Commodity Structure

To understand the dynamics of the Indian Ocean trade and India's role in it, it is imperative to study the commodity structure of this flourishing mercantile network. India was strategically located in the Indian Ocean. It was almost halfway from the Red Sea to China. The slow speed of sailing and dependence upon monsoons benefited India in several ways. Direct voyages from the Red Sea and the Persian Gulf were divided in two sectors. Western sector constituted of the Arabian Sea, the Persian Gulf, the Red Sea and the Indian Ocean around Africa. Eastern sector constituted the Bay of Bengal, Malacca straits and part of the Pacific Ocean. Two dominant types of shipping took control over maritime trade. Sewn *dhow* dominated the western sector, whereas *junk* plied in the eastern sector. As a result, south India emerged as a place of trans-shipment for both *dhows* and *junks*. This new pattern of sailing shortened the duration of the voyage. It also suited the typical design of the vessels sailing in the two different sectors.

India boasts of vast natural resources. Indian spices and textiles were an added advantage. Spices and textiles had great international market. India therefore proved to be a heaven for itinerant traders. As discussed earlier, the post eleventh century was a period of economic boom in oceanic trade. China, western Asia, India and even Europe displayed signs of economic recovery. Earlier, sea merchants mainly concentrated on the exotics and luxuries. Political turmoil in central Asia and the Mongol invasions brought havoc on the peasantry. Agriculture declined in these area and food grains were brought from the outer world. Staples were also taken into account alongwith luxuries. India, with its vast reservoir of foodgrains, benefited in several ways. Ships grew in size to accommodate the bulk and thus maximized their profits.
Indian foreign trade was a source of jealousy for the Roman and Islamic world. Referring to the commodity structure of India, Wassaf states, ‘...whether, since the days of Adam till the present, there has been a country to which people export gold, silver, commodities, and curiosities and from which in exchange, they bring away only thorns, drugs, dust, pebbles and various aromatic roots, from which money has never been sent to any place for the purchase of goods.’

People in India were ‘at a level of subsistence which did not entail the use of any foreign commodities.’ Secondly, all the products of basic needs were available within the country. The balance of Indian exports was settled with precious metals flowing into India. India exported several commodities from raw agricultural products to costly finished works of great excellence. There existed a large international demand for Indian spices, swords, teak and varieties of exotic luxuries. Her imports were mostly confined to war animals, spices, pearls, silk and precious stones.

Indian Exports

India has been endowed with different climatic zones that promote a wide range of vegetation. It specialized in a great variety of products. The various sectors bordering the Indian Ocean were reputed for numerous exportable products. Sind was known for putchuk, cane, bamboo, clothes, wheat, grains and chicken pulse. Gujarat exported fine qualities

1 Pliny (23-79 AD) observed, “not a year passed in which India did not take fifty million sesterces away from Rome.” Wassaf in The History of India as Told by its Own Historians, Vol. III, p. 30.


3 Al-Qalaqashandi, p. 61.

4 Many of these commodities were brought from interiors through the river transportation. Well-connected river traffic with the interiors always worked to
of cotton textiles, indigo, lac, swords, iron, wheat, rice, ginger, sugar, hides, ornaments, embroidered cushions, mats and shoes. Konkan was an established shipbuilding centre. Merchants visited Malabar to obtain pepper, ginger, cinnamon, coconuts, buckrams, the advantage of ports in the collection of commodities from the interiors. Duarte Barbosa, Vol. I, pp. 94-95.


10 Ibid., pp. 27, 35.


15 Nicolo Conti, p. 6.


18 Al-Qalaqashandi, p. 75; Marco Polo, Vol. II, pp. 375, 385; Nicolo Conti, p. 18.


20 Nicolo Conti, p. 18.
brazilwood, cardmoms and cloves. The Coromandel was known for their pearls and textile industry. Bengal was abundant with cotton and silken stuffs, spikenard, galingale, ginger, sugar, slaves and eunuchs.

Indian cotton clothes were a prized commodity in the Indian Ocean trade. It was eagerly sought after right from Africa, west Asia, southeast Asia to China. Indian clothes were sold in the markets of Cape of Good Hope, Mombassa, Mogadishu, Arabia, Persia, Java, Malacca and China. In China, one cotton piece was more expensive than silk. Cotton textile trade had grown considerably with time from twelfth century onwards and, without any doubt, it was the most important of all manufactured goods from India.

Bengal extracted huge profits from cotton clothes. Marco Polo observes that Bengal derived major profits from this commodity. Clothes of Bengal were so fine and delicate that dress made in Decca 'may be

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21 Nicolo Conti, p. 18.
23 Nkitin, p. 20.
24 Rashid-ud-din in The History of India as Told by its Own Historians, Vol. I, p. 69.
27 Mcpherson remarks that even cheap cotton clothes were in huge demand in China. Mcpherson, The Indian Ocean: A History of People and the Sea, p. 99.
passed through a signet ring.\textsuperscript{30} Duarte Barbosa came across many cotton fields in Bengal.\textsuperscript{31} Bengal cotton industry was dependant upon demands in southeast Asia. \textit{Junks} sailed to Malacca and carried eighty to ninety thousand \textit{cruzados} worth of goods. They brought fine white cloth and seven kinds of \textit{sambafs}, three kinds of \textit{chautares, beatilhas} and \textit{beirames} from Bengal.\textsuperscript{32} Bengal cloth fetched handsome prices in Malacca. Ibn Battuta presented cotton cloths from Bengal on his visit to the ruler of Sumatra.\textsuperscript{33} \textit{Sarbands} (headgears) from Bengal enjoyed a great reputation among the Muslims, Arabs and Persians.\textsuperscript{34} Shirts made of Bengal textiles were equally esteemed.\textsuperscript{35} Bengal also manufactured silk. Decca emerged as an important silk weaving centre. Deccan silk was not only exported to foreign countries but also catered to the demand of silk in Gujarat where it was of second great demand after cotton.\textsuperscript{36} The Coromandel was also highly reputed for cotton and muslin. Majority of its weaving industry was concentrated in Bijapur and Shikarpur.\textsuperscript{37} Malabar exported cotton and delicate muslin.\textsuperscript{38} Chau Ju-kua refers to coloured

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\textsuperscript{30} Merchant Sulaiman in \textit{The History of India as Told by its Own Historians}, Vol. I, p. 5.
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\textsuperscript{31} Duarte Barbosa, Vol. II, pp. 146-147.
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\textsuperscript{33} Duarte Barbosa, Vol. II, pp. 146-147.
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\textsuperscript{34} M.N. Pearson, \textit{Merchants and Rulers in Gujarat}, p. 20.
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\textsuperscript{35} Duarte Barbosa, Vol. II, pp. 146-147.
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\textsuperscript{36} Ibid.
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\textsuperscript{37} Meera Abraham, \textit{Two Medieval Merchant Guilds of South India}, p. 163.
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cotton stuff called *chintizes* and *tou-lo-mein* of Malabar.\(^3^9\) Tome Pires encountered great demand for *calicos* and *beatiha* (for turbans) of Deccan in international markets.\(^4^0\) Konkan also manufactured clothes, known as *tanishi* and muslin.\(^4^1\) It was Cambay that excelled in the production of cotton textiles. Since antiquity, Cambay cloth was eagerly sought after. It has its reference in The *Periplus* and even the *Jatakas*.\(^4^2\)

Gujarat cloth was reputed for its enormous variety and colour patterns. Ahmedabad, Pattan, Baroda, Broach and Surat were the famous textile centres. Marco Polo observes that in Gujarat they had good deal of cotton. Their cotton plants were of considerable size and grew upto full six paces. These plants yielded excellent cotton for full twelve years but after twenty years, their yield became somewhat inferior.\(^4^3\) Availability of indigo enabled Gujarat to manufacture textiles with a wide range of colour patterns. Muhammad bin Tughluq's gift to the Chinese emperor included a hundred pieces of *bairami* (cotton) clothes.

