Chapter IV

TAXATION AND TRANSPORTATION

"In levying taxes and in shearing sheep, it is well to stop when you get down to the skin."

- Austin O’ Malley
TAXATION

Ever since the dawn of civilisation taxation has been an integral part of the revenue of all welfare governments, as the most important necessity for running a state is revenue. Unless the government gets enough resources it cannot nurture the needs of the people satisfactorily. Therefore, irrespective of the form of governance - be it monarchy, democracy, dictatorship, military or the like, taxation forms the basis of the economy of a nation. The welfare of the people of a nation often depends on the nature and measure of taxes levied and how judiciously the amount accrued thereupon is spent by the rulers concerned. A close analysis of the Sangam Literature in general and Tirukkural in particular reveals that the ancient Tamils were extremely cautious and prudent in this respect.

The revenue for the state was collected in three ways. According to Tirukkural, the ruler should be an economist par excellence. Otherwise he could not provide a good government. The three duties of the king in the economic front is to find ways to enrich the treasury by way of taxes like land tax, customs tax (ulku or cuñkam), the booty brought from the spoils of war with enemies and wastages.

He has to spend the revenue thus acquired in a judicious manner for the welfare of the citizens:
uruporulun ulku porulumtan onnart

teruporulun ventan porul (Kural 756)

and

iyarralum ittalum kattalum katta

vakuttalum valla taracu (Kural 385)

These three may be equated to Public Finance (iyarral and ittal), Financial Administration (kattal) and Public Expenditure (vakuttal) in the economic parlance.

Other sources of revenue include tirai i.e. gifts received from feudatories and independent chieftains under the control of the king, tributes and voluntary contributions.¹

The ancient rulers of Tamilnadu were very considerate and judicious while handling the problem of taxation. They employed special officers who with their retinue used to go round during the harvest season in order to collect tax from the farming community. This was essential to increase the public revenue. Tiruvalluvar has dealt with this in detail under the caption ‘porul ceyal vakai’. The term ‘vāri perukki’ in couplet 512 refers to the importance of increasing the ways and means of revenue to the state.

It is also said that if any one died without any heir, his wealth was taken by the state. Similarly, if any treasure was found and there was no legal

¹ Dikshitar, Studies in Tamil Literature, p.211.
claim over it that should also go to the state.² Naccinārkkiniyar, the
commentator, enumerates the various sources of income to the state. They are:

- the stolen articles seized from the thieves;
- one – sixth of the produce;
- collecting customs tax;
- the portion of the yield allotted to the state from the land donated to the
  Brahmins;
- seizures from enemy country by valour;
- the wealth of the people who neither had issues nor any relatives and
  Brahmins to claim it;
- when short of money by trade and commerce;
- the fine levied to the criminals and so on.³

Thus it may be presumed in olden times the rulers were never short of
revenue, unless and otherwise they squandered it.

**LAND REVENUE**

The main source of income for the state was from the fertile lands. The
agriculturists were expected to hand over one-sixth of their produce to the
government.

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(Hereafter cited as Murukan).

Prapporu Venpā Mālai (179), Muttollāyiram (73) and Tirukkuṟaḷ (143) emphasize this point in their own inimitable style. 'What is noteworthy is that Sanskrit texts mention the same rate.'

This kind of levying tax was an age-old tradition. The Old Testament of The Bible mentions that one-fifth of the produce is to be given to the King. (Bible 47:24). One-tenth of the produce is to be allotted for the God since he is the sole owner of all the lands in the world.\(^5\)

It is apparent the farmers of the ancient Tamilnadu paid their taxes willingly and voluntarily. The reason being the ruler had borne the responsibility of safeguarding their occupation and protected them from intruders from within and outside. Moreover, the return from the lands was than enough, the agriculturists were not reluctant to pay one-sixth to the state.

Most of the rulers were satisfied with this portion of collection of taxes from the land. If a ruler violated the norms of the traditional taxation, there was widespread protest from the public and poets who acted both as historians of the Tamil culture and as the conscience of the law-abiding masses. For example Puranānūru cites the instance of a ruler who levied taxes more than the justifiable amount (i.e. one-sixth) and incurred the wrath of the wise and the displeasure of his people (Puram 75).

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The next source of the income for the state was through customs. This was called cuṅka vari and there was a king in later days i.e. in the 12th century who was called cuṅkam taviritta cōlan for abolishing the practice of collecting Customs Tax.

The mercantile community which was only next to the rulers in terms of wealth and status, had a flourishing trade. According to their status they were classified as ippar, kavippar and perunḵuṭi merchants who considered to be superior in that order. This is obvious from the epic Cilappatikāram in which Kōvalan and Kannaki, the protagonists are said to belong to the perunḵuṭi type of merchants.

