15 must therefore, on this reckoning, have amounted to about 750,000 lbs. In the former year Bengal exported about 320,000 lbs. of reeled silk: in 1914-15 neither exports nor imports were normal on account of the war, and it is safer to take the figures for the preceding year. In that year exports of reeled silk from Bengal amounted to a little over 50,000 lbs. Madras registered no such exports in either year. Deducting these exports, the decrease in the amount of raw silk available for home consumption amounts to about half a million lbs.

It remains to discover how far this decrease has been balanced by increased imports from foreign countries. This may be done in the following way. From the balance-sheet already given it has been seen that the total import of raw silk during 1913-14 was 2,963,139 lbs. Of this 79,072 lbs. were silk waste and must be deducted, leaving a total of 2,884,067 lbs. of reeled silk. Exports of raw silk (excluding chassam and cocoons) amounted to 302,084 lbs. The net import of such silk was, therefore, 2,581,983 lbs. In 1909-10 imports and exports of raw silk (excluding chassam and cocoons) were as follows:—

	Imports.	Exports.
Indian <i>Sea-borne.</i>	lbs.	lbs.
Foreign . . . . .	....	501,135
Burma <i>Transfrontier.</i>	2,330,185	72,617
Punjab	71,857	13,117
North-West Frontier.	9,570	....
Assam . . . . .	....	825
	....	5,610
TOTAL	2,411,612	593,304

This leaves a net import of 1,818,308 lbs., or 763,675 lbs. less than the balance for 1913-14. According to the estimate of mulberry acreage the decrease in production in India amounted to about 750,000 lbs. between these years. If, therefore, the figures are at all correct, the increase in net import corresponds almost exactly with the decrease in the production of the Indian raw material, and foreign raw silk has merely replaced Indian silk upon the looms to the extent to which the latter has decreased during the last five years, nor does there appear to have been less raw silk in use, which, had it been the case, would have argued a decline in the weaving industry.

12. The census figures support the view that the weaving industry is not declining. A comparison of the figures for 1901 and 1911 gives the following result:—

	1901. Silk carders, spinners and weavers, makers of silk braid and thread.	1911. Silk spinners and weavers.
Madras	55,126	74,773
Bombay	51,069	44,137
Burma	34,029	18,621

	1901. Silk carders, spinners and weavers, makers of silk braid and thread.	1911. Silk spinners and weavers.
Bengal and Bihar and Orissa	36,050	{ 48,783 8,438
Central Provinces	16,623	19,454
Punjab and North-West Frontier Province	14,113	13,957
United Provinces	12,657	16,044
Assam	568	1,717
Mysore	4,307	2,478
Kashmir	1,280	5,724
Others	2,621	3,123
GRAND TOTAL	228,443	257,249

N.B.—Local States and Agencies are included in the provincial figures.

The increase in 10 years amounts, therefore, to 28,806 persons. During the same period cotton-weavers (hand-loom industry), and those engaged in cotton spinning and sizing, increased from 5,460,515 to 5,966,468, or by more than half a million. How far weavers who use a small amount of silk but are mostly dealing with cotton material are included under either of these heads, it is impossible to say; but it is evident that the hand-loom industry is not on the down grade. The Provinces and States which show a decrease in the number of persons engaged in silk weaving and spinning are Bombay (−6,932); Burma (−15,408); Punjab and North-West Frontier (−156); and Mysore (−1,829); while all the remainder show an increase, which is greatest in the case of Bengal, Bihar and Orissa (+21,171); Madras (+19,647); and Kashmir (+4,444). According to the census figures for 1911, the chief silk districts now are—Murshidabad (27,338), Tanjore (22,444), Benares (15,044) and Surat (13,209); followed by Mandalay (9,903) and Chingleput (9,545). In Tanjore, Benares, Surat and Chingleput, the industry is certainly flourishing, and local opinion supports the conclusion that the number of persons engaged in the various processes of silk manufacture is on the increase. Of the remaining districts (Murshidabad and Mandalay) I have no definite information, but the very heavy decrease in Burma as a whole during the 10 years between 1901 and 1911 makes it probable that weaving in Mandalay is also declining. If the census figures, however, are at all trustworthy, the industry in India is in a sufficiently flourishing state, though where Bengal raw silk was once largely used China silk has now frequently taken its place.

13. The nature of the weaving which is carried on in the chief silk centres of Bombay, Madras and the Punjab, has already been described. A few details may be added of the silk-weaving industry in Benares, the chief centre in India. In this city a leading merchant estimated the value of the raw silk sold yearly to be more than Rs. 4 lakhs, about one quarter of this being Bengal and the rest China silk. This, judging from the number of persons employed, must be an under-estimate. It is said that more raw silk is now used in Benares than was formerly the case, though inasmuch as the whole of the silk used to come from Bengal, the use of that kind of silk has declined. Half the quantity now used is "Minchow" China silk, but Malda silk is still exclusively used for the manufacture of fine *saris*, valued at from Rs. 50 to Rs. 400 each, except when a white weft thread is required, in which case China silk is employed for the reason that it submits to the process of bleaching better than the Bengal product. The Minchow silk is re-reeled and sells for Rs. 21 per seer (of 80 tolas), the "Stock" Chop being apparently

the favourite. Kakaria at Rs. 16 and Meang at Rs. 15 are also largely used, as also Hoing and Chinese Steam Filature Silk, the "Double Butterfly Chop" of the last mentioned kind costing Rs. 13 per seer. Malda silk sells for Rs. 18 per seer. Only Malda and Minchow are said to be used for making a warp, and Minchow is preferred, being stronger and better reeled. Two or three lakhs' worth of mercerised cotton, and one lakh's worth of spun silk are also said to be sold in the city. Recently a sample of Kashmir silk was submitted to a merchant for his opinion, and (if that opinion is trustworthy) it was found to be better than Minchow, the place of which it might take were it supplied in sufficient quantity. In a separate quarter of the city cheaper goods are manufactured. Here plain spun-silk cloth is woven, besides a certain quantity of pure Malda silk and an inferior cloth manufactured from a Malda weft thread on a spun-silk warp. In spite of the fact that one of the chief of the merchants in this part of the city is a member of the Committee of the Central Weaving Institute, fly-shuttles have not apparently been adopted, at any rate in any quantity, and the plain spun-silk cloth is woven on the ordinary type of loom. The adoption of such a device should greatly increase the output of this class of silk cloth. It is to be noted that in Benares, as elsewhere in India, Minchow appears to be exactly the kind of silk required for warps, and here, where Malda silk is required chiefly for this purpose, complaints are heard of the inferiority of Bengal reeling. The conclusions arrived at will therefore be much the same as in the case of the Madras Presidency.

Winding and Winding Waste.