Availability of cotton proved to be of considerable advantage to Indian trade in the Indian Ocean trading empire. As mentioned above, Indian cotton clothes were in huge demand all over Asia. Cotton clothes

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\(^3^9\) Chau Ju-Kua, *Chu-Fan-Chi*, p. 88.

\(^4^0\) Tome Pires, Vol. I, pp. 52-54.

\(^4^1\) Al-Qalaqashandi, p.72; Marco Polo, Vol. II, p. 395.


were traded for spices and pepper in southeast Asia. Such was the nature of the demands of Indian clothes that even the dreaded Celebs (the pirates of southeast Asia, operating in the Malacca Straits) demanded Cambay cloth during their plunder of the sailing vessels. Ships brought Cambay cloth to Banda isles (south of Malacca). The peasants of the thirteenth century Pagan (Burma) were required to pay revenue in clothes when fields were not in production. In Cambodia, cloth was used as a standard unit of valuation. A slave could be purchased with upwards of hundred pieces of clothes.

Malacca’s control over the supply of textiles helped it emerge as the strongest port in southeast Asia. Tome Pires found Bengali sanbaff cloth selling in the markets of Java. It, however, came through Malacca. The maritime trade of China underwent a dramatic change after the twelfth century. From Chau Ju Kua to Ma Huan, all contemporary observers were familiar with Indian cotton cloth. One cotton dress was equal to four of silken stuff in China. Any traders operating in Canton thus could not ignore the importance of cotton textiles in his cargo. It necessitated his visit to Bengal, Coromandel or even to Cambay to obtain good cloth at reasonable prices. India catered to every type of market in cotton textiles. Expensive cloths like talach, a mixture of cotton and silk, were exported alongwith coarse varieties. Duarte Barbosa observes that white and coarse cloth of Cambay was exported to Arabia, Persia, India (other parts),

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Malacca, Sumatra, Melinde, Mogadishu and Mombasa. Tome Pires remarks that Cambay (prime supplier of cotton clothes) stretched one hand to Malacca and other to Aden.

China remained the prime source of silk in the Indian Ocean network. Silk was imported into India from China through land and sea routes. However, India also managed to develop sericulture and innovated new varieties of wild silk called *tasar*, *eri* and *muga*. Indians manufactured a new variety of cloth called *talach*, a mixture of cotton and silk. Such an innovation would have created new market for Indian clothes. Interestingly, Chau Ju Kua records the export of these clothes from the Chola dominion. Indian *patola* silk was in huge demand. Decca was an important silk weaving centre. Decca silk was not only exported to foreign countries but also catered to the demand of silk in Gujarat where it was of second great concern after cotton. Naqvi also finds the silk industry of Bengal catering to a wide range of markets. Rashid-ud-din

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48 Duarte Barbosa, Vol. I, pp. 154-56; Naqvi has compiled a list of thirty varieties of cotton cloth from contemporary sources, besides describing the process of production from plucking of cotton to printing of cloth. Hamida Khatoon Naqvi, *Agricultural, Industrial and Urban Dynamism Under the Sultans of Delhi*, pp. 40-41.

49 *Muga* and *eri* were wild varieties of silk and found in Assam. *Tasar*, silk extracted from a herb, was cultivated in Madhya Pradesh. Meera Abraham, *Two Medieval Merchant Guilds of South India*, p. 179.

50 Nkitin, p. 19.

51 Chau Ju Kua, p. 96.

52 M.N. Pearson, op. cit., p. 20; for a list of twenty five varieties of silk textiles and the process of production of silk in Delhi sultanate particularly Gujarat, see Hamida Khatoon Naqvi, op. cit., pp. 52-57.

53 Naqvi finds eastern Bengal producing silk of inferior quality. It has four varities namely *nistari, desi, harapalu* and *chinapalu*. In Orissa and southwest of Bengal, a yellow grass called *Yura*, grew wild in forests. It looked lustrous
informs us that the silken stuffs of Ma'abar were exported up to Iraq, Khurasan, Syria, Rum and Europe.\textsuperscript{54} Chau Ju-Kua designates the Chola kingdom as a place where silk threads were manufactured.\textsuperscript{55} South Indian guilds like the Ayyavole regulated the trade in silk threads around the Krishna delta.\textsuperscript{56} Silk clothes were also manufactured in northern India. Presents from Muhammad bin Tughluq to the Chinese Emperor included hundred pieces of native silk called \textit{Khazz}.\textsuperscript{57} Ships brought both cotton and silken stuff, called \textit{patola}, to Pegu from India. These clothes were skilfully coloured and very expensive.\textsuperscript{58}

Indigo was an important dye and it was exported from India to all the quarters of the world till the coming of chemical dyes. Sarkhej, in Gujarat, was a primary producer of indigo. 'The blue stone color' was refined in Cambay (famous for its export of clothes).\textsuperscript{59} Other kinds of dyes were also used. Indian madder (\textit{manjistha}), saffron (\textit{kusumbha}) and turmeric (\textit{haridra}) were some other forms of dyes but indigo (\textit{nili}) was said to be 'the fastest while the turmeric colour fade away easily.'\textsuperscript{60} Expansion of textile industry must have increased the production of indigo. The enough. However after bleachings it lost its brightness. Hamida Khatoon Naqvi, op. cit., p. 52.

\textsuperscript{54} Rashiduddin in \textit{The History of India as Told by its Own Historians}, Vol. I, p. 69.

\textsuperscript{55} Chau Ju-Kua, p. 96.

\textsuperscript{56} Meera Abraham, \textit{Two Medieval Merchant Guilds of South India}, p. 166.

\textsuperscript{57} Ibn Battuta, (Mahdi Husain), p. 151.

\textsuperscript{58} Duarte Barbosa, Vol. II, p. 157.

\textsuperscript{59} M.N. Pearson, op. cit., p. 20.

\textsuperscript{60} V.K. Jain, op. cit., p. 63.
'enormous variety of styles.....colours and patterns' of Gujarat clothes were possible mainly due to the availability of indigo. The Fatimids revived textile industry in Egypt and it must have necessitated the import of indigo from India. The Periplus has a reference to Indian indigo,61 while Pearson ranks its cultivation next to textiles in Gujarat.62 Marco Polo also observes that indigo was produced with the help of certain herbs in Quilon. The natives put the indigo plant in great vessels, filled with water till the plants were decomposed. The mixture was put in the sun, 'so that it boils and coagulates, and becomes such as we see it (they divided it into pieces of four ounces each and in that form it is exported to our parts).'63

The post-eleventh century was a period of economic recovery. Money circulated and the gentry sought new means to suit their rising status. Chewing betel was one of them. The custom of betel chewing expanded from Asia to Africa. Marco Polo observes that in Ma'abar people were very fond of chewing Tembul (betel). The lords, gentlefolks and kings 'have these leaves prepared with camphor and other aromatic spices, and also mix with quicklime.' This practice was said to be good for the health. He further remarks that if anyone happened to spit his betel on other's face, it amounted to gross insult. He adds that the aggrieved person went to the king and 'relates the insult...and demands leave to fight the offender. The King supplies the arms, which are sword and target, and all the people flock to see, and there are the two fight till one of them is killed.'64

Ibn Battuta was given betel leaves and areca nuts on his visit to the royal household of Mogadishu. Abdur Razzaq experienced a similar treatment in Vijaynagar. He was also presented betel and arecanuts as a sign of privilege. In Kamboja, it was usual to present a guest with arecanuts, camphor and other aromatics. According to Abdur Razzaq, the leaf of the betel looked similar to orange, but longer. Betel leaves were immensely popular among the Indians, Arabs and in Hormuz. According to him, the manner of eating betel was as follow:

"They bruise a portion of faufal (areca), otherwise called sipari, and put it in the mouth. Moistening a leaf of the betel, together with a grain of chalk, they rub the one upon the other, roll them together, and then place them in the mouth. They thus take as many as four leaves of betel at a time and chew them. Sometimes they add camphor to it."

In Damascus, betel was an integral part of the funeral procession. Until the final ceremony, no member of the grieved family ate any betel. After the final prayers, the qazi offered betel to the guests as a mark of honour. Finally, the betel was given to the heir of the deceased to confirm his new status. Ibn Battuta finds that the gift of betel was regarded more important than gold and official robes by the Sultan in Damascus.