Customs tax also goes by the name ulku and Valluvar in Kural 756 uses this word. Again, a detailed account of the activities associated with the collection of customs tax is found in Paṭṭinappalai in detail.

The poet Kaṭiyalur Uruttirahkaṇṇanar has composed a song in praise of the Cola King Karikal Peruvaiṭṭan and his realm with special emphasis on Kāvirippumpaṭṭinam, the famed sea port.

As in the wintry season, the clouds that drink their fill at the deep, disgorge the rains on the mountains and the showers over the hills in turn flow down the sea, innumerable cargos, difficult to measure, are brought to the shore from the sea and similarly merchandise galore are moved to the coast.
from the inland area and are limitlessly piled up in the storehouses and in turn loaded in ships and barges of the ocean. In the well-guarded vast custom house, strong willed stalwarts, customs officials affix the tiger mark (the ensign of the Cola king) on the commodities and pass them aside.6

Another part in Paṭṭinappālai mentions the role of customs officials: 'There were the famed customs officials who were in charge of protecting the goods of the king.' These officials are also called ‘porul kākkum tolīl mākkaṭ’ (Paṭṭina. 120-121).

The merchandise were loaded and unloaded in the port cities throughout the day and night; hence the officials were collecting the customs without a wink of an eye, making sure that none of the goods leave the port without their knowledge. Their vigilance is compared to the mythological horses of the Sun God that never rest (Paṭṭina. 122-125).

Another information we get from Paṭṭinappālai is that the goods which were loaded and unloaded could not be measured for the simple reason that they were enormous. Hence by experience the officials levied the customs charges even without physically measuring the goods with scales. A poet calls this ‘mati nirainta Kalipaṇṭam’ (Paṭṭīna.136).

Commenting on the aspect of collection of tax, K.A.Nilakanta Sastri observes: "Foreign Trade was important and customs revenue occupied a high

6 R.Balakrishna Mudaliar, (Tr.) The Golden Anthology of Ancient Tamil Literature, Kazhagam, Madras 1960, p.133.
place on the receipts of the budget." The activities of the customs officials are vividly described in Puttinappalai and copious descriptions of the port cities of Pukār and Korhāi endorse the fact.

The fact that many references to the customs tax in Tamil literature down from the Sangam Literature to the works of the Cola period show that this tax was one of the main sources of income to the state’s revenue, of course, next only to land tax.

**OTHER TAXES**

There is no factual reference to any other kind of tax levied by then rulers. But for the Land Tax and Customs Tax, it seems that the kings did not plead or punish for more revenue to the exchequer. If at all they wanted more wealth, they would make an expedition to many other countries and plunder cities and enriched their treasury with the booty so collected.

The land tax was remitted by the people wholeheartedly with will and pleasure. The customs tax was collected on the import and export items from wealthy merchant communities; hence most of the public never felt the burden of taxation as a stumbling block for their welfare and progress.

The *Artha Sastra* of Kautilya permits the king to levy taxes and forests, fish salt and cosmetics other than imported articles. It also allows the king to
levy other new taxes if necessary. He can get heavy loans from merchants and other wealthy people.\footnote{\textit{Tirukkural}, Translated by Rev.W H.Drew and Rev.John Lazarus, Asian Educational Services, New Delhi, 1991, p.113.}

But as far as other sources of revenue are concerned, it may safely be said that none of the kings mentioned in Tamil Literature resorted to such kinds of taxes mentioned by \textit{Artha Sastra}.

Tamils did not approve of the king to receive any kind of loan from the public. Valluvar compares such a king to a highway robber: "The request (for money) of him who holds the sceptre, is like the word of him who stands with a weapon (at your breast) and says ‘give’."\footnote{\textit{Tirukkural}, Translated by Rev.W H.Drew and Rev.John Lazarus, Asian Educational Services, New Delhi, 1991, p.34.}

**LAND MEASUREMENT**

The rulers in those days should have taken steps periodically to measure the lands belonging to the people and also that of the state which were acquired either by warfare or by way of gifts from other kings.

According to \textit{Purananuru} the lands of the Kāveri basin were very fertile. "One of the poet affirms that the produce of a small area on which a small elephant could lie down was so big that seven of its kind could be fed with it (\textit{Puram} 40). Since the lands were so fertile, it was necessary for the kings to be careful in measuring them, Such measurement was vital in deciding the
amount of tax to be collected from the citizens depending upon the extent of land they owned and cultivated.

The measurement used in those times was called mā, which is one twentieth of velī. A velī, according to K.A.N. Sastri, is approximately equal to 6.74 acres.\(^{10}\) Porunararruppatī points out that heaps of paddy were found in a mā of land thereby showing the fertility of the land (Porunar, 180-82). The same idyll also mentions the measurement of velī. It says: "The versant shaped sickle was used to cut the paddy corns which were bent because of their weight: the heaps of paddy seemed like hills; these were later separated from hay and filled in large number of cūtu or kutir; this was possible because of the fertility of the land in which a velī produced more than thousand kalams of paddy, kalam being a measuring vessel with a capacity of approximately 100 litres (Porunar, 242-248).