14. Most of the raw silk in use in India contains, in its imported state, not only a quantity of waste but also many variations of quality in the thread. Re-reeled China silk contains no waste and few variations of quality, whereas other kinds contain a large percentage of waste and many gradations of thread. It is consequently necessary, before the silk can be used for making a warp, to eliminate the waste and separate these qualities. This is ordinarily effected by giving the silk to professional winders or sorters, who unwind the raw silk and rewind it according to quality on separate reels, at the same time extracting the unwindable waste. The cost of this process appears to vary in different parts of India. In the Madras Presidency winders ordinarily receive from eight to 10 annas per Madras seer (*i.e.*, 24 tolas). In the Bombay Presidency, at Surat, the wages are said to amount to Rs. 2 per Bombay seer (*i.e.*, 72 tolas) or slightly more than in Madras, while in the Punjab, at Multan, the rate is stated to be from Rs. 2 to Rs. 3 per seer. In Ahmedabad it is said that the girls and women engaged on this work are paid at the rate of from Rs. 3 to Rs. 4 a month. There are, moreover, two different methods of making payment:—in some places, as at Salem in Madras, payment is made on the weight of the raw silk, as it is imported and before it is wound, the whole of the silk being returned, in the form of several reels of different qualities of thread and a ball of unwindable waste, by the winder to his employer; elsewhere, as at Surat, the winders get paid only on the total weight of the various qualities of wound silk, the unwindable waste being kept by them as their perquisite. The number of qualities into which the raw silk is divided, and the amount of each kind, also appears to vary in different provinces and according to the skill of the individual winder. Thus in Amritsar, where a great deal of very coarse silk is used (*Methra*, *Susa*, *Sikka*, etc.) the silk does not appear to be ordinarily divided into different qualities at all, only the unwindable waste (*suf*) being extracted. The Chinese silks used (*Hoing* and *Meang*) contain a considerable amount of such waste, but Yarkand very little. In Multan, on the other hand, China silk is divided into four qualities, *viz.*, (1) weaving silk, fetching Rs. 17 per seer; (2) thread, used locally for coarser weaving; (3) coarse thread, used for rough sewing; and (4) waste (called *suf*, *radi*, or *charram*). In Peshawar, China silk is separated into four qualities of windable thread, in addition to waste. Of these the best is used for regular weaving, the two next qualities for making lungis, and the last and coarsest for purposes of embroidery. It is, however, unusual for more than four different qualities to be obtained

(including waste). In Tanjore, where some 500 families, or about 2,000 persons, are reported to be engaged on this work on behalf of the merchants of Kumbakonam, the silk is ordinarily divided into four qualities, the two finest being termed "nice" and "mota" respectively, and the two coarsest classed together as *khesra* or *sidhirai*. From Chinese silk the proportions of the different qualities are said to be (1) five-eighths, (2) two-eighths, and (3) and (4) together one-eighth. In good Mysore or Malda silk only one tola of waste is said to be found. It is, however, admitted that very skilled winders can obtain a small quantity of even finer thread than the first quality ordinarily obtained. In Salem Kakaria is divided into four qualities, of which three are used for weaving and the fourth is waste (*shedaram*), amounting to two to four tolas in a local seer (24 tolas). Kobin is said to contain a greater quantity of waste, but re-reeled Shantung silk none at all. In Kumbakonam the proportion of waste in a seer is said to be—Shantung $\frac{3}{4}$ to one tola, Japanese $\frac{1}{2}$ tola, Indo-China $1\frac{1}{4}$ tolas, Minchow $\frac{1}{2}$ to one tola. In Conjeeveram, out of 24 tolas of Minchow silk, $1\frac{1}{2}$ tolas of very coarse thread is obtained and the same amount of waste. Malda silk contains less, the total quantity of such thread and unwindable waste amounting only to one or two tolas in every 24. This agrees with the Tanjore estimate and also with that of Kumbakonam, which puts the amount of waste as from $\frac{3}{4}$ of a tola to one tola in such silk. The quantity of waste in Mysore silk apparently varies greatly according to the quality of the silk, but ordinarily there appears to be from about one tola to two or even more in 24. Estimates of this nature, however, vary so greatly from place to place that they are not only unreliable, but also seem to show that the merchants concerned are not generally very careful to reckon the amount of coarse thread and waste with any exactitude, in spite of the fact that the real price of the raw material varies considerably according to the quantity of such thread and waste contained in it.

The coarse thread obtained in this way is variously used. In the North-West, a great deal of embroidery is done from silk of this nature, coarse Canton silk (*panjam*, etc.) being used for the same purpose. Multan imports such thread from Amritsar and also from Ahmedabad, but a certain quantity is also dyed in Amritsar and used locally. In Multan also *tukmas* are manufactured from such coarse thread. For this purpose two threads, dyed black, are twisted together, and a number of these are loosely tied and ornamented with silver thread, glass beads, and little balls, brightly dyed, of silk waste. These articles are sold in the bazar for from four to six annas and are used as earrings. In Surat, again, this kind of thread is cleaned by biting off the waste and knotting the ends with the mouth, and used for the manufacture of *vankra* or rough coats. In Coimbatore coarse thread is dyed and used for making fringes to cloth. It is also used in its natural state for packing and tying bundles of raw silk or cloth. In Conjeeveram a regular industry centres round this product. This is the manufacture of cord-girdles (for tying men's under-garments) and of sashes. The former are made simply by twisting the threads into the form of a cord about one-sixth of an inch thick, but the manufacture of the latter involves the use of a specially constructed miniature loom. A warp is first made of ordinary weaving silk, but of coarse quality. This warp is, of course, only as broad as the sash is intended to be, *i.e.*, ordinarily about $1\frac{1}{2}$ to 2 inches. The loom is in consequence so narrow as to resemble a toy. For the weft, the coarsest quality of thread extracted from the Chinese or Bengal silk is used, and a rough pattern is made in the cloth. The weaving process is regulated by four pedals attached to the frame. These sashes are about three yards in length and are sometimes provided with pockets. Like the cord-girdles, they are generally woven of silk dyed a red colour, and at each end the threads of the warp are left loose so as to form a fringe. These articles are manufactured in large quantities and very commonly worn in the Madras Presidency. Unwindable waste is mostly sent to the Bombay Mills, where it is used for spinning. It is also used locally in Multan, where it is dyed and made into the balls (*phunri*) on embroidery or on *tukmas*. In Surat it is used, with waste ends of thread, for making tassels (*kas*) worn on coats. The winders of Surat say that they receive about 10 annas a lb. for this waste from the local banias, by whom it is sold to the Mills. The value of winding waste and of very coarse thread is, of course,

very low as compared with the fine qualities of silk, and though (as has been seen) there are many uses to which these articles can be put, it is obvious that the actual cost of any kind of silk is very much enhanced if it contains a large percentage of such material, the quantity of silk suitable for fine weaving being correspondingly smaller. This point has always to be taken into consideration in comparing the relative values of different kinds of raw silk.