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65 Betel was a sign of respect in most parts of Asia including India. Ibn Battuta, (H.A.R. Gibb), p. 75.

66 Abdur Razzaq, p. 31.


68 Abdur Razzaq, p. 32.

69 Marco Polo, Vol. II, p. 374; (fn. 4).

Arabs were very fond of betel chewing. Betel was exported from India to Aden. Betel and arecanuts were cultivated in great quantity in Ceylon and Sumatra. Nevertheless, it was Malabar that catered to the demands in western Asia and Africa. The inscription of Ganapatideva (a Kakatiya ruler from 1244-45 AD) listed arecanuts as the major item of export. Areca nuts were brought from Kannada speaking areas to Bangalore. Several inscriptions relating to the activities of the Ayyavole point to the brisk trade being carried out in local and foreign markets. Areca nuts were so abundant in Calicut that ships took its cargo to Cambay, Deccan and other countries. Bassein and Gandhar also exported betel and arecanuts but more as a re-export.

Pepper was a cargo par excellence for any trading ship out in the Indian Ocean. It enjoyed a huge international demand since antiquity. The ships could also use it as a ballast to maximize the profits. Pepper could

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71 Abdur Razzaq, p. 32.
76 Meera Abraham, *Two Medieval Merchant Guilds of South India*, p. 158.
79 Ballast was an integral part of ships sailing in the Indian Ocean. The ships required weight for stability. In antiquity, stones were used as ballast. However, in medieval times the staples also constituted an integral part of cargo. Pepper, porcelain, rice and dates were procured at reasonable prices at their sources.
be purchased cheaply in its cultivable areas, but extracted handsome profits all over Asian and European markets.\textsuperscript{80} It was in considerable demand in China, western Asia and Europe. In fact, the new found prosperity in China, Egypt, western Asia and Europe introduced changes in the eating habits. Thus, it generated a big demand for spices, pepper in particular.

Southeast Asia was a good source of pepper, but it was Malabar that remained 'a country of pepper'\textsuperscript{81} for the western world. All contemporary travellers recorded the abundant cultivation of pepper in Malabar. Marginolli, a fourteenth century traveller, provides a vivid account of pepper cultivation in Malabar. According to him:

"This pepper grows on a kind of vines, which are planted just like in our vine-yards. These vines produce clusters which are at first like those of the wild vine, of green colour, and afterwards are almost like bunches of our grapes, and they have a red wine in them which have squeezed out on my plate as condiment. When they have ripened, they are left to dry upon the trees, and when shriveled by the excessive heat the dry clusters are knocked off with a stick and their weight provided stability to the ships and also extract profits on foreign lands where existed substantial demand for them."

\textsuperscript{80} N.J.G. Pound, \textit{An Economic History of Medieval Europe}, pp. 95-97; Hitti remarks:

"Returning Crusaders introduced into their homes the rugs, carpets and tapestries of which western and central Asia had for long made specialty. Fabrics such as muslin, baldachin, damask, Sarcenet or Saracen stuff, velvet, silk and satin came to be more appreciated. Rosary became familiar... with fine clothes and metallic waves went lacquers and dyestuff, such as indigo. Oriental works of art on glass, pottery, gold, silver and enamel served as models for European products." Philip K. Hitti, \textit{History of the Arabs}, p. 669.

\textsuperscript{81} Al-Qalaqashandi, p. 75.
and caught upon linen cloths, and so the harvest is gathered....there is no roasting of the pepper."82

Considerable amount of pepper was brought from the interiors through the river Chetwai, to the ports of Malabar. 83 Chau Ju Kua observes that the pepper gatherers suffered greatly from acrid fumes they have to inhale and are commonly afflicted with headaches.84 Meera Abraham points out that Venice was consuming around 1,150,000 pounds of pepper annually during the thirteenth century.85 The Pardesi merchants exported pepper from Malabar to Yemen from where the Karimis took over further distribution of pepper into Arabia, Egypt and Africa.86 Vessels sailed regularly from Calicut to Mecca and they were heavily laden with pepper.87 Pepper was also re-exported to Europe via Alexandria. Still, Marco Polo found pepper consumption of Europe to be the hundredth part of the supply towards China. According to him, Kinsay consumed 43 loads of pepper daily, each load being equal to 223 lbs.88 Coromandel coasts were not suitable for pepper cultivation. They remained dependent upon Malabar and southeast Asia. Tome Pires records that Burma acquired pepper, sandalwood, sanbaf, quicksilver, vermilion, damask, satin and white cloth from Bengal. Pepper was not cultivated in Bengal but it was

83 Duarte Barbosa, Vol. II, p. 86.
84 Chau Ju-Kua, p. 80.
85 Meera Abraham, Two Medieval Merchant Guilds of South India, p. 176.
87 Abdur Razzaq, p. 19.
88 Marco Polo, Vol. II, p. 204.
more a re-export of the supply received from Malabar and southeast Asian countries. Gujarat also exported some quantities of pepper. Marco Polo mistakenly remarks that in the province of Gujarat there grew much pepper.89 It was, on the other hand, again a re-export from Malabar and southeast Asian countries.90

Apart from pepper, India was also the home of several other spices like ginger, aromcola-cassia, rhubarb and other raw spices. Referring to the flora and fauna of India, Qalaqashandi writes that in Indian mountains there grew trees of aloes wood, camphor, cloves, spikenards, darchini, cinnamon, salikha (the oil of bentree), cardamom, cubeb, mace and many kinds of drugs of vegetable origin.91 As mentioned earlier, the newfound mobility and cultural interaction among different societies, settled around the Indian Ocean, must have enriched the eating habits of these societies. This made spices and aromatics a prized commodity in the Indian Ocean trading world. As a result, Indian spices went right from Manzi in China to Alexandria in the Mediterranean Sea.92

Ginger, known for its medical properties, was exported from the Coromandel,93 Malabar, Gujarat and Bengal.94 It was also known as

90 Trade of Gujarat with southeast Asia and Malabar was well balanced with the availability of clothes. Its clothes were a prized commodity whereas spices, pepper in particular, enabled it to control its trade with western Asia in a fruitful way.
91 Al-Qalaqashandi, pp. 58-59.
beledi, gebeli and ne/. Calicut abounded with colobi (ginger). Aromcolacasia was exported from south India. It was cooked along with meat in Malaya. The Pardesis of Malabar traded in cardamoms, tamarind, ginger and rhubarb. The Ayyavoles of Tamilnadu controlled the supply of cloves and cardomoms. Cochin and Cannanore were huge stores of zeadory.

India exported camphor, frankincense, galingale, spikenards, costus, civet, bdellium, cinnamon and other aromatic roots. These aromatics were used in perfumes and rituals. Products like putchuk and bdellium (a tree that yields aromatic gum raisin) were also in demand due to their alleged healing properties. Many of these aromatics were in considerable demand in China owing to their medicinal properties. For example, many of these aromatics like putchuk were available in the Himalaya, yet Chau Ju Kua refers to putchuk as a product of Arabia. Rarity and distance of products and costly aromatics also satisfied imperial hunger to prove 'the Mandate of Heaven' to rule the whole civilized world.

