ARCHAEOLOGY *of* EARLY HISTORIC SOUTH ASIA

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Pragati Publications · New Delhi
in collaboration with
Centre for Archaeological Studies and Training
Eastern India

Genesis and Development of Urban Processes in the Ancient/Early Historic Tamil Country

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Introduction

The ancient Tamil country experienced widespread human occupation from the iron age onwards as evidenced by the distribution of burial and habitation sites categorised as 'megalithic', and characterised by Black and Red Ware pottery and iron implements. The succeeding early historic period (c. 300 BC to c. 500 AD) witnessed the appearance of an entirely new range of material cultural assemblages at a few sites, while majority of the sites retained their 'megalithic' character. The presence of political powers, growth of complex patterns of internal and external trade and exchange networks, emergence of urban settlements, the rich material cultural assemblage, and efflorescence of literature have prompted scholars to designate this period as 'classical', and the developments as 'civilisation'. This paper is an attempt to trace the genesis and development of the urban processes in the ancient Tamil country through a synthesis of the existing literary and archaeological data.

The Region

The ancient Tamil country encompasses the area demarcated by the Arabian Sea in the west, the Bay of Bengal in the east, the Indian Ocean in the south and the Venkatam (Tirupathi) hills in the north (roughly to the south of 13° Latitude N.), comprising the modern day states of Tamil Nadu and Kerala.

The region, marked by the discontinuous gneissic hillocks of the Eastern Ghats and thickly forested, continuous mountains of the Western Ghats, is watered mainly by rain-fed rivers such as the Kaveri, the Palar, the Vaigai and the Tamaraparani on the east, and the Periyar and the Ponnani on the west. Apart from its geographic isolation in the southern extremity of the subcontinent, the early historic *lingua franca* of this region, Tamil has prompted scholars to treat this as a distinct, homogeneous entity.

Sources

Literature

The Sangam literature, an anthology of love and war poems in Tamil, serves as a primary source of information for the early historic period, which is otherwise called the Sangam Age. The major works of Sangam corpus are, *Ettutogai* (Eight Anthologies) and *Paththupattu* (Ten Idylls), collectively known as *Pathinenmelkanakku* (18 major works). The literature narrates the day-to-day life of the common people residing in five-fold landscapes, namely, *Kurinji* (the hilly zone), *Mullai* (pastoral zone), *Marutam* (the riverine zone), *Neytal* (coastal zone) and *Palai* (the arid zone), as conceptualised by the poets. The first three centuries of the Christian era is the widely accepted date for the composition of the Sangam literature, though there are debates about the exact chronology. The *Pathinenkizhkanakku* (18 minor works), and the epics of *Silapadikaram* and *Manimekalai* are the post-Sangam works, assigned to the post-third century AD period. *Tolkappiyam* is an ancient Tamil grammatical work and its chronology has been an issue of debate. Historians, linguists and scholars of Tamil literature have extensively investigated this literature to understand the socio-economic life and formations in the Tamil country (Srinivasa Iyengar, 1930; Ramachandra Dikshitar, 1936; Chelliah, 1946; Kangasabhai Pillai, 1966; Singaravelu, 1966; Subramanian, 1966; Champakalakshmi, 1975–76, 1996; Nilakanda Sastri, 1972; Zvelebil, 1974; Hart, 1979; Gurukkal, 1995; Ramanujan, 1996).

The texts of Greco-Roman origin, *Periplus Marei Erythrei* (Casson, 1989), Ptolemy's *Geography* and Pliny's *Natural History* also offer valuable information on the overseas trade contacts between the Tamil country and the western world (the Indian Ocean trade) in the early historic period (Warmington, 1974; Begley and DePuma, 1991).

Archaeological Evidence

The explored and excavated archaeological sites in Tamil Nadu and Kerala provide useful data on the early historic settlements, their character, and the material assemblage of the period Gururajarao, 1972; Leshnik, 1974; Ramachandran, 1980; Raman, 1991; Moorti, 1994; Rajan 1994, 1997, 2001; Rajavelu and Thirumoorthy, 1995; Begley et al., 1996; Gurukkal and Varier, 1999; Sridhar, 2004). The archaeological sites of this period can be classified into following categories:

1. Megalithic burial sites of early historic period (e.g. Kodumanal; Rajan, 1994).
2. Megalithic habitation sites of the early historic period. Sometimes burial and habitation sites occur in the neighbourhood (e.g. Kodumanal, and S. Pappinayakanpatti; Selvakumar, 1996, 1997).
3. Non-megalithic sites with 'new type' of material assemblage, not found in the 'iron age' sites (e.g. a portion of Northern Sector at Arikamedu, Period II at Pattanam; Selvakumar, *et al.,* 2005).
4. Rockshelters/caves with beds carved for the Jaina monks and Tamil-Brahmi inscriptions, e.g. Pugalur and Sittanavasal (Mahadevan, 2003). Short inscriptions of Tamil-Brahmi characters also occur on the pottery from habitation sites.
5. Coin hoards sites with Roman (Turner, 1989) and punchmarked coins (e.g. Eyyal and Valluvalli in Kerala). Besides, there are coins of the Cheras, the Cholas and the Pandyas of the Sangam Age and Satavahanas reported from the excavated sites (Krishnamurthy, 1997; Mitchiner, 1998).