SUMMARY.

15. We may now sum up the most noteworthy features of the silk trade of India.

1. There has been a very great decline in exports of Bengal raw silk to foreign countries. The place of this silk has been partially taken by exports from Kashmir, but these are small in comparison with the Bengal exports of earlier years. There has also been a marked decrease in the use of Bengal silk in India, though this is neither entirely nor even largely due to any demerit of the silk itself, but rather to the decline in production in that province. Were Bengal and Mysore silk produced in greater quantity, and especially could it be produced at a cheaper rate, there are numerous markets ready to take it. The first point is therefore to find a method of increasing, and if possible cheapening, the production of Indian raw silk.

2. The weaving industry is on the whole in a fairly flourishing condition, but the place of Indian silk has been largely taken by a heavy increase in the amount of foreign raw silk imported into this country. In some cases such silk is chosen in preference to the Indian material on the ground that it is more suitable—on account of finer reeling or some other cause—for the purpose for which it is required. More often, however, it is used because it is obtainable more easily or at a cheaper rate. To supply the former demand some changes are necessary in the present methods obtaining in this country: to supply the latter nothing is needed but greater production and cheapening of the cost.

3. There is a marked absence of organization in the silk trade as it is at present carried on, and a corresponding success on the part of better-organized competitors in the Indian markets. The methods according to which the weaving industry is conducted is wasteful and unsatisfactory. Illustrations of this will be found throughout this report. The introduction of modern methods has met with considerable success in the Madras Presidency, but there are many areas where no serious attempt at such improvements has been made. Where these improvements have been attempted, they are frequently retarded by the small merchant-employers,—the very persons who under the present conditions would profit by the change. The condition of the weaving community is generally very unsatisfactory, as has already been shown. Some system of profit-sharing or co-operation is badly needed for its improvement. In Lyons and St. Etienne in France benevolent societies exist for the purpose of advancing sums to small master-weavers for modernising their plant, etc. These societies were approved and supported by the French Government in 1909. In Japan there is a Sericultural Association, established in 1892, said to contain some 150,000 members. This Association has among its objects those of creating a larger market for Japanese raw silk, making investigations and researches regarding sericulture, and attempting to develop sericulture on a co-operative basis. Other bodies exist for the purpose of improving existing methods, and Sericultural Guilds have been formed with the object of removing defects in the practical management of the industry. It is said that silk-rearers are so combined by Government regulations. There are also co-operative societies of all kinds, for advancing funds, for finishing and selling the produce of members, and for purchasing material or plant. Such societies are said to number five thousand—or one for every two villages.—of which three-fifths are concerned with sericulture, and they are reported to be entitled to concessions of various kinds from Government. That there are many difficulties in the way of organizing production on these lines in this country cannot be denied, but better organization of the industry (on these or on other more suitable lines) is an urgent necessity in this country. A com-

mercial agency for the purpose of discovering the right markets and for the disposal of the produce would fill a much-needed gap in the present method of carrying on the industry.

4. There has been a startling decrease in the export of silk manufactures from this country, and a still greater increase in the import of foreign manufactured goods. The use of the latter is most marked in the Punjab. The consumption of Japanese spun silk is particularly noticeable in that province. It is possible that the Punjab is now passing through a stage which the Madras Presidency reached more rapidly, when the advantages of such silk were realized, but not its disadvantages. After a short trial that Presidency largely rejected such silk for ordinary manufactures, and the weaving-masters of the Punjab may yet do the same. The import of foreign piece-goods into that province, however, undoubtedly supplies a real demand, which at present the Indian looms are not able to meet. The heavy Indian, silk manufactures are now commonly rejected there in favour of the finely-woven and brightly-coloured Japanese article. Very little attempt has been made in India to meet this demand. Even where, as in Madras, the Indian manufactures are generally preferred, there is still a market for printed and embroidered Japanese goods, and these could only be supplied by mills specially fitted for their production. How far the Punjab market might be courted on behalf of Indian manufactures of the better quality must remain to be seen, but finer weaving, better finish, and above all a careful study of the exact nature of the demand, are indispensable preliminaries to any such attempt.

In conclusion, the possibilities of the silk trade in India are still very great, and the present moment is eminently favourable for their development. The wide range of mixed goods previously imported from enemy countries bears witness to the demand for such goods in India, and with proper organization it should certainly not be impossible to supply most, if not all, of these goods at home. Further, if satisfactory methods can be found for checking the decrease in the production of silk in this country, there does not appear to be anything to prevent the substitution of Indian for foreign raw material upon the looms, for the manufacture of these and other articles. Finely-reeled silk of the best quality is not at all required for the purpose of manufacturing cheap mixed goods of the nature referred to above, and there is no reason why Indian material should not be used. If by increasing and cheapening the production of raw silk in India and by organizing the silk-weaving industry so as to enable it to compete successfully with the weaving of other countries, the demand for silk manufactures in this country could be supplied from this country's looms, there would then be no cause for regret even if the European market for Indian raw silk were never recovered.



R
X8 (M73) X2 N16
N17.2

APPENDIX A.

Effect of the War upon the Import Trade in Foreign Silk.

The following reports by Mr. D. R. Pochaji, Appraiser in the Bombay Customs Department, are of considerable interest and show clearly the effects of the war upon prices and transactions, and indicate the present state of the market. I am indebted to the kindness of that Department for permission to reproduce them here.

1ST REPORT OF MR. D. R. POCHAJI, DATED 27TH DECEMBER 1915 AND 29TH DECEMBER 1915.

1. *Raw silk.*

Owing to the European war, Great Britain, France, and America displayed but little interest at the beginning of the war in their purchases of raw silk from China (Canton and Shanghai), and consequently Chinese holders were obliged to look to the Indian markets. The Indian merchants taking advantage of this, placed big orders of raw silk at advantageous prices, and side by side the silver market being dull, and with a favourable exchange, great business was put through till the end of November 1915.

After November owing to great floods in China the Canton Raw Silk crop was spoiled, and consequently the European and American buyers had to turn their attention to the Shanghai market, where a bumper crop of raw silk was reported.

As soon as the Shanghai merchants saw the opportunity of the European buyers coming in their market, they raised their prices, and along with the steady rise of silver the prices of raw silk went up in Shanghai, and a great business was done by the European and American merchants; and at the same time the Indian market took up a lot of business for Bombay, hence the prices gradually went up in Bombay.

It seems that if the present prices of raw silk and the high exchange is maintained the demand will fall, and the consumers will then turn their attention to the Bangalore and Bengal raw silk.