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95 Nicolo Conti, p. 6.
96 Ibid., p. 18.
97 Ibn Battuta, (Mahdi Husain), p. 187
100 Duarte Barbosa, Vol. II, pp. 83, 92-93.
101 In Confucian ideology, an Emperor is supposed to be the ruler of whole inhabited world. Thus, the Chinese emperor was obliged to display his strength in order to rule his country. Trade was of great help to Chinese rulers in their pursuit of strength. Traders came to their country with many gifts from distant
These aromatics were mostly found in the Himalayas and other inland areas. Caravans brought these aromatics to the coastal areas. Bengal exported galangal, spikenards\textsuperscript{102} and costus\textsuperscript{103} brought from the hinterlands. The Coromandel coasts exported camphor, civet, frankincense\textsuperscript{104} and other perfumes\textsuperscript{105} Malabar was the land of cinnamon, ambergris\textsuperscript{106} (brought from Africa), bdellium and civet.\textsuperscript{107} Konkan sent out costus.\textsuperscript{108} Gujarat exported spikenards, incense, \textit{putchuk} and bdellium.\textsuperscript{109}

Pearls were obtained from the gulf of Sopara and the Coramandel coasts. Meera Abraham suggests periodical movement of pearls fisheries from India to Ceylon and vice versa.\textsuperscript{110} There existed a large market for countries. Many a time, rulers, like Cholas, also sent tributes to get privileges in the Chinese courts. These gifts were displayed by the emperor as the submission of distant rulers before his rule. Thus the Chinese trade was more oriented towards the import of exotic and luxurious products, because the things of daily needs were found in abundance in China. G. F. Hudson, 'The Medieval Trade of China' in D. S. Richards, ed., \textit{Islam and the Trade of Asia: A Colloquium}, pp. 165-166; Meera Abraham, \textit{Two Medieval Merchant Guilds of South India}, pp. 143, 150.

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\bibitem{102} Marco Polo, Vol. II, p. 115.
\bibitem{103} Meera Abraham, \textit{Two Medieval Merchant Guilds of South India}, pp. 177-178.
\bibitem{105} Meera Abraham, \textit{Two Medieval Merchant Guilds of South India}, p. 140.
\bibitem{106} Duarte Barbosa, Vol. II, pp. 76-77.
\bibitem{107} Meera Abraham, \textit{Two Medieval Merchant Guilds of South India}, pp. 159, 161.
\bibitem{108} Ibid., pp. 177-178.
\bibitem{109} Duarte Barbosa, Vol. I, pp. 154-156.
\bibitem{110} Meera Abraham, \textit{Two Medieval Merchant Guilds of South India}, p. 173.
\end{thebibliography}
pearls within the country. Marco Polo remarks that the Bellals of Dwarsamundra bought pearls even on inflated rates. He provides vivid details of the methods of pearl fishing. In his words:

"The pearl fishers take their vessels, great and small, and proceeded into this gulf, where they stop from the beginning of April till the middle of May. They go first place called BETTELAR, and then go 60 miles into this gulf. Here they cast anchor and shift from their vessels into small boats. You must know that many merchants who go divide into various companies and each must engage a number of men on wages, hiring them for April and half of May. Of all the produce, they have first to pay the King as his royalty, the tenth part. And they must also pay those who charm the great fisheries, to prevent them from injuring the divers whilst engaged in seeking pearls under water, one twentieth part of all they take....when the men have got to the small boats they jump into the water and dive to the bottom, which may be at depth of from 4 to 12 fathoms, and there they find the shells that contain the pearls. And these they put into the net bag tied around the waist and mount up to the surface with them and they dive a new. When they can't hold their breath any longer they come up again and after a little down they go once more and so they go on all day."112

Ibn Battuta remarks that the pearls of Mannar were finer than those of the Persian Gulf.113 Rulers of Ma'bar were very fond of pearls. No one was allowed to take any pearl weighing more then half a saggio (miskal).

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112 Ibid., pp. 331-332.
The ruler had made a proclamation that he would pay double the price if anyone brought precious and big pearls to him.\textsuperscript{114} Abu Zaid records that pearls were held in high esteem and eagerly sought after in India.\textsuperscript{115} Notwithstanding, internal demand, pearls were also exported to southeast Asia and China. Chau Ju-Kua attests to the export of pearls from the Chola kingdom.\textsuperscript{116} Almost all the tributes of the Cholas to China included pearls. The mission of 1077 AD took 'pearls like peas' to China.\textsuperscript{117} Meera Abraham suggests that pearls were important in China because they were used to buy livestock, camels and horses from northern parts.\textsuperscript{118} It was to ensure their monopoly over this lucrative pearl trade that the Cholas invaded Ceylon. Indian Chettis exercised great control over pearl fisheries. The pearls of Sopara were not as fine as the pearls of the Coromandel. Ibn Battuta considers the pearls of Ceylon finer than those of Qais and Kish. It is possible that these might have found acceptance among common folks in India, western Asia, Africa and southeast Asia.

Qalqashandi addresses India as a place whose mountains produced rubies and diamonds.\textsuperscript{119} The subcontinent produced rubies, diamonds, emeralds, agnate, onyx, cat's eye, topaz and jacinths. Motupalli was an important centre of diamonds. These diamonds were exported upto Europe.\textsuperscript{120} The Kohinoor, a world renowned diamond, came from the mines

\textsuperscript{114} Marco Polo, Vol. II, p. 339.
\textsuperscript{115} Abu Zaid in \textit{The History of India as Told by its Own Historians}, Vol. I, p. 11.
\textsuperscript{116} Chau Ju Kua, p. 96.
\textsuperscript{117} Meera Abraham, \textit{Two Medieval Merchant Guilds of South India}, p. 174.
\textsuperscript{118} Ibid.
\textsuperscript{119} Al-Qalaqashandi, pp. 57-58.
\textsuperscript{120} Marco Polo, Vol. II, pp. 360-61.
of Golconda. The Ayyavole controlled the flow of precious stones like rubies, diamonds, lapiz lazli, onyx, topaz, carbuncles, corals, and emeralds.\textsuperscript{121} Gujarat was also exporting diamonds, emeralds, onyx and cat's eye to western Asia.\textsuperscript{122} It is important to remember that a big chunk of these exported precious stones came into India from Ceylon. On the other hand, Indians were excellent in the art of inlaying precious stones in the ornaments. Therefore, precious stones inlaid into beautiful ornaments might have been in more demand from India and abroad.

The rising standard of living among the elites, nobility and merchants must have magnified the demand for expensive wooden both ordinary and scented furniture. Teak and timber were also required for house and ship constructions. Teak needed for the construction of \textit{dhows} was exported primarily from Konkan. Nature had endowed southeast Asia with many rain forests. On the contrary, western Asia remained almost treeless due to hostile climatic conditions and the Arabian desert. The situation benefited western India. It emerged as a major exporter of wood to western Asia. The Periplus points out that Persia imported timber, teak and blackwood from India.\textsuperscript{123} In Sind, bamboo and cane grew and these were exported to the Middle East.\textsuperscript{124} Konkan was blessed with rich forests. It had plenty of teak. As a result, Konkan emerged as a great location for shipbuilding. \textit{Dhows} were constructed in Bassein and Agashi.

\begin{thebibliography}{9}
\bibitem{122} V. K. Jain, op. cit., p. 102.
\bibitem{123} W. R. Schoff, \textit{The Periplus of the Erythraean Sea}, p. 36
\bibitem{124} Al-Qalaqashandi, p. 81.
\end{thebibliography}
in Konkan.\textsuperscript{125} Malabar had timber and teak. Varthema notices the shipbuilding centre at Calicut.\textsuperscript{126}

Sandalwood was exported from the Coromandel coasts.\textsuperscript{127} It was used in incense sticks and other rituals. Chau Ju Kua divided sandalwood into three categories. He refers to a variety of yellow colour as \textit{huang-t’an}; a red brown variety was called \textit{tzi-ta’n} and the last one of light and brittle kind was known as \textit{Sha-ta’n}. However, he adds that all varieties emitted similar aroma.\textsuperscript{128} Members of the royal families and nobility were cremated in sandalwood pyres. Malabar was a prominent source of brazil wood. Quilon had a large store of brazil.\textsuperscript{129} Aloes wood oil was used in perfumes and medicines. It grew in the northeastern part of India. Kamarupa was famous for the various varieties of aloes wood. It was transported right up to Multan for export.\textsuperscript{130} Pine and deodar grew in northwestern India and might have been exported through Sind and Gujarat.

Indian iron industry and weapons were highly reputed in foreign lands. Indian swords, called \textit{al Muhammad}, have its reference even in pre-Islamic Arabic poetry.\textsuperscript{131} It was immensely popular among the warring tribes. Alberuni and Idrisi praise Indian swords and daggers for their

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\textsuperscript{126} Varthema quoted in Radha Kumud Mookerji, op. cit., pp. 145-146.

