

## ANCIENT TRADE ROUTES OF TAMIL KINGDOM AND THE GLOBAL BLACK PEPPER SUPPLY CHAIN NETWORK WITH ITS IMPACT ON ROMAN TRADE AND ECONOMY - A SURVEY

**N.AYYANATHAN**

Research Consultant, GB Power Projects Pvt Limited, Chennai, Tamil Nadu, India

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### Abstract

*This research survey is on the India's Black Pepper Supply Chain network during sangam age and its impact on Roman trade and economy with respect to the inventory movement using heritage trade routes thousands of years ago . This multidisciplinary research work of sangam age Spice route connecting the ancient port towns of Chera ,Chola and Pandian kingdoms revolves around building a supply chain network design of a single item and multi echelon inventory movement. The process of identifying the various explanatory variables of the single traded item , called black pepper during the sangam age is the highlight of this value chain building research work. The seafaring abilities of the Tamil Merchant guilds are reviewed with the related works and excavation reports in this study. The commercial terms and trade route realities with roman shippers are presented with inscriptional evidences and literary quotes.*

**Keywords:** Sangam age Chera, Chola and Pandian Kingdoms, Black Pepper supply chain Network, Trade routes

### Introduction

The ancient Tamils were highly renowned seafarers. Tholkappiyam, the earliest and extant Tamil grammar work, denotes the Tamil practice of going on a Voyage by the expression "Munnir Vazhakkam"[2]. A number of port towns lay strewn all over the coastal line of Chera, Chola and Pandian Kingdoms and it is no wonder that Tamil land surrounded by three sides by the sea had populations evincing extraordinary interest in Voyages and seaborne trade [2].

### Review of Literature

The agro based commercial items of the ancient Tamil land that reached the countries beyond the sea, were black pepper, Pearls, Ivory, clove, sandalwood, Teak wood, Rosewood, Agil, Rice and Peacock feathers [2]. Amongst all commodities, Black pepper was the premium product and has been traded in large volumes from 1st century B.C to 3rd Century A.D as per the Sankam Tamil literature references and official records of Roman and greek geographers [2].

### Black Pepper Global Supply chain

The pepper plant is a perennial woody and spreading vine growing up to 4 metres (13 ft) in height on supporting trees or poles [3]. Pepper is native to South Asia and Southeast Asia and has been known in Indian cooking since at least 2000 BCE. [3]. Before the 16th century, pepper was being grown in India, Java, Sumatra, Madagascar, Malaysia, and everywhere in Southeast Asia. Ports in the Malabar area also served as a stop-off point for much of the trade in other spices from farther east in the Indian Ocean [3].

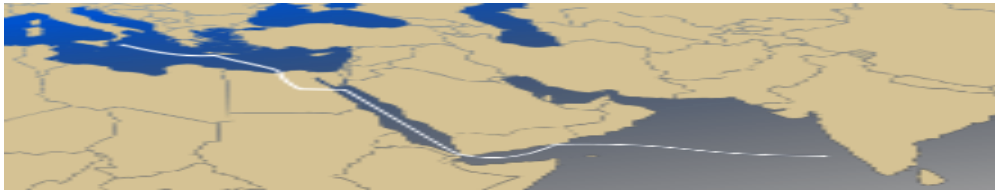
Pepper was so valuable that it was often used as collateral or even currency. In the Dutch language, "pepper expensive" (*peperduur*) is an expression for something very expensive. Pepper had been an item exclusively for the rich. Today, pepper accounts for one-fifth of the world's spice trade [3]. The commercial contacts of the Tamils had with the foreign lands 2000 years ago included countries in the West and East. The seafaring had become a part of the life of Sangam Tamils, and was quoted in the Sangam Tamil literature; ships carried cargo to the adjacent and distant overseas ports [2]. Black pepper corns were found stuffed in the nostrils of Ramesses II, placed there as part of the mummification rituals shortly after his death in 1213 BCE [3]. By the time of the early Roman Empire, especially after Rome's conquest of Egypt in 30 BCE, open-ocean crossing of the Arabian Sea direct to southern India's Malabar Coast was near routine. Details of this trading across the Indian Ocean have been passed down in the *Periplus of the Erythraean Sea*.

According to the Roman geographer Strabo, the early Empire sent a fleet of around 120 ships on an annual one-year trip to China, Southeast Asia, India and back. The fleet timed its travel across the Arabian Sea to take advantage of the predictable monsoon winds. Returning from India, the ships travelled up the Red Sea, from where the cargo was carried overland or via the Nile-Red Sea canal to the Nile River, barged to Alexandria, and shipped from there to Italy and Rome [3].