Owing to the above high prices now, it seems that the shipments now expected will fall short, thus the China Mail of the 15th December, which left Hongkong, brings about 125 bales of raw silk only, against the normal shipments of about 500 to 600 bales.

2. *Silk manufactures.*

In the beginning of the war the Indian market of silk manufacture became very dull here in Bombay. No buyers came forward to make purchases, consequently shipments from China and Japan grew scarce, and the prices went down considerably in China and Japan.

After a period of three months and in the commencement of the Hindu New Year enquiries from all quarters followed, and the prices went up a little bit, and the Indian merchants, taking advantage of this and the low prices ruling in China and Japan, began importing; by that time the consumption in India increased considerably, which naturally told on the market in China and Japan.

At the present time the imports are normal, say just the same as before the war, but the next shipments of silk manufacture will be considerably less, owing to the numerous enquiries for raw silk and silk manufacture from the outer world, especially from America; as may be judged from the fact that the value of raw silk, for various classes of silk manufacture, is going up from 700 yen per picul to the present highest price of 1,200 yen per picul.

This in its turn has had the effect of sending up the prices of the manufactured silk from 25 per cent. to 30 per cent. in China and Japan.

These causes will affect the imports very much hereafter, and I think the imports of silk manufacture will be about 50 per cent. less than during normal times.

2ND REPORT, DATED 22ND MAY 1916.

1. *Raw silk.*

After putting in the last report of 27th December 1915, the market was going up in January and went up till March.

From April, the first crop of raw silk arrived in the China market, but the quantity was only half that of the previous year.

Owing to the bad weather now prevailing in the interior of China, *i.e.*, the silk producing countries, the bulk of the silk worms was partly destroyed by bad weather, which made the market of raw silk steadier. Besides, on account of the high prices of silver and the high exchange, the American and Indian markets have made very few purchases for the present.

These reasons will make the prices of raw silk in China fall considerably, and account for the Indian buyers' now buying Bangalore raw silk, which is cheaper and good in quality. This Bangalore raw silk is consumed by the Indian weavers of Saha-poor, Belgaum and Madras.

2. *Silk manufactures.*

In December, on account of the high prices of raw silk ruling in Japan, the American buyers of raw silk paid the highest price of yen 1,400 per picul—a record price. This price remained very firm till the middle of January. Along with the rise in the price of raw silk, the prices for silk manufactures also went up, and when it was seen by the Bombay merchants that the prices had gone up in Japan by about 40 per cent. to 50 per cent., they went in for reckless speculation in the Bombay market, which forced the prices up.

By the middle of April again the prices of raw silk underwent a decline of about 10 per cent. to 15 per cent. and simultaneously the prices of silk manufactures showed a decline.

It seems that the tone of the local market will be steady for some time owing to the large stocks on hand of higher prices, and unless a demand unexpectedly starts, there are less chances of improvement of the market.

It may be convenient to summarise here the trade figures for the year 1914-15, as compared with the preceding year. Imports of raw silk by sea fell from 2,563,720 lbs., valued at Rs. 126 lakhs, to 2,303,331 lbs., valued at Rs. 113 lakhs. This decline is attributed (in the "Review of the Trade of India in 1914-15") to the over-trading of the two preceding years. Imports from China (including Hongkong) fell from Rs. 116 lakhs to Rs. 99 lakhs, and the Straits Settlements from nearly Rs. 5 lakhs to a little over Rs. 2½ lakhs; Japan's consignment increased from 21,610 lbs. to 172,370 lbs., and that of Siam also showed a slight increase. Imports of manufactures fell from Rs. 310 lakhs to Rs. 194 lakhs. This is directly attributed to the cessation in demand caused by the war. Imports from Japan declined from Rs. 145 lakhs to Rs. 94 lakhs, and China goods (excluding Hongkong) from Rs. 38½ to Rs. 34 lakhs. Consignments from Hongkong, however, showed a slight increase, from Rs. 25 lakhs to Rs. 26 lakhs. Imports from France and Italy fell from Rs. 24½ and Rs. 19 lakhs to Rs. 11½ and Rs. 10½ lakhs respectively. Consignments from the United Kingdom declined from nearly Rs. 28 lakhs to Rs. 11 lakhs, and those of Germany from Rs. 22½ lakhs to Rs. 4 lakhs. Silk piece-goods decreased from 27,338,000 yards, valued at Rs. 192 lakhs, to 17,690,000 yards, valued at Rs. 133½ lakhs; mixed goods from 8,164,000 yards, valued at Rs. 69½ lakhs, to 3,089,000 yards, valued at Rs. 24 lakhs; yarns, noils, and warps from 1,168,000 lbs., valued at Rs. 46 lakhs, to 863,000 lbs. valued at Rs. 34 lakhs; and other sorts from Rs. 3 lakhs to Rs. 2 lakhs.

Exports of raw silk fell from 1,203,098 lbs. to 516,282 lbs., the value in 1913-14 being nearly Rs. 25 lakhs, and in 1914-15 less than Rs. 12 lakhs. Exports to France fell from 712,110 lbs., valued at Rs. 18½ lakhs, to 187,209 lbs., valued at Rs. 4 lakhs; whereas those to the United Kingdom rose from 276,502 lbs., valued at less than Rs. 4 lakhs, to 287,630 lbs., valued at nearly Rs. 7½ lakhs. Exports to Italy fell from Rs. 1½ lakhs to Rs. ½ lakh. Exports of Indian silk manufactures were valued at Rs. 3½ lakhs, as against Rs. 5½ lakhs in the preceding year, piece-goods falling by Rs. 1½ lakhs and mixed goods by Rs. 80,000. Aden received only Rs. 7,000 worth instead of Rs. 73,000 worth, but exports to Tunis fell only from Rs. 71,000 to Rs. 61,000.

Re-exports of foreign raw silk fell from 21,000 lbs., valued at Rs. 1 lakh, to 14,000 lbs., valued at Rs. 74,000; and of manufactures from Rs. 10 lakhs to Rs. 5½ lakhs.

Turning to the transfrontier trade, imports of raw silk from Persia remained steady. Exports of raw silk to North and East Afghanistan rose

from 85 maunds, valued at Rs. 21,000, to 278 maunds, valued at Rs. 71,000; while exports of manufactured silk fell from Rs. 4,000 to *nil*. Imports of raw silk from Ladakh and Kashmir fell from Rs. 5 lakhs to Rs. 4½ lakhs, while exports of manufactured silk fell from Rs. 3½ lakhs to less than Rs. 3 lakhs. Exports of silk manufactures to Tibet fell from nearly Rs. 1 lakh to Rs. 36,000, whereas exports of raw silk to Bhutan rose from Rs. 2,99,000 to Rs. 3,12,000 and of silk manufactures from Rs. 3,79,000 to Rs. 4,42,000. On the Eastern frontier imports of raw silk from Western China fell from nearly Rs. 12 lakhs to Rs. 9 lakhs, and manufactured silk from Siam declined from nearly Rs. 8 lakhs to less than Rs. 3 lakhs, exports of similar goods to that country remaining fairly steady.