OTHER MEASUREMENTS

As for the weight and mass, length, breadth and width, height and depth, area and volume and other such measurements, it may be presumed that the ancient Tamils of the Sangam age were well-versed with them in their own way.

The Kural, which states that if loaded in excess, even if it were to be the peacock feathers, the axle of a cart will break down (Kural.475) proves that the Tamils were far ingenious than Aristotle who said that if thrown from a higher

\(^{10}\) K.A.N. Sastri, Cultural History of Tamils, p.76.
plane a kilo of iron would be heavy and falls down first than a kilo of cotton. Aristotle’s views were later proved wrong by Galileo.

To weigh heavy and light articles the Sangam Tamils used various types of scales i.e. balance. It goes without saying that they have used separate scales big and small to weigh articles like iron and gold. The usage of balance shows that the Tamils had known well the principle of lever system also.

To elucidate that the Tamils had their own way of measurements, the Tables for linear dimension is give below:

<table>
<thead>
<tr>
<th>8 aṇu (atoms)</th>
<th>1 sand (run over by a heavy chariot drawn several horses)</th>
</tr>
</thead>
<tbody>
<tr>
<td>8 sands</td>
<td>1 immi (may be equated with a molecule)</td>
</tr>
<tr>
<td>8 immis</td>
<td>1 sesame seed</td>
</tr>
<tr>
<td>8 sesame seed</td>
<td>1 paddy grain</td>
</tr>
<tr>
<td>8 paddy grains</td>
<td>1 thumb length (3.5cm)</td>
</tr>
<tr>
<td>6 thumbs</td>
<td>1 cāṅ (21cm)</td>
</tr>
<tr>
<td>2 cāṅs</td>
<td>1 mulam</td>
</tr>
<tr>
<td>2 mulam</td>
<td>1 kól (24 fingers)</td>
</tr>
</tbody>
</table>

It is said that the Tamils had linear measuring scales of the length of 9 kōls, 12 kōls, 16 kōls, 18 kōls and 22 kōls.\(^{11}\)

\(^{11}\) Tamifnāṭtu Varalāru, p.469.
The tables for the measurement of land is as follows:

1 sq. köl  =  1 kuli
100 kulis = 1 ma
20 ma = 1 veli

Tolkappiyam mentions in Eluttatikāram a few of the measurements which begin with k, c, t, p, n, m, v and u. Ilampūranar in his commentary details them as:

Measurements used to measure rice and other grains:

- Kalam
- Tūtai
- Nāli
- Vaṭṭil
- Uḷakku

Measurements used to weigh gold, pepper, etc., are:

- Kalañcu
- Toṭi
- Nirai
- Varai
- Ummi
Other details of these measurements are not available.\textsuperscript{12}

\textit{Tūnī} \hspace{2cm} \textit{panāi}

\textit{kaṅcu} \hspace{2cm} \textit{Pataku}

\textit{kōl}

are also mentioned in \textit{Tolkāppiyam} (\textit{Tol. Eluttu}, 165,167,170,240,241)

\textbf{TAX OFFICIALS}

The management regarding Taxation is an arduous job. The officials have to adhere to strictly to the rules and regulations. They have to be unbiased and have to collect taxes without fear or favour. However, it seems that the officials who collected the taxes in those days were of high calibre and did the job with great amount of sincerity and integrity. Some of them were even given titles for their untiring efforts by the rulers. On this point it is relevant to quote the words of V.R.R.Dikshitar:

"That the management of this department was vested in a body of officials who went by the name \textit{kāviti} is evident from the \textit{Cilapattikāram}. From the circumstances in which the term is mentioned, it is reasonable to assume that \textit{kāviti} was the chief finance minister whose headquarters was at the capital and whose chief duty was probably to see that the revenues due were collected in season and in the proper way."\textsuperscript{13}

\textsuperscript{12} \textit{Tol. Eluttu}, 171, Ilam. Comm.

\textsuperscript{13} Dikshitar, \textit{Studies in Tamil Literature}, pp.208-209.
As for the word kāviti mentioned by Dikshitar, it not only denotes an official of the finance department, but also a title given by the ruler of the country for meritorious service to the state.

These are the people who judge the good and bad, maintain kindness and virtue without fail, stay away from all infamous deeds, and by their spotless character praised by everybody. (Maturai. 496-499). The term kāvitippū by the commentator Naccinārkkiniyār (Tol. Eluttu, 155) leaves us to conclude that the king while giving the title kāviti also presented a golden flower to the recipient.