\textsuperscript{127} Stefano, p. 5.

\textsuperscript{128} Chau Ju Kua, p. 208.

\textsuperscript{129} Nicolo Conti, p. 18; Marco Polo, Vol. II, p. 375.

\textsuperscript{130} Brajesh Krishna, op. cit., p. 154.

\textsuperscript{131} Maqbul Ahmad, op. cit., p. 87.
\end{scriptsize}
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Islamic expansion, continuous warfare and the crusades would only have generated more demand for Indian iron and weapons. S. D. Goitein remarks that Indian iron was imported into Egypt by the Jews in large quantities. Since the Jews were neutral in the crusades, they might have passed Indian iron and weapons to the Christian world.

Gujarat possessed the best iron workers and their mastery in metallurgy made Gujarat a prime exporter of swords, lances and other weapons. Its weapons were not only exported to western Asia but also to China. Tamils were also skilled in metallurgy. Meera Abraham records their presence as far as Quseir-al-qadain in the Red Sea. India also exported jewel laden swords. The gift of Muhammad bin Tughluq to China included ten swords, one with a scabbard set with pearls.

Export of slaves from India has always remained open to much scholarly debate. One can build a hypothesis from the limited material available. India is a vast country prone to various natural and unnatural calamities. Droughts, floods and wars rendered many people homeless who were ready to sell themselves. Frequent battles resulted in the enslavement of many prisoners. Alauddin Khalji enslaved many natives during his Gujarat campaign. Firuz Shah Tughluq had thousands of slaves and launched campaigns to obtain still more slaves. Since no

134 Meera Abraham, *Two Medieval Merchant Guilds of South India*, p. 171
136 Sulatn Alauddin Khalji had as many as 50,000 slaves. The number went up to 180,000 under Firuz Tughluq. Muslim invasions right from Mahmud of Ghazni (1000 AD – 1026 AD) to Timur collected huge booty of slaves. The sultans of Delhi also launched numerous raids in surrounding areas to capture slaves.
professional caste was available to handle the new crafts which were introduced in northern India during the sultanate period, enslavement provided cheap reserves of labour out of which new craftsmen could be created.\(^{137}\) New found prosperity and economic recovery necessitated employment of slaves to cater to domestic and sexual needs of the elites. Ibn Battuta was presented a girl of Ma’bar by the grand vazir of Maldives.\(^{138}\) Muhammad-bin-Tughluq sent, ‘Hundred male salves, hundred Hindu girls accomplished in song and dance’ to the Chinese Emperor.\(^{139}\) V.K. Jain finds a reference pointing towards the export of slaves in *Lekhappadhati*. According to him, Teja Pala earned merit by prohibiting the abduction of men by seamen for sale in foreign lands.\(^{140}\) Eunuchs were an important element of the slave trade. They were employed as bodyguards in harems. Marco Polo observes that Bengal offered many eunuchs along with slaves, both males and females, for sale.\(^{141}\) Duarte Barbosa records that ‘the Moorish merchants of this city of Tamer travel up country to buy heathen boys from their parents or from other persons.

Indian slaves were introduced to new technologies that came with Muslims. These included bow carding of cotton, wheel spinning and paper manufacturing. New learning made Indian slaves very valuable. Firuz Shah Tughluq even imposed ban on the export of slaves. He had around 12,000 artisans and 40000 soldiers as his slaves. However, slave trade was confined mainly to land routes. There is no reference of slaves trained for navigation and other menial works on board in sea voyage. For more details, see Irfan Habib, ‘Non-Agricultural Production and Urban Economy’, in Tapan Raychaudhuri and Irfan Habib, eds., op. cit., pp. 89-93.

\(^{137}\) This means that there was a considerable demand for slaves within the country. Irfan Habib, ‘Economic History of the Delhi Sultanate: An Essay in Interpretation’, *Indian Historical Review*, Vol. IV, No. 2, pp. 292-94.

\(^{138}\) Ibn Battuta, (*Mahdi Husain*), p. 208.

\(^{139}\) Ibn Battuta, (*Cathay and the Way Thither*), Vol. IV, p. 19.

\(^{140}\) V.K. Jain, op. cit., p. 105.

\(^{141}\) Marco Polo, Vol. I, p. 115.
who steal them and castrate them, so that they are left quite flat. Many die from this; those who live they train well and sell them. They value them much as the guardian of their women and estates and for their low objects.\footnote{Duarte Barbosa, Vol. II, p. 147.}

India exported various miscellaneous items. The country had a flourishing leather industry. Marco Polo finds Gujarat sending skins of goats, oxen and buffaloes to Arabia and other quarters.\footnote{Marco Polo, Vol. II, pp. 393-94.} Cambay was reputed for shoes. Sanjan and Sopara also manufactured shoes, but Cambay shoes were more in demand.\footnote{Brajesh Krishna, op. cit., p. 104.}

Foodgrains constituted a major segment of maritime trade after the eleventh century. A large part of western Asia was not suitable for cultivation and, henceforth, much of its requirements were satisfied with Indian wheat and rice. Malabar exported inferior black rice to Aden.\footnote{Duarte Barbosa, Vol. I, p. 196.} Ibn Battuta found merchants of Qalhat very joyous on the arrival of ships from India. These ships brought rice for their daily needs.\footnote{Ibn Battuta, (H.A.R. Gibb), p. 396.} Gandar had a large store of wheat and grains.\footnote{Duarte Barbosa, Vol. I, p. 137.} V.K. Jain argues that export of grains to western Asia was limited, but he himself comes across the statement of Benjamin of Tudela that cereals were sent to Kish from India.\footnote{V.K. Jain, op. cit., pp. 103-04.} Even the Portuguese attempted to control the movement of rice with the object of
forcing merchants to visit Goa. Africa was also dependent on India for grains. The Periplus informs us about the ships carrying wheat, rice, clarified butter, sesame oil and honey to Africa.

Indian sugar was much in demand. Sugar made of Indian palm was consumed in Paternexy. Ceylon received her sugar from Bengal. Malabar exported sugar made from coconuts. V.K. Jain notes great encouragement to sugar industry after the tenth century. Perhaps its causes can again be traced in the enrichment of eating habits in societies settled around the Indian Ocean. The Portuguese collected sugar from Malabar, Chaul, Dabul and Cambay, and carried it to Goa from where the merchants from Hormuz collected it.

Malabar exported vinegar. It was made of the must of the coconut tree. From the same must, a kind of strong water was made. It was used as a wine and 'many ships were laden with it.' Lac and myrobalans were

152 Ibid., Vol. II, p. 112.
153 Ibid., pp. 90-91.
154 V.K. Jain, op. cit., p. 104.

A coconut tree was of great use to people in Malabar. Almost every part of it was used. It bore good fruit. Its water quenched the thirst better than the water. Oil was also extracted from these fruit. And from the outer husk, certain cord was also made. With leaves of coconut tree, people thatched their houses and from the shell, close to kernel, were made charcoal for goldsmiths. Sugar, vinegar and wine were also made from the must of coconuts. Duarte Barbosa, Vol. II, pp. 90-91.
procured from Gujarat. The Arabs also knew Indian fruits like mangoes, jackfruit, lemons, coconuts, citrus and jamun. Animals might have been exported from India. Ibn Battuta was presented five rare sheeps of high prices that were brought from Ma'bar and Malabar.\footnote{Ibn Battuta, (Mahdi Husain), p. 208.} In Malabar, the natives made cord from the outer husk of the coconuts. It was exported to many parts of the outer world.\footnote{Duarte Barbosa, Vol. II, pp. 90-91.} Cords made of coconut husk were exported to western Asia where they were employed in shipbuilding industry.\textit{Dhows} were not nailed but stitched with these cords.

**Imports**

Indian commodity structure was more oriented towards exports. Almost everything of necessity was produced in India. Only a limited section of Indians enjoyed access to capital. It discouraged imports into India. Therefore, Indian imports were limited to selected exotic items and war animals, which were demanded by the ruling elites. Spices, aromatics were imported for re-export to foreign destinations. Horses and elephants were imported from western Asia and Ceylon respectively. Spices and aromatics came from southeast Asia. China sent silk and porcelain. Besides pearls, precious stones, gold, silver and copper were the other chief imports of India.