It will be seen, therefore, that there have been very few exceptions to the general fall in value of the trade in silk between India and other countries during the year 1914-15.

APPENDIX B.

I.—Imports of Raw Silk and Waste from China into Bombay.

Year.	China (Hongkong).		China (Treaty Ports).		TOTAL.	
	lbs.	Rs.	lbs.	Rs.	lbs.	Rs.
1875-76 . . .	1,939,224	53,38,484	5,599	27,349	1,944,823	53,65,833
1876-77 . . .	1,028,882	31,80,954	40,950	1,59,714	1,069,832	33,40,668
* * *	* * *	* * *	* * *	* * *	* * *	* * *
1880-81 . . .	1,246,456	51,39,146	517,864	25,78,928	1,764,320	77,18,074
1881-82 . . .	1,045,526	41,63,988	186,386	8,83,015	1,231,912	50,47,003
1882-83 . . .	1,657,384	74,78,098	177,129	8,34,504	1,834,513	83,12,602
1883-84 . . .	1,508,703	64,59,317	174,195	8,86,501	1,682,898	73,45,818
1884-85 . . .	1,032,496	41,89,565	156,124	8,03,040	1,188,620	49,92,605
1885-86 . . .	1,118,297	44,59,356	202,242	10,64,110	1,320,539	55,23,466
1886-87 . . .	1,186,068	53,60,823	205,804	10,37,979	1,391,872	63,98,802
1887-88 . . .	1,688,777	70,46,654	320,492	15,76,788	2,009,269	86,23,442
1888-89 . . .	1,174,217	47,37,793	303,231	15,21,367	1,477,448	62,59,160
1889-90 . . .	1,409,677	58,12,051	333,776	17,43,615	1,743,453	75,55,666
1890-91 . . .	1,415,557	61,81,839	377,974	19,42,371	1,793,531	81,24,210
1891-92 . . .	1,225,734	68,01,337	567,422	30,34,131	1,793,156	98,35,468
1892-93 . . .	1,328,987	52,08,260	378,823	20,41,991	1,707,810	72,50,251
1893-94 . . .	1,460,180	60,84,025	919,852	46,35,861	2,380,032	1,07,19,886
1894-95 . . .	1,313,754	50,83,006	775,729	38,99,583	2,089,483	89,82,589
1895-96 . . .	1,514,405	54,32,366	836,977	39,38,923	2,351,382	93,71,289
1896-97 . . .	1,540,955	53,75,638	264,687	12,31,308	1,805,642	66,06,946
1897-98 . . .	1,176,412	31,48,275	346,880	15,59,062	1,523,292	47,07,337
1898-99 . . .	1,143,180	32,52,801	588,555	26,30,007	1,731,735	58,82,808
1899-00 . . .	792,403	20,31,854	490,745	23,43,613	1,283,148	43,75,467
1900-01 . . .	874,295	28,26,220	1,098,258	54,35,925	1,972,553	82,62,145
1901-02 . . .	726,879	21,59,449	874,789	40,13,757	1,601,668	61,73,206
1902-03 . . .	729,964	18,69,804	531,724	23,48,447	1,261,688	42,18,251
1903-04 . . .	761,310	24,98,246	474,162	23,10,458	1,235,472	48,08,704
1904-05 . . .	881,973	28,50,227	502,419	27,16,242	1,384,392	55,66,469
1905-06 . . .	708,375	24,31,466	531,547	30,99,462	1,239,922	55,30,928
1906-07 . . .	566,402	18,16,516	411,677	22,99,635	978,079	41,16,151
1907-08 . . .	704,765	25,12,734	859,972	51,46,089	1,564,737	76,58,822
1908-09 . . .	612,969	20,64,902	853,291	48,74,411	1,466,260	69,39,313
1909-10 . . .	613,084	18,31,734	1,199,752	58,51,977	1,812,836	76,83,711
1910-11 . . .	660,143	19,55,967	1,015,623	47,69,441	1,675,766	67,25,406
1911-12 . . .	529,247	17,53,914	1,118,612	59,28,799	1,647,859	76,82,713

I.—Imports of Raw Silk and Waste from China into Bombay—contd.

Year.	China (Hongkong).		China (Treaty Ports).		TOTAL.	
	lbs.	Rs.	lbs.	Rs.	lbs.	Rs.
1912-13 . . .	(a)621,230	20,84,276	(d)2,194,443	1,08,51,251	2,815,673	1,29,15,527
1913-14 . . .	(b)508,920	17,51,909	(e)1,422,795	75,56,624	1,931,715	93,08,533
1914-15 . . .	(c)453,567	16,62,918	(f)1,343,416	71,94,970	1,796,683	88,57,888

II.—Exports of Indian Raw Silk.

Year.	Reeled Silk.	Chassam.	Cocoons.	TOTAL.	
	lbs.	lbs.	lbs.	lbs.	Rs.
1889-90	593,425	1,233,494	262,843	2,089,762	63,98,178
1890-91	502,603	1,112,313	145,695	1,760,611	52,10,687
1891-92	518,705	1,012,254	131,560	1,662,519	51,86,271
1892-93	655,338	1,087,500	77,395	1,820,233	61,75,739
1893-94	613,330	1,080,684	77,071	1,771,085	69,80,989
1894-95	510,800	793,892	26,035	1,330,727	50,20,087
1895-96	707,683	1,072,452	12,294	1,792,429	64,21,693
1896-97	595,433	498,713	643	1,494,789	51,16,611
1897-98	622,587	1,037,701	1,742	1,662,030	51,48,504
1898-99	512,830	1,046,541	4,780	1,564,151	45,80,032
1899-00	722,285	1,217,432	..	1,939,718	69,86,106
1900-01	559,776	1,030,523	13,976	1,604,275	51,22,057
1901-02	727,651	1,165,754	42,356	1,935,761	66,34,209
1902-03	681,852	1,240,689	67,281	1,989,822	65,48,153
1903-04	624,064	1,136,566	101,686	1,862,316	63,42,468
1904-05	506,318	751,355	95,990	1,343,663	40,69,975
1905-06	578,450	1,131,060	68,906	1,779,316	56,39,679
1906-07	777,654	1,095,193	70,591	1,943,438	68,65,018
1907-08	730,733	1,093,384	119,009	1,943,126	63,78,154
1908-09	581,566	1,182,691	69,387	1,833,644	54,05,077
1909-10	501,135	1,485,548	88,929	2,075,612	50,75,737
1910-11	494,035	1,147,243	209,273	1,850,551	50,55,287
1911-12	381,677	1,092,764	275,505	1,749,946	45,83,853
1912-13	382,081	943,143	352,617	1,677,841	41,73,728
1913-14	160,222	909,077	133,799	1,203,098	24,74,142
1914-15	82,700	433,600	516,282	11,91,000	

(a) Includes 6,667 lbs. of waste.
(b) Includes 18,694 lbs. of waste.
(c) Includes 32 lbs. of waste.
(d) Includes 32,288 lbs. of waste.
(e) Includes 7 lbs. of waste.
(f) Includes 25 lbs. of waste.