Arumpatavuraikārar in his notes on Cilappatikāram says kāviti-variyyilār (Cila. 22/9) which means that those who have the title kāviti need not pay any tax to the state. This might have been a privilege enjoyed by those good people for their dedicated service.

Cēnāvaraiyar too in his commentary for Tolkappiyam mentions kāviti as an example for a title along with ēnāti another title given to warriors who excel in warfare. The kāviti may be compared to the sannidhata or samaharta of the Artha Sastra. But, K.A.Nilakanta Sastri in a specific context brings out an important difference between Artha Sastra and Kural in tax collection. According to him:

"And in striking contrast to Kautilya’s maxims on pranaya (benevolence) is the sound rule of Tiruvalluvar: A sceptered king
imploring a gift (tax) is like a robber with lance in hand, crying 'give'."\(^{15}\)

Though one can be proud of the righteousness of the officials in the system of tax collection, in later days there seemed to be a deterioration of the ways and means of collecting taxes:

"The processes of tax collection were not always free of violent and oppressive methods."\(^{16}\)

However, the works of the Sangam period indicate the rulers tempered their collection of revenue from their citizens with sympathy and understanding, paying heed to the words of the wise.

**REMISSION OF TAXES**

Another important feature of Taxation during the Sangam period is that of remission or moderation of taxes. There were times when the monsoon failed and the yield from the lands was practically nil. In such bad times or in times of famine, the agriculturists could not pay the land tax to the state. It is quite natural that people under such circumstances would plead to the authorities to review the situation and cancel the dues from them. If they fail in their attempt with the officials, then they would go to the rulers and plead their case. The kings were generous enough to exempt the people from paying taxes

\(^{15}\) K.A.N. Sastri, *Cultural History of Tamils*, p.45.

\(^{16}\) K.A.N. Sastri, *Cultural History of Tamils*, p.61.
on the advice of poets and scholars; sometimes the king himself would take the decision on the remission of taxes.

One such instance is seen in *Purāṇānūru*. A poet Nākanār who was an agriculturist by profession found the economic law of diminishing returns operating in his fields, and knowing that he could not get justice from the officials of lower cadre, approached the Cola King Killivalavan and pleaded his cause before him. After hearing what the poet said, he ordered the remission of revenue (*Purām*. 35).

The concluding part of this long poem is worth rendering into English for its message:

If at all king wins in the battle field it is only because of the toiling of the tillers who cultivate the land with plough; if rain fails or the yield diminishes, and if calamities come either by nature or by evil mongers, the world will only blame the ruler. Having known this quiet well, your should not pay heed to the words of others. Hence take care of the peasants’ families and give them shelter, then it is no wonder for the enemies to surrender and fall at your feet (*Purām*. 11/25-34).

Needless to say that the king learnt a lesson from the wise words of the poet and ordered for the remission of taxes for the agricultural lands of the poet.
The King is the life of the people as will be seen from the following stanza:

Foodstuff is not the life nor water;
The king is the life of the world,
Therefore to know he is the life,
Is the duty of the king with a large army.

(Puranam. 186)¹⁷

In Cilappatikāram we come across a sequence wherein the king himself decides on taxation. Alumpilvel was the Finance Minister to the great king Cēran Ceṅkuṭṭuvan. At the time of the consecration of the Kaṇṇaki temple at Vaṅci, the king asked his minister to accompany his officials called āyakkanakkar to go around the country and proclaim the remission of taxes in honour of the chaste lady turned goddess.

yānkum karaikēḷu nāṭu karaivīṭu ceypadēna (Cila 28/204)

The term karaivīṭu ceypadēna means the exemption of taxes due to the state from the people.

Tax without tears was the prevailing policy in those days. If any of the kings was harsh and extorted taxes from the people by unrighteous means, he was taken into task by the wise. One such instance is found in Puranānūṟu wherein the poet Picirāntaiyār advised the king in unequivocal terms.

He said:

If an elephant take mouthfuls of ripe grain on it, the twentieth part of an acre will yield it food for many days,

But if it enter a hundred fertile fields with no keeper,

Its foot will trample down much more than its mouth receives.

So if a wise king who knows the path of right take just his

His land will prosper yielding myriad fold,

But if a king not softened by his knowledge take just what he desires

Nor need prescriptions rule, feasting with song and dance

Amid his court and kindred, and show no love to his subjects

Like the field that elephant entered

His kingdom will perish and he himself will lose his all."18

Thus, a close study of the Sangam works will lead anyone to the conclusion that the kings in those days appreciated and bowed to the wisdom of the great poets and acted upon their words with wholehearted sincerity even in vital matters of governance like taxation.

**TRANSPORTATION**

Next to the taxation policy, the rulers had to concentrate on transport facilities for internal and external trade. Unless and otherwise they knew the means of transporting goods from one place to the other, they would not be in a position to levy proper taxes. The mode of transport, the goods which were
moved from the remote corners in the state and also to and from other countries, and the value of the articles brought or sent were closely studied by the officials and only after that the taxes and customs were levied. After receiving the proper tax amount, the officials sealed baggages with the respective seals of the country.