The author of this research work is exploring the trade routes connecting Korkai port of Tamil Nadu and Muzhiri Port (Kerala) . The trade routes originating from the Thandikudi mountain village to korkai and interlinking pattern with the Muzhiri Pattanam port town and other port towns are under study. Like the Silk Road the spice route of ancient Tamil Nadu comprising today's Kerala, is gaining momentum for focused research.



**Fig. 1 Unripe drupes of Black Pepper (*Piper Nigrum*)**



**Fig. 2 A Roman era trade route from India to Italy**

### **Tamil Sangam**

The Sangam age in South India is a landmark in her history. The word sangam means a group of persons or an association. The Tamil Sangam was an academy of poets and bards who flourished in three different periods and in different places under the patronage of the Pandyan kings[4]. The seat of the second Sangam was Kapatapuram, another capital of the Pandyas. It was attended by several poets and produced a large mass of literature, but only Tolkappiyam (the early Tamil grammar) has survived [4]. The seat of the third Sangam was the present Madurai. It has also produced vast literature, but only a fraction of it has survived. The Sangam literature constitutes a mine of information on conditions of life around the beginning of the Christian era [4].

### **Sangam Literature**

According to Prof. K.A. Nilakanta Sastri, the Sangam literature which combines idealism with realism and classic grace with indigenous industry and strength is rightly regarded as constituting the Augustan age of Tamil literature. It deals with secular matter relating to public and social activity like government, war, charity, trade, worship, agriculture etc[4]. The poetry in the Pattupattu was divided into two main groups: Aham (deals with matters strictly limited to one aspect of subjective experience viz., love) and Puram (deals with matters capable of externalization or objectification) [4]. The eight anthologies (Ettutogai) also are in two groups, the Aham and the Puram [4]. The towns and places of ancient chera, chola and pandyan kingdoms connected with Black pepper supply chain are referred in the above Tamil classics and are the greatest source of cultural heritage antiquity.

### **Roman Trade and Sangam Anthology**

The author of reference [4] has pointed out that the Prime source of our information about the trade between Rome and India is the Periplus Maris Erythrian Sea, a handbook written sometime between 40 and 70 A.D. for the use of merchants and shippers who sailed out of the ports of Roman Egypt on the Red Sea to trade with the eastern coast of Africa, with Arabia and India[4]. This also provides graphic details about major ports (emporium) on the west coast and the various items to be bought or sold is very brief on the east coast [4]. In the past, scholars have relied totally on written records and have neglected the archaeological and ethnological evidence of

seafaring traditions in the Indian Ocean. As a result, the relatively prolific Greek literary sources, such as the *Periplus Maris Erythraei* written in the first century AD, have led to the importance of what has been termed Roman trade in the East. It has been argued that with the conquest of Egypt by Rome in the first century BC, the Mediterranean became the home of a world power and the hub of a world economy [3].

The reference [3] states that Wheeler identified the shreds as the Mediterranean type and fabric used for transporting wine and oil and sought corroboration of this from ancient Tamil texts which mention the Yavanas importing wine into India[3]. Sangam anthology alludes to the settlement of the Romans at Kaveripattinam (Yavanar-irukkai). More eloquent is the growing archaeological and numismatic evidence on the subject[3]. Incidentally, the reason for the limited information on the east coast in the *Periplus* is mainly because, Roman ships visited the east coast only occasionally and usually stopped on the west coast [3]. The reference [4] further adds that the materials they brought or took were taken to the east coast in the Indian crafts by the middleman who had the monopoly of trade. The *Periplus* also mentions that the Indian vessels sailed regularly from the east coast to the west coast and vice-versa. Ptolemy also gives interesting information of the types of crafts used on the east coast [4]. Added to this was the land-trade route between the west and east coasts, which must have served well for the transport of the goods and the traders. The presence of the Roman artifacts like the Arretine, the amphorae jars, Roman glass, lamps and coins and the presence of the Roman resident traders need to be understood in this context[4].