Indian rulers required war animals like horses and elephants in large numbers. Islamic invasions and the emergence of small kingdoms in south India necessitated employment of war animals in an era of continuous warfare. Indians were poor in horse breeding. They reared their horses on

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\footnote{Ibn Battuta, (Mahdi Husain), p. 208.}

\footnote{Duarte Barbosa, Vol. II, pp. 90-91.}
boiled rice and vegetables. The horse merchants were clever enough not to bring any farrier with them. It would have affected their trade. They did not even let any farrier come to India. As a result, there was a huge demand for good horses in India. These horses came from Bahrain, Yemen, Iraq, Suhar, Aden and Persia. Horses always accompanied men on their voyage from west Asia to India. Though Persia, Iraq and Arabia were the main exporters of good horses to India, yet Marco Polo points out that people of Anin in China sent good number of horses to India and earned large profits. The horse merchants earned sizeable profit, and were even in a position to bargain with the native rulers. Malik-ul-Islam Jamaluddin entered into an agreement with Sunder Pandya to bring 1400 horses annually from Kish and 10,000 horses from Persia, Bahrain, Hormuz and Kulhat. These imported horses fetched price upto 2,200,000 dinars, which were collected from temples and courtesans in south India. The rulers also promised to compensate the horses lost on a

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160 Marco Polo, Vol. II, p. 345. Nkitin also records that in India, "Horses are fed on peas; also on khichris, boiled with sugar and oil; early in the morning they get shishenivo. Horses are not born in that country, but oxen and buffaloes; and these are used for riding, conveying goods, and every other purpose." Nkitin, p. 10.


162 Al-Qalaqashandi, p. 87; Marco Polo, Vol. I, pp. 83-84; Vol. II, p. 44.

163 Horses were introduced in Arabia from Syria. Horses were loved for their speed and loyalty. They were important for any Bedouin raid (ghazw). A common saying in Arabia advises that in case of shortage of drinking water, it should go to horse than one's child. Phillip K. Hitti, History of the Arabs, p. 20-21.


165 Wassaf in The History of India as Told by its Own Historians, Vol. III, pp. 33-34.
voyage. Thus, Ma'bar was a major importer of horses from all quarters.\textsuperscript{166} Ankola, Mirjan and Honnavara in Vijayanagar received \textit{bahri} horses.\textsuperscript{167} Sind received horses from west Asia. Balban sent his son to Sind to ensure a regular supply of war horses.\textsuperscript{168}

War horses were central to medieval warfare. Simon Digby argues that the military superiority of Delhi sultanate depended upon its control over the supply of war animals.\textsuperscript{169} Malik Kafur fetched 20,000 \textit{bahri} horses in his invasion on Warangal in 1310 AD. Rudradeva also promised to supply 1,000 horses annually to Delhi.\textsuperscript{170} Nkitin came across a bazaar held annually at Piriatyr (Deccan) where merchants brought as many as 20,000 horses for sale.\textsuperscript{171} The Ayyavoles were also trading in horses in south India.\textsuperscript{172} The ruler of Thana engaged corsairs to launch their plunder of sailing vessels from his ports with a covenant that captured horses would be handed over to him.\textsuperscript{173}

Elephants were another important weapon in medieval warfare. Employed primarily to breach forts and break enemy lines, they were also used for ceremonial purposes. Elephant fights were also staged as a

\begin{footnotesize}
\textsuperscript{166} Al-Qalaqashandi, p. 78.
\textsuperscript{167} S.R. Rao, op. cit., p. 225.
\textsuperscript{169} Ibid.
\textsuperscript{170} Ibid., p. 48.
\textsuperscript{171} Nkitin, pp. 12-13.
\textsuperscript{173} Marco Polo, Vol. II, p. 395.
\end{footnotesize}
spectacle for the king. Cosmas observes that in India two elephants were set with pair of upright timbers with a great crossbeam fastened to them. These elephants were then incited to thrash each other with their trunks. Chau Ju-Kua speaks of a house built upon elephant's back. According to him, the Cholas had 60,000 elephants in their army. The figure seemed exaggerated, yet the number must be large. The Bahmanis and Delhi sultanate were said to have 3,000 war elephants each in their pilkhanas. Elephants were captured from Bengal, south India and Pannah in Rajasthan. The elephants from Ceylon were admired for their war skills. Abdur Razzaq informs us that merchants went to Ceylon in search of said elephants. The prices of elephants varied according to their heights and skills.

Spices constituted a major part of India's imports. India did have her native sources, yet spices were obtained from southeast Asia. Tome Pires opines that pepper of Sunda was better than that of Cochin.

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174 Cosmas, (Cathay and the Way Thither), Vol. I, p. 231. Elephants were used as pack animals. They carried heavy loads like tents. Almost all the doors of forts had elephants' spikes to ward off elephants strike. Simon Digby shows as to how elephants could be used to ford flooded rivers. Swift currents of river could result in loss of animals and soldiers. According to Afif, the elephants were deployed in two chains, attached by ropes. One chain stood upstream whereas the other stayed downstream. The chain of upstream broke down the speed of stream. Chain of elephants standing downstream could act as net in case any soldier or animal was caught in currents. For more details see Simon Digby, op. cit., p. 21.

175 Chau Ju-Kua, p. 96.

176 Simon Digby, op. cit., pp. 56-76.

177 Ibid., pp. 65-68.

178 Abdur Razzaq, p. 20.

Java, Sumatra and Malacca. It also exported pepper to India. Java was abundant with camphor, cinnamon, cubeb and cardomom. Cloves were also used for its medicinal properties. It was used to cure tooth decay and bad odour from the mouth. Chau Ju Kua informs us that the best cloves came from Arab countries and it had the property to remove bad odour of the mouth. High officials even put cloves in their mouth when they represented their cases before the Emperor. Brunei was sending camphor to Vijaynagar, Malabar and Deccan. The natives of Sumatra, with sufficient amount of past experience, knew how to extract good camphor. Marsden records that people ascertained with a simple strike of a stick whether a tree contained camphor or not. Camphor was divided into many categories depending on its qualities. The finest quality had little heterogeneous particles. Even in modern times, the finest camphor could get around two thousand dollars in the markets of Canton. Cambodia was famous for fine cloves.

182 Ibid., p. 123.
187 Chau Ju-kua, p. 209.
189 Marsden, History of Sumatra, p. 21.
Ibn Battuta states that Indians took cinnamon washed down from the mountains of Ceylon without paying anything in return but clothes. In fact, the textile industry of India mainly attracted the flow of spices from southeast Asian countries. Indian clothes were a prized commodity in southeast Asia. Prior to the emergence of the Malacca empire, Indian merchants directly traded with these islands. However, Malacca soon started collecting the merchandize from neighbouring islands and emerged as an important intermediary. Indians obtained spices from Malacca and the latter acquired clothes in return. Tome Pires remarks that Malacca and Cambay were so inter dependent on each other that none could survive without the other.\textsuperscript{191}

India imported incenses, saffron, madder, rose water, dried roses, \textit{putchuk}, musk and asafoetida. Western Asia and Africa sent incense, saffron, madder, rose water, dried roses and \textit{putchuk}. Incense was used in making sticks for burning before idols. It was greatly valued in China and India. Medina,\textsuperscript{192} Dufar,\textsuperscript{193} Yemen,\textsuperscript{194} Somal\textsuperscript{195} and Shih\textsuperscript{196} were important sources of incense for India. Asafoetida, saffron and rosewater were called \textit{turuska} in Vajayanti and this hints at their middleeast Asian origin.\textsuperscript{197} In Southeast Asia, musk was obtained from Pegu, Ava, China

\begin{footnotes}
\begin{enumerate}
\item Tome Pires, Vol. I, p. 45.
\item Ibid., p. 227.
\item Marco Polo, Vol. II, p. 445.
\item Neville Chittick, ‘East African Trade with the Orient’, in D. S. Richards, op.cit., p. 93.
\item Duarte Barbosa, Vol. I, pp. 154-156.
\item V.K. Jain, op. cit., p. 98.
\end{enumerate}
\end{footnotes}
and Ceylon. Aloes wood oil, used in perfumes, was brought from Java and Ceylon. Aloes wood of Cambodia fetched 200 dinars per man in India. Even Champa’s aloes wood was highly prized in Calicut. Southeast Asia also sent sandalwood. Bengal obtained sandalwood for Java in return of her clothes. Sumatra was another important source of sandalwood.