Goods were transported either by land or by water. Carts drawn by bullocks were used to carry articles from one village to another, or town since there were large number of villages and since most of them were self contained, the intercourse among them was not frequent.

In the olden days, merchants who moved goods from one place to another usually went on their carts. This group movement was called cāttu or vaṇikac cāttu. The leader or the most prominent among the merchants bore the name cāttan or cāttanār. The author of Maṇimēkalai one of the twin epics was one such, and he was called Maturai Kūlavāṇikan Cittalaic Cāttanār, meaning the leading grain merchant of Cittalai village of Maturai. There were many more cāttans among the Sangam poets. It is to be noted that the father of Kövalan, the hero of Cilappatikāram, had the name Mācāttuvan, which means a great merchant in the community.

There were references to the movements of caravans consisting of carts drawn by bullocks in Sangam literature. The young ladies in the fort of Parampu mountains owned by King Pāri used to count the number of carts which were carrying salt and other articles from seaside hamlets. (Puram 116/7-8).
The ancient Tamils were experts in making carts and chariots. They had known the importance of wheel, one of the first inventions of human beings, fully well. The cart, kāl or cakkaram, cēma accu, ārai, āṇi etc., are mentioned in various places in Sangam poetry (Puram 102,87,60 etc).

A complete description of such a cart is to be seen in Permpānārụpatai. The cart (cakāṭam) had two wheels (uruḷai) which were connected by the axle (accu), the joining place was like a big drum (kuṟatu) from where the spokes (ār) extend to the circumstance of the wheel (cūṭtu). Two long and heavy wooden planks (pār) proceed from the middle of the axle and were joined by the yoke (nukam) to which two bullocks were tied. The cart had the canopy of a big mat (tottulip pāy) for protection from sunshine and rain. The full view of the cart was just like a mountain covered by dark clouds (Puram 45-50). The large number of bullock carts which moved one by one in majesty with a variety of goods was called ‘series’ (ōlukai) (Puram 37).

The merchants who had to travel a long distance always went in groups and never ventured to go in single. The very reason for this was the fear of robbers who used to waylay the rich merchants of their goods and valuables. The eyinar of Pāḷai were adepts in highway robbery and they were merciless and never hesitated to kill the wayfarers and plunder their wealth (Akam.245/5-7). The robbers so cruel and avarice, attacked the merchants even when they travelled in groups. They had lances and arrows with which they killed the innocent traders (Akam.157/7-9). Fearing such attacks, the merchant
groups sought the help of warriors who readily accepted to accompany them on the orders of the king (Akam.89/10).

**ANIMALS USED IN TRANSPORTATION**

**Donkeys:** For most of the local trade between villages, the merchants not only used bullock carts, but also made use of donkeys to carry loads, particularly when they had to move on hilly tracts. The terms ‘porai mali kalutai neṭunirai’ (Akam. 89/12), ‘neṭuṇcevik kalutai kurunkal ērrai puraniraip paṇṭattup porai’ (Akam.343/12-13) and ‘puṇarp porai tānkiya vaṭuvāl nonpurattu anarc cevik kalutaic cāttu’ (Perumpaṇ 79-80) bear testimony to the fact that the donkeys in large numbers were used to carry goods. The bags were so heavy that their backs had the scars on them.

By the references from the Sangam poetry, we come to understand that the merchants used the donkeys for carrying salt, pepper and other articles.

**Horses:** They were also used in those days to draw carts. Sometimes wealthy persons rode on them; kings used them on the battlefront; chariots (tēr) too were drawn by the horses. Usually, horses were imported from Arab countries via the Arabian Sea by ships. However, there were no references to state that merchants used them to carry goods.

**Attiri:** Similarly ‘attiri’ or ‘kōveru kalutai’ too had been used to carry articles. This animal was considered to be status symbol and rich people like the sons of merchants rode them. Kōvalaṉ majestically rode on this attiri when he went to take bath in the sea during the Intira festival. (Cila.6/119).
The animal was mostly used in the region adjoining the sea. One of the descriptions in Akanānuru says that the attiri which painfully strode in the lagoons had wounds on its legs caused by the attacks of the whales (Akm.120/10-11). When they stood on the slush on the seaside small fish called irāl rested in large numbers under its hooves (Nar.278/7-8).

Sometimes this animal was made to pull the chariots. There is a reference that these attiris were tied to the bent yoke of a big chariot on which the lover used to meet his lady-love (Akm 350/6-7).

One of the commentators of Cilappatikāram describes this animal as ‘raja vaṅkam’ (Cil.6/119. Arumpatavurai) which explains its superiority over other animals.