III.—Exports of Raw Silk, showing share of each province.

(Quantity in lbs.)

1	2	3	4	5	6	7	8
Year.	Bombay.	Burma.	Sind.	Madras.	Bengal.	Total (excluding Bengal).	GRAND TOTAL.
	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.
1899-00	56,280	14,803	11	277,260	1,591,364	348,354	1,939,718
1900-01	10,091	1,249	100	362,564	1,230,271	374,004	1,604,275
1901-02	69,750	9,411	101	375,738	1,480,761	455,000	1,935,761
1902-03	168,050	5,597	10	463,822	1,352,343	637,479	1,989,822
1903-04	171,852	6,314	144	432,767	1,251,239	611,077	1,862,316
1904-05	141,478	8,312	..	295,378	898,495	445,168	1,343,663
1905-06	155,997	6,775	..	485,600	1,130,944	648,372	1,779,316
1906-07	233,774	7,119	..	392,695	1,309,850	633,588	1,943,438
1907-08	310,656	6,045	1,200	377,778	1,247,447	695,679	1,943,126
1908-09	61,679	7,834	179,413	571,840	1,012,878	820,766	1,833,644
1909-10	87,524	4,191	297,902	559,550	1,126,445	949,167	2,075,612
1910-11	53,965	..	471,232	360,481	964,873	885,678	1,850,551
1911-12	80,475	5,758	501,086	400,981	761,646	988,300	1,749,946
1912-13	60,704	29,211	679,641	301,978	606,307	1,071,534	1,677,841
1913-14	74,312	24,543	260,433	271,898	571,912	631,186	1,203,098
1914-15	40,017	22,103	101,887	71,719	280,556	235,726	516,282

IV.—Exports of Raw Silk, showing share of each province.

(Value in Rs.)

1	2	3	4	5	6	7	8
Year.	Bombay.	Burma.	Sind.	Madras.	Bengal.	Total (excluding Bengal).	GRAND TOTAL.
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.
1899-00	34,782	9,930	50	1,65,851	67,75,493	2,10,613	69,86,106
1900-01	16,526	750	400	2,41,866	48,62,515	2,59,542	51,22,057
1901-02	4,86,989	9,020	382	2,13,654	59,24,164	6,10,045	66,34,209
1902-03	9,92,951	4,595	40	3,51,631	51,98,936	13,49,217	65,48,153
1903-04	12,93,325	4,220	500	3,36,147	47,08,276	16,34,192	63,42,468
1904-05	11,43,562	8,307	..	1,85,864	36,32,242	13,37,733	49,69,975
1905-06	11,05,768	6,971	..	2,72,913	42,54,027	13,85,652	56,39,679
1906-07	11,23,483	6,498	..	2,18,532	55,16,500	13,48,518	68,65,018
1907-08	14,42,359	5,873	3,750	2,31,013	46,95,159	16,82,995	63,78,154

V.—Exports of Reeled Silk and Chassam from Bengal, Bombay and Sind.

* Approximate only ; exact figure for Burma not available.

[illegible]

VII.—Total Exports of Raw Silk from India.

Year.	To United Kingdom.	To France.	To Italy.	To United States of America.	To Other Countries.	TOTAL.
	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.
1889-90 . . .	801,501	1,156,412	112,129	5,354	14,366	2,089,762
1890-91 . . .	647,945	983,312	117,486	3,210	8,658	1,760,611
1891-92 . . .	590,345	1,034,765	27,206	454	9,749	1,662,519
1892-93 . . .	482,416	1,179,670	133,482	3,959	15,806	1,820,233
1893-94 . . .	519,407	1,136,089	87,215	20,831	7,543	1,771,085
1894-95 . . .	426,867	847,295	44,738	1,173	10,654	1,330,727
1895-96 . . .	521,705	1,183,878	62,706	3,674	20,466 (a)	1,792,429
1896-97 . . .	461,809	991,368	35,872	..	5,740	1,494,789
1897-98 . . .	788,837	838,621	23,833	..	10,739	1,662,030
1898-99 . . .	570,211	922,030	31,494	149	40,267 (b)	1,564,151
1899-00 . . .	797,060	1,090,472	36,720	7,003	8,463	1,939,718
1900-01 . . .	488,654	1,090,344	18,113	1,490	5,674	1,604,275
1901-02 . . .	577,939	1,327,700	17,951	5,976	6,195	1,935,761
1902-03 . . .	581,382	1,380,166	..	23,095	5,179	1,989,822
1903-04 . . .	431,858	1,380,029	225	31,592	18,612 (c)	1,862,316
1904-05 . . .	441,418	883,806	..	11,903	6,509	1,343,663
1905-06 . . .	380,684	1,334,719	19,614	36,426	7,873	1,779,316
1906-07 . . .	431,870	1,420,380	8,330	47,610	35,248 (d)	1,943,438
1907-08 . . .	480,460	1,297,245	97,787	29,400	38,234 (e)	1,943,126
1908-09 . . .	389,377	1,326,691	100,211	15,645	1,720	1,833,044
1909-10 . . .	459,500	1,482,194	123,859	9,690	369	2,075,612
1910-11 . . .	390,997	1,354,387	104,367	596	204	1,850,551
1911-12 . . .	362,975	1,302,898	79,238	4,550	285	1,749,946
1912-13 . . .	345,050	1,269,533	56,340	..	6,918	1,677,841
1913-14 . . .	276,502	712,110	148,025	..	66,461 (f)	1,203,098

VIII.—Exports of Indian Silk Manufactures.