'Yavanas' (Westerners in general) in many texts refers to the Greco-Romans on circumstantial evidence. One verse in the Sangam Tamil anthology *Mullaiapattu* describes them as "dressed in wide and puffed skirts, folded up and sustained by a whip with their stiff corset, fearsome looking, strong body, hard eyed, stand watch over the tiger-chain that separate the beautiful room [4]. Nakkirar, a leading poet of the Sangam refers to the statues of women lamp bearers of excellent workmanship made by the Yavanas[4]. Further interesting evidence to state that some of the merchant-sailors trading with the Mediterranean via the Red sea may have been Tamil speakers now comes from the two short Tamil Brahmi inscriptions on potsherds found in recent excavations at the Egyptian coastal site of Quseir-al-qadim in the strata associated with the Roman trade[4]. They give short proper names in the Tamil Brahmi script assignable to the first or second century A.D [4].

## Muzhiri

The literary proof of evidence for the heritage value of the trade route is presented here as follows by the author. A tantalizing description of Muziris is in *Akananooru* as quoted in the reference [3], an anthology of early Tamil bardic poems (poem number 149.7-11) in *Ettuthokai*. [3]. "The city where the beautiful vessels, the masterpieces of the Yavans [Westerners], stir white foam on the Culli [Periyar], river of the Chera, arriving

with gold and departing with pepper-when that Muciri, brimming with prosperity, was besieged by the din of war[3].

A Tamil-Brahmi script on a pot rim, reading “a ma na”, meaning a Jaina, has been found at Pattanam in Ernakulam district, Kerala, the script can be dated to circa second century CE[3]. The Kerala Council for Historical Research (KCHR) has been conducting excavations at Pattanam since 2007, with the approval of the Archaeological Survey of India. The pot-rim was found during the sixth season of the excavation currently under way. Pattanam is now identified as the thriving port called Muziris by the Romans. Tamil Sangam literature celebrates it as Muciri [3].



**Fig. 3 The Tamil Brahmi script which mentions “a ma na”.**

### **Traded Commodities and Impact on Economy**

A brief mention of the implications of the newly discovered Vienna papyrus Dating back to the mid-second century AD, contains the text of an agreement between two shippers, whereby one contracts to serve as an agent for a cargo belonging to the other and to oversee its transportation to Alexandria. The names of the merchants are lost, but the details of the cargo from Muziris which arrived in one of the Red Sea ports is interesting [5]. It comprised of Pepper, nard, ivory and textiles of the total value of 131 talents, which according to Casson(1999) could have purchased almost 2,400 acres of Egypt's farmland. It shows the private control of maritime enterprise and the compact nature of the commodities involved. The total weight of the consignment was no more than 7,190 pounds or three-and-a-half tons (Casson, 1989)[5].

Berenike, an ancient Greek city itself was an important conduit in the southern Maritime Spice Route, which served long-distance commerce ranging from the Mediterranean basin, Egypt, and the Red Sea on the one hand to the Indian Ocean, including the African coast, the Indian subcontinent [6]. Clearly, Berenike played an important role in the vibrant Old World global economy that bound west with east and south with north, both by sea and by land [6]. The political and commercial intervention by the Romans in the trading systems of the western Indian Ocean, which was made possible by their superior ship building capabilities Roman ships used the southwest monsoon for sailing directly to the Indian coast [6]. This eastward orientation of Roman interests was then seen as a prime mover to the establishment of foreign colonies in the Indian subcontinent. The two that have been postulated are Arikamedu on the Tamil coast, on the grounds of the recovery of the so-called foreign pottery from the site, and Muziris on the Malabar Coast, based on the equally tenuous evidence of

the Vienna papyrus[3].By sailing or trekking overland long distances for weeks, months, or even years per single round-trip journey, ancient voyagers and merchants were also making other important contributions: the discovery and documentation of distant lands and people. In this sense these earlier mariners and businessmen were amateur geographers, ethnographers, and anthropologists [6]. The outcome of this survey emphasizes that the need is to intensify the excavation work on the coastal sites. There is also a great need for collaborative work of the Indian and the classical archaeologists abroad in order to coordinate the evidence from both the sides of this ancient and far flung international trade. The major stakeholders and the destination market intelligence trajectory points of the black pepper supply chain with respect to heritage enriched culture routes have been identified in this research survey.

## Conclusion

The significance of cultural heritage antiquity of the proposed supply chain network of the black pepper trade and Tamils maritime activities has been established in this survey with ample literary quotes, inscriptional and well documented evidences. The value chain analysis is done in this research survey for the proposed cultural route connecting the source points and the destination port towns of the ancient trade route .Value based requirement analysis for the software product design engineering has been done with a systematic compilation work and the drawn inferences are presented for future integration. Converting this proposed pepper supply chain trade network into a web based smart heritage tourism product is the future scope of this study.

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