**SEA TRANSPORT**

Since Tamilnadu was and is surrounded by vast sea on three sides i.e. South, East and West, by the Indian Ocean, the Bay of Bengal and the Arabian Sea respectively, it is no wonder that the Tamils became sea-faring people and made the best use of the waters. Further, a large number of rivers, big and small, with a lot of tributaries run across the length and breadth of Tamilnadu facilitating the people to transport articles through barges and ships.

*Kaṭal, paravai, puṇari, ārkali, munnir* are the synonyms of the sea which were used in ancient days; *kappal, vaṅkam, kalam, ṇṭam, nāvāy, tōpi, marakkalam, mitavai, timil, ampi, maram* are synonyms of the ship and barge.
This is enough proof to say that the Tamils had been one of the foremost of the sea-faring people in the world.  

The names mentioned for the sea and boats have the meanings as below:

- **Kaṭal** - that which is difficult to cross
- **paravai** - wide and vast sheet of water
- **punarī** - collection of different waters
- **ārkali** - having big sound always
- **munntri** - the waters of rain, river and spring
- **kappal** - the one that holds (here people and articles)
- **vaṅkam** - the one which is curved
- **kalam** - container of things
- **ōtam** - that which runs
- **nāvāy** - one which has mouth and tongue
- **tōni** - one which is curved
- **marakkalam** - container made of wood
- **mitavai** - that which floats
- **timil** - one which has a sharp back
- **ampi** - that which is beautiful
- **maram** - made of wood.

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There is an interesting argument over the word ‘kalam’ which means ship. According to Dr. Xavier Thaninayagam this word had entered into the Greek vocabulary. In the Periplus of the Erythraean Sea, the word ‘colondiaphonta’ occurs as per Fabricius, the publisher (1849); Muller read this as the same. The later edition, Fabricius changed this and said it is only ‘colandia’ and not ‘colandiphonto’ (1883). W.H. Shoff, who published the Periplus in 1912, accepted this. The Greek word ‘Kolana’ which means ships, is the plural form of ‘kolanon’. Hence it is possible that the word in Greek originated from ‘kalam’ in Tamil. With this, the learned author Thaninayagam refutes the origin of the word from Sanskrit propounded by Rajendralal Mitra (Antiquities of Orissa I p.115) and the origin from Malay language ‘koleh’ panjail (sailing ship) put forth by Pritchett (Sketches of shipping and craft). 

Going by this, the observation of Mayilai Seeni Venkataswamy in respect of the word ‘kalam’ is untenable.

While kalam, kappal, vankam are big in size and sailed in the seas, timil, ampi, etc. are used for internal trade both in seas and rivers. The boats were in various shapes; some were in the shape of elephant, some like horse and some others like lion. These were often used to ferry merchandise in the rivers.

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It is said that the ancient Tamil kings were able mariners and were well-versed with the direction of the sea winds and accordingly sailed their ships in the deep seas. A verse in Puranāṇūru speaks of a Cola monarch, who a few generations earlier to Karikālān of the Sangam age, brought the sea-wind under his control and made the voyage a simple one. (Puram 66).

Pantiya kings too were experts in the sea travel. One among them Vōṭimpalampa Nīrā Pāntiyān, was the earliest to rule over the waves on the East. His name itself means that the sea surrendered to his might and washed his feet.

If the Colas and Pantiyas brought the Eastern and Southern sea under control, it was left to the Cera kings to subdue the Western sea i.e. Arabian Sea. They sent ships and barges to the high seas for trade and received the goods brought to the western coast in ships by the Greco-Roman traders. One among the Cera kings was named ‘kaṭal pirakōṭṭiya Celkelu Kuṭṭuvan’ who won over the winds and also pirates of the ferocious sea on West.

This King Ceṅkuṭṭuvan was the son of Netuncēralātan and the Cola princess Maṇakkili. His expeditions and victory were praised by many poets. Among them Paranār sang ten verses in Patriṛuppattu; he says that the kings from North who could not win over Kuṭṭuvan however befriended some Greeks and fought the Cēran who overwhelmed them in the Western Sea.²²

The Tamils were expert ship builders. They know all the nuances of the making various types of vessels.

Ships which were bigger than those which sailed in the Mediterranean were built by Indians. A ship from the neighbouring Kalinga king Raja sailed with seven hundred people in 6th century B.C.  

The skill of the carpenters in building a ship was marvellous. The shipping industry was much developed even in the early Sangam period. We across various types of boats and ships, mostly made up of wood. When hetic sense prevailed, the carpenters used to decorate the vessels to please eyes of the onlookers (Cila.13/176).