Year.	Rs.	Year.	Rs.	Year.	Rs.
1885-86 . . .	32,95,836	1895-96 . . .	18,33,987	1905-06 . . .	7,15,109
1886-87 . . .	31,81,076	1896-97 . . .	15,98,407	1906-07 . . .	6,86,072
1887-88 . . .	37,92,972	1897-98 . . .	12,60,409	1907-08 . . .	8,30,930
1888-89 . . .	28,84,872	1898-99 . . .	12,81,890	1908-09 . . .	7,32,715

- (a) Includes 10,013 lbs. of reeled to Ceylon.
 (b) " 36,382 lbs. of waste to Egypt.
 (c) " 15,036 lbs. of waste to Belgium.
 (d) " 32,335 lbs. (mostly reeled) to Ceylon.
 (e) " 30,383 lbs. (mostly waste) to Ceylon.
 (f) " 59,080 lbs. of waste to Belgium.

VIII.—Exports of Indian Silk Manufactures—contd.

Year.	Rs.	Year.	Rs.	Year.	Rs.
1889-90 . . .	26,07,213	1899-00 . . .	12,89,018	1909-10 . . .	8,17,305
1890-91 . . .	20,31,808	1900-01 . . .	12,54,447	1910-11 . . .	7,69,005
1891-92 . . .	18,39,571	1901-02 . . .	10,54,694	1911-12 . . .	6,51,450
1892-93 . . .	19,71,779	1902-03 . . .	9,48,851	1912-13 . . .	7,37,835
1893-94 . . .	24,24,169	1903-04 . . .	8,32,669	1913-14 . . .	5,68,095
1894-95 . . .	16,71,981	1904-05 . . .	7,30,602	1914-15 . . .	3,44,384*

IX.—Exports of Indian Silk Manufactures from Bengal, Bombay and Madras.

Year.	From Bengal.	From Bombay.	From Madras.
	Rs.	Rs.	Rs.
1900-01	9,05,912	2,27,649	1,14,191
1901-02	7,52,978	2,26,923	74,300
1902-03	7,33,954	1,69,806	50,293
1903-04	6,09,611	1,38,605	78,340
1904-05	5,76,390	1,34,749	14,992
1905-06	5,50,456	1,31,819	17,264
1906-07	4,95,491	1,54,464	15,802
1907-08	5,93,611	2,08,045	20,759
1908-09	4,38,467	2,48,675	44,535
1909-10	4,43,970	3,01,815	67,920
1910-11	4,76,382	2,02,867	85,103
1911-12	3,68,722	1,80,729	1,01,491
1912-13	3,50,346	2,97,578	88,797
1913-14	1,90,310	2,31,275	1,45,261
1914-15	93,694	1,55,588	95,052

X.—Exports of Silk Piece-goods from Calcutta (in bales). (Extracted from D. N. Bosu's Silk Exports Lists.)

Year.	UNITED KINGDOM.		FRANCE.		TOTAL IN BALES.
	Corah.	Tusser.	Corah.	Tusser.	
1895	103,745	6,084	30,290	10,937	151,056
1896	72,587	5,805	24,105	12,827	115,324
1897	87,867	7,326	20,203	3,479	118,875
1898	90,783	2,513	8,184	2,344	103,824
1899	99,962	918	11,005	2,784	114,669

* Excluding Burma, for which figures are not available. Exports from Burma, however, averaged less than Rs. 500 in the three preceding years.

X.—Exports of Silk Piece-goods from Calcutta (in bales). (Extracted from D. N. Bosu's Silk Exports Lists)—contd.

Year.	UNITED KINGDOM.		FRANCE.		TOTAL IN BALES.
	Corah.	Tusser.	Corah.	Tusser.	
1900	80,676	6,148	9,460	3,566	99,850
1901	49,238	5,342	16,170	3,633	74,383
1902	29,243	3,538	12,330	5,524	50,635
1903	45,629	5,736	4,249	4,745	60,404
1904	23,523	5,702	5,714	1,746	36,415
1905	27,621	2,944	8,031	2,232	40,828
1906	28,488	2,780	6,108	1,352	38,728
1907	28,527	3,519	3,599	1,907	37,552
1908	18,241	2,760	2,939	1,847	25,787
1909	19,963	4,092	5,848	2,303	32,206
1910	23,430	653	3,591	297	27,971
1911	24,017	1,552	635	..	26,204
1912	35,294	2,478	1,263	..	39,035
1913	16,923	87	1,478	..	18,488
1914	3,613	167	445	..	4,225
1915	3,589	..	..	..	3,589

XI.—Exports of Silk Manufactures, showing countries of final destination.

Countries.	1893-94.	1898-99.	1903-04.	1908-09.	1913-14.
	Rs.	Rs.	Rs.	Rs.	Rs.
United Kingdom	13,32,666	6,26,382	3,60,594	4,34,298	1,62,075
France	3,34,842	1,05,243	94,862	64,701	16,425
Arabia	3,03,347	37,726	38,915	1,356	13,290
Persia	1,17,811	50,452	10,957	18,624	6,825
Turkey in Asia	1,11,660	80,358	39,300	29,614	4,065
Straits Settlements and Malay Peninsula, Ceylon	74,176	1,68,105	94,697	46,358	97,845
Aden	44,281	37,081	7,636	4,942	11,055
Natal	9,041	12,352	6,622	4,188	73,065
Tunis, Tripoli and Algeria	110	11,909	18,467	22,666	48,075
Egypt	..	1,162	61,096	75,319	78,195
Australia	16,628	46,523	22,862	4,680	8,730
Other places	987	59,051	25,300	3,930	2,295
	78,688*	45,548†	51,361‡	22,039	45,555§
TOTAL	24,24,169	12,81,890	8,32,669	7,32,715	5,68,095

* Includes Rs. 27,417 to Turkey in Europe : Rs. 26,132 to Malta : and Rs. 14,032 to Zanzibar.
† Includes Rs. 11,229 to Turkey in Europe : and Rs. 10,037 to Mauritius.
‡ Includes Rs. 21,811 to Turkey in Europe.
§ Includes Rs. 11,970 to the United States.

XII.—Imports of Raw Silk into India by sea.

Year.	Quantity.	Value.
	lbs.	Rs.
1889-90	2,360,467	1,06,70,453
1890-91	2,046,239	1,11,50,683
1891-92	2,701,069	1,26,40,030
1892-93	2,292,846	1,01,60,801
1893-94	2,947,595	1,36,01,789
1894-95	2,494,496	1,03,65,326
1895-96	3,030,546	1,23,29,503
1896-97	2,287,752	87,54,878
1897-98	2,049,608	66,97,717
1898-99	2,250,866	79,76,559
1899-00	1,694,848	57,60,883
1900-01	2,535,377	1,01,69,402
1901-02	2,128,483	80,96,200
1902-03	1,639,189	55,16,149
1903-04	1,544,315	59,29,527
1904-05	1,858,709	73,41,121
1905-06	1,645,696	71,19,049
1906-07	1,422,467	56,80,273
1907-08	2,050,839	98,15,137
1908-09	2,168,458	1,01,88,989
1909-10	2,330,185	97,69,680
1910-11	2,121,799	85,22,805
1911-12	2,239,105	1,05,97,410
1912-13	3,579,837*	1,71,44,610
1913-14	2,563,720†	1,25,89,635
1914-15	2,303,331‡	1,13,00,000

XIII —Imports of Silk Manufactures into India by sea.