Ambergris, also called dragon saliva in Chinese literature, was imported into India from Sacotra, Madagascar and Oman. There are many legends connected with the ambergris. Chinese considered it ‘spittle of dragon.’ According to Chau Ju Kua, ambergris used to be white when fresh, red on becoming a bit stale and black when it became old. Ambergris is a waxy substance, secreted by the intestinal tract of the sperms of whale. It was used in perfumes and medicines. It was a general belief that ambergris enhanced the quality of perfume. Chau Ju Kua considered it important in holding fragrance. It was commonly used in incense sticks that were employed in rituals all over the world.

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199 Al-Qalaqashandi, p. 81.
200 Al Masudi in *The History of India as Told by its Own Historians*, Vol. I, p. 23.
203 Stefano, p. 7.
205 Chau Ju-Kua, p. 237.
206 Chau Ju-Kua, p. 237.
imported ambergris from western Asia and Africa and further re-exported it to southeast Asia and China, where existed a considerable demand for such products.

In the preceding pages, we have discussed how Indians had innovated indigenous methods alongwith sericulture to meet the demand of silk. Nevertheless, China remained the prime source of good silk for India. Marco Polo saw 1000 cart loads of silk coming to Cathay in one day alone.²⁰⁷ Ibn Battuta remarks that silk was found in plenty in China. It was even used by beggars and monks. If there were no international demand for silk, certainly it would have no value at all in China.²⁰⁸ Chinese obtained their silk from mulberry insects. These insects weaved a flossy object. After wetting it with hot water, they obtained silk threads. Chinese silk enjoyed a high reputation since antiquity. However, the production of silk underwent one major change. According to Pliny, it was a transparent gauze.²⁰⁹ In medieval times, however, it was more like satin and damasks.

Problems in the traditional Silk Route diverted the flow of trade towards the ocean. The Mongol menace made these routes extremely hazardous. Therefore, the Chinese junks brought silk upto south India. The Ayyavoles of south India were involved in silk trade.²¹⁰ They acted as intermediaries. The question remained whether or not India imported

²⁰⁸ Indians were, however, quick to develop its own sericulture. Gujarat cloth industry was heavily dependent upon Chinese raw silk upto seventeenth century. By that time, Bengal was able to supply one third of Gujarat demand for silk. The Dutch found market for Indian silk in Japan whereas the English exported it to Europe from Bengal. Ibn Battuta, (Cathay and the Way Thither), Vol. IV, p. 111.
²¹⁰ Meera Abraham, Two Medieval Merchant Guilds of South India, p. 179.
finished silk clothes from China. It is probable that India imported silk more in a raw form. There existed a vibrant silk weaving industry in India. Ahmedabad and Surat were reputed silk weaving centres. Chau Ju Kua also refers to the export of silk threads from Chola country. The royal kharkhanas in Delhi imported raw silk from China.\(^{211}\) Therefore, it is probable that silken clothes were manufactured in India before exporting them to the outside world. The emergence of Malacca diverted the flow of silk to this kingdom from where Indian merchants obtained the required quantity of silk in lieu of clothes and other merchandize.

Indian rulers and nobility had an insatiable demand for pearls and other precious stones. Marco Polo observes that Bellal kings of Dwarasamudra were always eager to buy large pearls and precious stones even at inflated rates.\(^{212}\) Similarly, the ruler of Ma’bar had more gold, gems and pearls than a city’s ransom.\(^{213}\) Pearl fisheries of Mannar were known for the finest pearls. The Cholas even invaded Ceylon to control Mannar pearl fisheries. The pearls of Hormuz also fetched high profits in India.\(^{214}\) The Chola embassy to China in 1077 AD carried pearls of various sizes and these were mostly imported into India.\(^{215}\)

Apart from pearls, Ceylon was a land of various precious stones like sapphires, diamonds, emeralds, civets, cats-eye, crystals, topaz,

\(^{211}\) Al-Qalaqashandi, p. 87.

\(^{212}\) Marco Polo, Vol. II, p. 364.

\(^{213}\) Ibid., p. 338.

\(^{214}\) Duarte Barbosa, Vol. I, p. 82.

antimony, fastisses, agates, sumbades and rubies. Pegu excelled in the art of cleaning rubies. They certainly did not perfect the art of polishing. These rubies were sent to Pulicat, Vijaynagar and Calicut for polishing, where excellent craftsmen for this work were available. Java and Ceylon exported topaz. Yellow topaz from Ceylon fetched, a good price in India, whereas the white ones were less precious and used to forge diamonds. Duarte Barbosa records that blue sapphire from Ceylon fetched handsome prices in India. According to him, the following were the prices of good sapphires in this country:

<table>
<thead>
<tr>
<th>WEIGHT</th>
<th>PRICE</th>
</tr>
</thead>
<tbody>
<tr>
<td>One weighing one carat</td>
<td>2 fanam</td>
</tr>
<tr>
<td>One weighing two carat</td>
<td>6 fanam</td>
</tr>
<tr>
<td>One weighing three carat</td>
<td>10 fanam</td>
</tr>
<tr>
<td>One weighing <em>Meitighal</em> <em>(that is about 23 carat)</em></td>
<td>350 fanams</td>
</tr>
</tbody>
</table>

India also obtained precious stones from western Asia and Africa. India imported civet, turquoises, gems and emeralds. Emerald came to

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220 Ibid., p. 224.

221 Fanam denotes both weight and currency. Fanam stands for a weight little over two carats. Eleven fanams make one Metigal and six and half of Metigals comprise one ounce. Regarding currency Duarte Barbosa uses the term to signify one real silver coin prevalent in south India (around Calicut) at that time. Duarte Barbosa, Vol. II, p. 222.
India from Africa through the Arabs (Duarte Barbosa called it a product of Baghdad). Ethiopians obtained emeralds from Blemmyes, the predatory nomads in Africa. Ethiopia exported these emeralds to India and invested the money into many other wares. McCrindle writes that emeralds came through 'Adule'. From the port of Broach, these emeralds were exported through other trading routes to Ujjain, thence to Kabul and to Hindukush and Central Asia. Duarte Barbosa adds that the finest emerald was without bubbles in it and left a brass coloured streak when touched with stone. These emeralds were as costly as diamonds in Calicut. Civet brought from Ethiopia was further re-exported upto China by Indian merchants. Arabia sent gems. Indians were very skilled in the art of inlaying precious stones and it is possible that these imported precious stones were used in making exquisite ornaments that fetched high prices both in India and abroad.

Ivory was an important and costly commodity in the Indian Ocean commercial network. It was employed in making ornaments and bridal bangles. India had her own sources of ivory. The Coromandel and Ceylon produced ivory. Indian elephants did not have big tusks. African ivory enjoyed huge demand right from west Asia to China. Cambay was a home to various skilled workers. They worked upon ivory and re-exported it to southeast Asia, China, west Asia and Africa. Ivory was also available in southeast Asian countries. It was available in Malay Peninsula, Sumatra

224 Meera Abraham, Two Medieval Merchant Guilds of South India, p. 161.
and Java. But, African ivory outweighed other ivories in its colour and elegance. It ‘show a pattern of delicate streaks’ whereas other ivories consisted of small tusk and ‘reddish tint.’

Sofala, Zeila, Berbera, Melinde, Abyssinia and Somali were main sources for ivory. Ceylon also exported some ivory. The ivory did not come to India directly from Africa. The Arabs had monopolized the African trade in ivory. They brought gold and ivory from Africa in return for rosewater, white and coarse cloths (brought from Cambay), dates, crystals and opium etc.