While dealing with the various types of boats and ships of that period, author of the Periplus remarks:

"In the harbours of the Cola country are ships of the country, coasting along the shore as far as Damirike, and other large vessels made of single logs bound together called ‘Sangara’, but those which make the voyage to Chryse and to the Ganges are called ‘Colondia’ and are very large”

23 N.S.K.Pillai, Tamil India, p.225.
24 K.K.Pillay, p.207.
The fact that the ships were big and large is mentioned in Muraikkanici as ātiyar perunāvāy (Maturaï.83) and the mast and the flag on it were mentioned in Paṭṭinaappalai as micai kūmpin nacai kōṭiyum (Paṭṭina.175).

Regarding the difference in ship building of Tamils with those of China and other countries the following remarks are worth-noting:

"The greatest of achievement of Dravidians was the art of navigation. The Indian ship was very like Egyptian as we see in a fifth dynasty painting, a long and wall sided vessel with the stem and stern highly raised, and had oars arranged in hanks. The Dravidian paddle was round, not spade-like in form as in ancient China or vary long as in ancient Egypt. There are native words in the Dravidian language for the oar, sail, mast and anchor."\(^{25}\)

TIMIL

Timil is a big boat used by the elderly people to enter the sea frightening the ‘irāl’ (prawns) fish (Akam 60/1-3); this kind of boat is curved in shape and taken to the sea for fish-hunting (paratavar vēṭtam) by the fishermen (Akam. 70/1-2); at the time of dusk young girls of the fishermen community would climb on the heaps of salt to count the number of timils (boats) in the sea (Akam. 190/1-3); fishermen with killing instinct threw sharp

weapon (uṭi) on a big fish whose blood changed the colour of foul-smelling sea, and went up like a bow and came down again to the sea, lost its vigour and fell near the timil (Akam. 210/1-6); the men folk will go to the cold sea on the timil piercing the wave-road and will show the numerous stars with the help of the lamps taken with them (Akam. 240/4-7); the timil of the paratavar community went into the big sea as fast as the chariot of the lover (Akam. 330/150-16); the fishermen while sailing on a strong timil threw down a whale (curā) with a sharp weapon, which tore their net (Akam. 340/18-21); some fishermen went into the sea, setting aside the whales opted to gather valampuri chaṅku (conch) (Akam. 350/15-17); these descriptions show how the fishermen made the best use of the boat, timil.

Similarly, tōqi (Akam. 50; Puram 299; 343); puṇai (KuRu.161;222); mitavai (Akam 340; Pari.6/25); nāvāy (Maturai 83/321,379) and ampi (Nar.75, 315, 354; Puram 261, 343; Kali 103, 106) had been used to catch fish and transport them to various places.

THE CREW

Every ship had a big crew to sail it safely on the waters. The chief of the crew is called ‘mihāman’. He knew everything about the sea, ship, wind, monsoon, countries, directions etc. The sailors who accompanied him were called ‘mālumikal’.

The ship at night well illuminated looked like a city. It had flag on its mast (kāmpu) indicating the country from which it sailed. The people who
were in the duties of the ship like rowing etc. were mostly from the ‘paratavar’ community (fishermen of neytal region).

The sailors when reached any particular harbour were used to drink toddy and take rest. Narriṇai says that the ships from various countries reached the port with the help of the winds and the sailors bought the toddy (kaṇ) and drank (Nar. 295/5-6).

Though the Tamils were expert sailors they never took women along with them in their ships to other countries. Ilampuranar interprets the Tolkāppiyam line, ‘munṭir vaṭakkam makaṭuyu voṭillai’ (Tol.Poruḷ **) as while sailing on the seas one should not take ladies with him’. The strenuous effort one has to put and the dangers and difficulties on has to face when one sails on a ship may be the reason for avoiding women to travel with them.

But when the merchants returned from a successful voyage to their city, the womenfolk along with others used to welcome them with boundless joy and mirth (Pari. 10/38-39).

**HIPPALUS**

The Westerners usually preferred the month of July, according to Periplus, being a season with favourable wind. But it is left to Hippalus to find a way across the sea for the first time; when the Etesian winds blow annually from North for more than forty days in summer, the south westerly wind in
the Arabian sea is formed and blew towards the shores of Cera country. The wind is named after Hippalus who discovered the process.\(^{26}\)

**HARBOURS ON THE WEST**

On the Western side the harbours were far away from the sea. The ships were used to be anchored at a distance and the merchandises were carried by smaller boats to the harbour. Accordingly, the ships which came from Greece, Rome and Arab countries were left in the mid-sea for some days for unloading through smaller barges, resulting in piracy by the so-called kaṭampars, who were successfully overpowered and punished by the Cera Kings. (*Patirru*. 1/12-16 & 10/2-5).