Year.	Value in	Year.	Value in	Year.	Value in
	Rs.		Rs.		Rs.
1885-86	1,10,90,430	1895-96	1,70,43,204	1905-06	1,90,15,100
1886-87	1,38,37,350	1896-97	1,36,66,690	1906-07	1,82,50,465
1887-88	1,74,38,179	1897-98	1,14,92,603	1907-08	2,13,48,661

* Besides 104,875 lbs. (Rs. 1,32,270) of waste.
† Besides 79,072 lbs. (Rs. 1,15,635) of waste.
‡ Besides 130,252 lbs. (Rs. 1,64,261) of waste.

XIII.—Imports of Silk Manufactures into India by sea—contd.

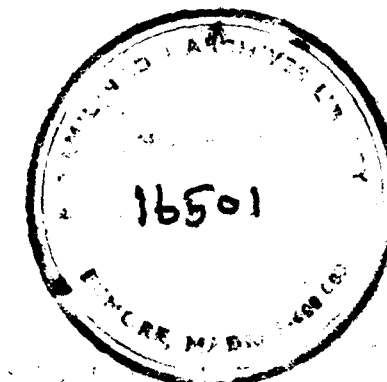
Year.	Value in	Year.	Value in	Year.	Value in
	Rs.		Rs.		Rs.
1888-89 . . .	1,68,21,661	1898-99 . . .	1,36,17,934	1908-09 . . .	2,28,13,727
1889-90 . . .	1,77,81,141	1899-00 . . .	1,12,98,310	1909-10 . . .	2,28,69,275
1890-91 . . .	1,38,63,620	1900-01 . . .	1,66,58,108	1910-11 . . .	2,76,46,230
1891-92 . . .	1,75,06,949	1901-02 . . .	1,48,47,009	1911-12 . . .	2,65,35,930
1892-93 . . .	1,80,15,708	1902-03 . . .	1,63,23,232	1912-13 . . .	3,05,31,015
1893-94 . . .	1,82,78,743	1903-04 . . .	1,83,34,720	1913-14 . . .	3,10,13,295
1894-95 . . .	1,27,74,196	1904-05 . . .	2,11,81,502	1914-15 . . .	1,94,00,000

XIV.—Imports of Silk Manufactures, showing countries of consignment.

From	1893-94.	1898-99.	1903-04.	1908-09.	1913-14.
	Rs.	Rs.	Rs.	Rs.	Rs.
United Kingdom	63,40,310	28,73,826	20,00,880	14,04,906	27,87,285
Austria	5,97,683	1,91,223	5,99,611	3,27,890	2,52,570
Belgium	4,16,949	5,95,770	5,53,199	8,20,196	1,73,310
France	31,43,427	20,12,187	22,43,026	21,52,287	24,59,670
Italy	4,02,127	11,48,377	14,26,525	15,18,407	19,18,090
Germany	2,24,884	2,83,527	5,46,949	10,10,112	22,39,725
Holland	3,825	..	1,17,969	8,152	14,715
Switzerland	..	..	..	..	1,37,400
China (excluding Hongkong) . . .	7,21,292	14,24,666	22,05,429	28,08,879	38,57,490
Hongkong	56,65,469	21,51,724	13,67,785	18,78,980	25,23,555
Japan	2,09,675	24,54,130	66,79,185	99,06,399	1,44,84,330
Straits Settlements	3,92,317	1,32,423	1,32,157	91,660	1,08,675
Ceylon	65,015	32,455	12,734	36,264	26,205
Russia	1,703	2,72,193	16,054	26,456	10,260
Egypt	18,105	40,448	4,22,909	8,13,647	4,710
Persia	50,672	36	1,236	2,910	1,050
Others	5,290	4,955	9,072	6,583	14,325
Total	1,82,78,743	1,36,17,934	1,83,34,720	2,28,13,727	3,10,13,295

XV.—Re-exports of Foreign Silk from India.

	RAW SILK.		SILK MANU-FACTURES.	TOTAL RE-EXPORTS.
	Quantity in	Value in	Value in	Value in
	lbs.	Rs.	Rs.	Rs.
1889-90	116,261	3,39,513	5,77,578	9,17,091
1890-91	145,298	4,00,240	6,46,769	10,47,009
1891-92	119,919	3,74,381	6,69,822	10,44,803
1892-93	109,141	3,72,253	7,17,637	10,89,890
1893-94	113,069	3,49,809	7,06,777	10,56,586
1894-95	95,542	2,51,524	9,01,135	11,52,659
1895-96	60,680	1,95,690	8,87,698	10,83,388
1896-97	88,650	2,50,692	7,92,417	10,43,109
1897-98	66,654	1,86,994	5,83,146	7,70,140
1898-99	72,832	1,88,037	4,67,128	6,55,165
1899-00	90,795	1,71,913	4,64,791	6,36,704
1900-01	97,519	1,89,475	5,33,749	7,23,224
1901-02	59,941	1,46,265	6,72,841	8,19,106
1902-03	85,249	1,62,279	7,33,519	8,95,798
1903-04	68,131	1,40,828	6,98,160	8,38,988
1904-05	54,522	1,48,729	6,01,942	7,50,671
1905-06	69,330	1,35,045	6,47,797	7,82,842
1906-07	105,288	3,78,860	6,77,683	10,56,543
1907-08	83,333	1,80,623	5,45,251	7,25,874
1908-09	74,135	1,18,677	4,21,181	5,39,858
1909-10	72,617	1,81,170	4,47,915	6,29,085
1910-11	70,280	1,17,765	5,57,490	6,75,255
1911-12	17,014	88,935	6,80,730	7,69,665
1912-13	56,155	1,25,250	8,23,245	9,48,495
1912-14	21,371	1,03,125	10,05,360	11,08,485
1914-15	14,305	74,000	5,48,000	6,22,000



CALCUTTA
SUPERINTENDENT GOVERNMENT PRINTING, INDIA
8, HASTINGS STREET

0/270✓
29.12.56 S.R.A.N.

தமிழ்நாடு ஆவணக்காப்பக நூலகம்,
மேலும்பூர், சென்னை-600 008.

தவணைத்தாள்.

சே எண் : 1650)

ப. எண் :

வழங்கிய நாள். (1)	திருப்பிய நாள். (2)	வழங்கிய நாள். (1)	திருப்பிய நாள். (2)
20.11.56	21.11.56		
15/10			

S.F. 259A-6-1,00,000-30-1-54.