This is the reason why Chau Ju-Kua considers ivory a product of Tashi (Arabia) lands.

The introduction of silk into Syria, India and other countries intruded into the Chinese monopoly over silk. Porcelain, however, remained exclusively under the Chinese influence. Porcelain jars were exported from China. Being heavy and in demand, it must have been a ballast par excellence. Hudson thinks that porcelain necessitated the increased tonnage of junks. Martaban, a Chinese port, was visited by many ships to procure porcelain jars. In fact, it derived its name from the very word, martaban, applied to porcelain jar in the Arabic. Porcelain was used in

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227 Chau Ju-Kua, p. 232.
230 Ibid., p. 8.
231 Chau Ju-Kua, p. 282.
233 Duarte Barbosa, pp. 157-59.
royal kitchens of the Delhi sultans.\textsuperscript{234} Not only in the royal kitchens, Chinese \textit{martabans} were also used in common households. Ibn Battuta was served in Chinese porcelain during his journey from Multan to Delhi.\textsuperscript{235} It was a good vessel for storage. Porcelain was further re-exported from India to west Asia and Africa. Gujarat sent porcelain to Aden and Jeddah from where it was distributed in the markets of Cairo, Greece, Italy and Damascus.\textsuperscript{236}

\begin{figure}[h]
\centering
\includegraphics[width=0.5\textwidth]{Ming_Porcelain.jpg}
\caption{Ming Porcelain in Bridgeman Art Library, London\newline(Source: Microsoft Encarta)}
\end{figure}

\begin{flushright}
\textsuperscript{234} Simon Digby, 'The Maritime Trade of India', in Tapan Raychaudhuri and Irfan Habib, eds., op. cit., p. 125.
\textsuperscript{235} Ibn Battuta, (Mahdi Husain), p. 15.
\textsuperscript{236} Ibn Battuta also finds the Chinese porcelain called \textit{Sahn} in Damascus but it not clear whether it came through India or not. M.N. Pearson, op. cit., p. 11.
\end{flushright}
India imported gold, silver, copper and limited quantity of iron. Since antiquity, India remained a drain of precious metals. Islamic expansion into Africa brought African gold in the Asian markets. The Arabs obtained gold from Kilwa, Sofala, Mambasa and Melinde. Gold was also obtained for the pyramids of Egypt. Precious metals were exported into India in return for the Indian merchandize. Duarte Barbosa finds Gujaratis taking gold from Melinde, but the Arabs mainly controlled this trade. Almost all the ships from Jeddah, Aden and Hormuz carried gold and silver to Cambay. Malabar received silver and gold in return for its spices and other merchandize. Rashiduddin remarks that gold and silver were not exported to anywhere else from Malabar.

The eastern sector of the Indian Ocean was reputed for spices, aromatics, silk and porcelain. It might be possible that Indian exports were balanced with these prized commodities. But Indian textiles and its great international demand tilted the balance in favour of India. Marco Polo refers to the Chinese ships bringing gold to Malabar. During the early thirteenth century the Chinese government even tried to increase the production of silk to stop the flow of precious metals outside the country. Tome Pires also notices Gujaratis taking gold from Sumatra.

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239 Rashiduddin in The History of India as Told by its Own Historians, Vol. I, p. 68.
241 V.K. Jain, op. cit., p. 94.
Apart from precious metals, India imported iron from the mines of Sofala. Tome Pires records the export of iron and needles from China, but whether they were intended for India is not clear. Tin was available in Malacca and Siam. Copper was imported into India on a large scale. It was imported from Mecca, Jeddah, Aden and Hormuz. Marco Polo writes that ships from China brought copper as a ballast to Malabar. Gujaratis visited Martaban to obtain copper. Copper imported into India was perhaps used to make vessels and utensils, which were also in demand in western Asia.

Islamic invasions and the gradual rise of Islamic states in India created an increasing demand for slaves. They were employed as soldiers, bodyguards, sailors and domestic help and as guards in the harems. Slaves from central Asia remained a prime choice for the elites in north India. They came overland through Afghanistan. On the contrary, the

246 Ibid., pp. 43-45, 55-57.
249 Early sultans of Delhi like Qutbuddin Aibek, Iltutmish and Balban were slaves from central Asia. Slaves were important to early sultans because of the absence of skilled artisans in India. The Muslims brought many innovations with them. Bow carding of cotton, wheel spinning and paper manufacturing were new to Indian labour. Thus the invaders and new elite class found it reasonable to train their slaves for new tasks. Adoption of new technologies by Indians gradually reduced the employment of slaves. When the Mughals arrived in India, they found artisans organized in hereditary professional castes rather than slavery. For details see Irfan Habib, 'Non-Agricultural Production and Urban Economy', in Tapan Raychaudhuri and Irfan Habib, eds., op. cit., pp. 90-93.
principality of Jooner in south India received slaves from foreign countries in dhows or Indian ships. Ships brought slaves from Africa to south India. In the Deccan, habshis rose to high ranks. Simon Digby attributes survival of boabab tree in south India to the survival of non Islamic culture that came with these habshis from Africa. Apart from seasoned soldiers, Africans (the Abyssinians in particular), were excellent sailors. The Siddis of Janjira, reputed for their naval skills, came from Africa. The Abyssinians were also employed in Indian ships to ward off the pirates. The Jews in India also employed slaves. In the Geniza letters, there is a reference regarding a female slave named Ashu in India. However, it is not clear whether she originally belonged to India or was bought from western Asia or China. Another letter refers to the gift of a girl around six to be kept as a personal attendant.

India imported various miscellaneous items from different countries. Woolen carpets, woollen clothes, hats and velvet came from Persia and Arabia. Indian swords were reputed in the Islamic world, but Bengal imported krisks and swords from Java. Tortoise shell and rhino horns were prized commodities imported from Africa. Rhino horn was valued

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250 Nkitin, p. 10.
252 Ibid., p. 149.
256 Ibn Battuta, (Mahdi Husain), p. 98.
because of its supposed medicinal properties. It was a symbol of vigour and vitality. India also re-exported rhino horn further east because it grabbed huge profits even in the Chinese markets. Edible commodities were also brought from foreign destinations. A fish called *Qalb-almas* was imported from Maldives and fondly devoured in south India.\(^{257}\) Melons of Khwazirm were also transported to India.\(^{258}\) The western Asia produced plenty of dates. These dates came as ballast from there. Wine was also brought from western Asia.\(^{259}\) Ships brought quicksilver from Jeddah and Aden to India.\(^{260}\) Lac was obtained from Martaban in China\(^{261}\) and Melinde in Africa.\(^{262}\) Cowries were also imported from Maldives. These were used in small transactions in Bengal and Kashmir. When Ibn Battuta enquired from the grand *vazir* of Maldives what he should do with cowries, he was advised to send them to Bengal.\(^{263}\) Cowries were also used for commercial transactions in Kashmir.

Thus, one can see how prosperous the Indian Ocean trading world was before the arrival of the Europeans. Indians with their vast range of products were successful in extracting massive gains. Coastal areas of Gujarat, Malabar, the Coromandel and Bengal had specialized their commodity structures. Gujarat was famous for its manufactured products, cotton textiles in particular. It also


\(^{258}\) V.K. Jain, op. cit., p. 98.


\(^{261}\) Duarte Barbosa, Vol. I, p. 23.


exported indigo, leather and vessels. Malabar was famous for its spices, but it also specialized in sugar and foodgrains. The Coromandel exported clothes and silken threads. They also controlled the supply of pearls. Bengal was home to expensive clothes of cotton and silk. It also exported slaves and eunuchs. Indian imports were mainly dominated by war animals namely horses and elephants. Spices, precious stones, ivory, silk and porcelain were the other imports, but a big share of these were re-exported to foreign destinations to earn profits. For example, precious stones were imported from Ceylon and worked upon jewellery in India. These expensive pieces of jewellery catered to the demands of rich clients throughout Asia and Africa.