The ports of the western coast mentioned by *Periplus* were *Muziris* (*Muciri, Cranganore*), *Tyndis* (*Tonți, Ponnāṇi*), *Naura* (*Cannanore*), *Nelcynda* (*near Kōṭṭayam and Bakare* (*Porakad*). The other ports of ancient Tamilnadu mentioned in *Periplus* were *Balita* (*Varkalai*), *Comari* (*Kaṇyakumari*), *Poduca* (*Pondicherry*) and *Sopatma* (*Marakkāṇam*). This is an impressive list of port cities which bears testimony to the flourishing maritime trade of Tamils during the Sangam period.

**HARBOURS ON THE EAST**

The trade with the Far East countries by the three Tamil kingdoms is of no less importance. The shipping in the Bay of Bengal was more congenial

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than on the Arabian Sea and hence the activities in Pukăr and other places on the East were quite appreciable. Schoff, the publisher of the Peripuls says:

"The numerous migrations from India into Indo-China, both before and after the Christian era, give ample ground to the belief that the ports of South India and Ceylon were in truth, as the Periplus states, the centre of an active trade with the Far East, employing larger ships, and in greater number than those coming from Egypt".27

It may be safely concluded that the Tamils of the Sangam Age had made the best use of the sea waters on the three sides for commercial purposes by means of ships and boats.

For trade with North India, the Tamils used ships and went upto Pātaliputra through the sea-route. They had contact with Kaliṅga and Benares (Vāraṇasi) also. There are references in Sangam literature of Mauryas (Akam 69 & 281) and Nandas (Akam 265) who ruled over North India during the same period.

**ACCIDENTS IN MID-SEA**

The merchants travelling by large ships and boats with a lot of merchandises faced with the risk of meeting with accidents in mid-sea due to rough weather. There are references of ships capsizing and drowning in the sea. One such incident is described in detail in Maṇimēkalai.

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A merchant, Cātuvaṇ by name proceeded in a big ship with many articles to the Eastern Islands particularly Java. When he neared the Naga mountains in the mid sea, his ship overturned and all the people on board were drowned except Cātuvaṇ. He managed to reach Naga dwelling by holding a log, a broken piece from his own ship and on reaching the shore fainted. The people there, were aborigines practising cannibalism. Fortunately, after recovery, Cātuvaṇ, a master of many languages spoke in their tongue, advised them not to eat fish, meat or any such thing and also to abhor drinking toddy. Nagas learnt their lesson and after a few days Cātuvaṇ was sent to Pukār by another ship with due respects and presentations. (Maṇimēkalai, Āṭirai Piccaiṭṭa Kātai).

Maturaikkāṇci also describes a ship troubled by stormy weather. A cyclone struck the ship whose ropes were loosened, the mast uprooted, the wooden planks battered and at last dashed on a rock. (Maturai. 375-379).

While describing the twilight, a poet Kollan Aḷici, says that the fading of mountain in the darkness of the night was like the drowning of a ship in the dark sea. (Kuru.240). The comparison of ship with the mountain brings to our knowledge the enormous size of the ship.

**LIGHTHOUSES**

Since the maritime trade flourished well in Tamilnadu, it is no wonder that there were lighthouses at many places along the coastal region. Scientific
and sophisticated instruments were not available for the sailors in those days and hence they had to rely mostly on the lighthouses along the seashores.

The lighthouse at Eyiṟpaṭṭīnām, described by Kaṭiyalūr Uruttiraṅkaṇṇaṅṇār, was so tall that it looked like a pillar erected to hold the sky from falling down; though it was cemented with lime (cuṟṇam) it did not have a ceiling (vēyā māṭam). At nights people used to burn a torch on the top of the building thereby showing the direction to the ships down the sea. The lighthouse had steps to go to the top. (Perum.346-350).

Ilankōvatikal in Cilappatikāram while describing various illuminations in the city of Pukār at night mentions about the light beamed from the lighthouse also. Aṭiyārkkunallār while explaining the line says that it is intended for showing the direction for the captains of the ships, whose languages were different (Cila.6/141 comm.). The author uses the word ‘kalaṅkarai viḻakkam’ for the lighthouse.

The lighthouse was built on strong, firm and high sands on the shore and on the top was the beacon light showing the direction to the ships which looked like a big city and splashed through the deep water (Akam.255/1-6).

However, when there were no lighthouses on the seashore, the fishermen made some alternative arrangements. In one of the Nāṟṟinai poems, there is a reference that when the fishermen went for fishing on the waves at night they left a torch at a height on the shore, which was burning till the sunrise (Nar.319/6-8).
In the light of the above discussions, we may safely say that the ancient Tamils during Sangam days, the then rulers had been very meticulous in levying taxes and collecting the same; they were judicious and equitable taking into account what the traffic could bear and never found to be a burden for the tax payers. Similarly, on the transportation front, in the absence of the scientific advancement in carriers and communications, the system prevalent was conventional, but it never failed to cater to the requirements of trade and commerce for movement of goods, particularly in the sea transport. The ancient Tamils excelled others in shipping, facilitating free flow of commercial activities even to far-off countries.