Definition of Terms

Early Historic

The term 'early historic' is defined as a chronological unit spanning from c. 300 BC to 500 AD. The early historic period in the Tamil country has been variously labelled as 'Sangam age', 'megalithic' and 'Indo-Roman period' based on the respective evidence categories – the Sangam literature, megaliths and Roman artefacts. However, it is being realised that these evidence categories point to the same cultural period (Gurukkal, 1989). 'Megalithic'

is not treated here as a distinct chronological period, but a burial tradition that began in the iron age and continued in the early historic period. The early historic period may be divided into Phase I (pre-1st century BC), and Phase II (first century BC to third century AD, coinciding with the 'Indo-Roman' or Indian Ocean trade, and Phase III (post-third century to 500 AD the post-Sangam age, with each of these phases witnessing distinct levels of development.

Urbanism and Urbanisation

Urbanism and urbanisation have been the focus of anthropological and historical studies (Weber,1922; Wirth, 1938; Childe, 1950; Mumford, 1961; Rapport and Overing 2000: 374–380). Gordon Childe defined urbanisation/ early cities as distinguished by craft specialisation; emergence of elites, who did not involve in subsistence related activities; generation of social surplus through taxes or tribute; presence of monumental public buildings; use of a writing system; rise of long distance trade; and the appearance of political organisation (Childe, 1950). Childe's ten criteria on urbanisation have been criticised and revised now by several scholars (Venkatasubramanian, 1988; Parasher-Sen, 1989: 124). Wirth (1938) defined city as 'a relatively large, dense, permanent settlement of socially heterogeneous individuals'. According to Sjoberg (1960), pre-Industrial cities were characterised by government, religious centres and literate elites rather than dense concentration of population focussed on manufacturing and commercial activities.

Urbanisation is a process that leads to the emergence and sustenance of cities, which are differentiated by higher population density, commercial and manufacturing activities, among other characteristics (Carter, 1983; Fields, 1999). Cities are to be viewed as an integral part of the society rather than separate entities (Weber, 1922). Hence, the recent urban studies focus on the processes (substance) that influenced the entire society rather than cities (forms) (Al-Zubaidi, n.d.).

Current Theories on the Urbanisation in
Ancient Tamil Country

The Harappan civilisation that flourished in Pakistan and north-western parts of India is considered to represent the first urbanisation in South Asia, while the development of cities in the early historic North India, which

appears to have had a considerable influence on the entire South Asia is treated as the second urbanisation (Lal, 1984; Thapar, 1984; Erdosy, 1988; Chakrabarti, 1998, 1999; Sharma, 1994; Allchin, 1995). The source of early historic civilisation/urban process or the emergence of cities in ancient Tamil country has evoked a great deal of discussion among scholars. These deliberations have centred on the internal dynamic, e.g. growth and interaction among the micro regions within the Tamil country, and external dynamic such as migration of people, ideas and artefacts from North India, and trade contacts with the outside regions (Begley, 1986; Champakalakshmi, 1996; Venkatasubramanian, 1996; Gurukkal, 1998).

Champakalakshmi (1975–76; 1996: 9) contends that the urban forms of ancient Tamil country were not a result of internal growth, but a 'secondary generation' due to inter-regional trade (with Andhra and Ganga valley) and overseas trade with the Mediterranean region. In her view, there was no state formation in the early historic Tamil region and the society was largely 'tribal' in nature (Champakalakshmi, 1996: 16), unlike Andhra and the Deccan regions, which have evidence for 'secondary state formation'. She also adds that the influence of the Mauryan polity was minimal in the Tamil country and the impact of overseas trade was higher.

Gurukkal (1989, 1995), who has studied the socio-economic formations in the Tamil country, contends that the ancient Tamil society was in a 'tribal stage' where relationships of productions were kinship-based and the political formations were at chiefdom level, not representing the 'early state'. He highlights the influence of the Mauryan contacts in the early historic Tamil country (Gurukkal, 1998), and argues that the state formation took place mainly in the early medieval period when the orthodox religions and wet agriculture took roots in the Tamil country.

Seneviratne (1993) lays emphasis on the coalescence of internal and external factors in the emergence of early political formations (and urbanisation) in Tamil country. Giving primacy to the role of internal dynamics, he argues that the interactions among micro zones led to the integration of smaller settlements ('*kudi*') into macro eco-zones ('*nādu*'), and the formation of 'areas of attractions' in the coastal deltaic plains due to the internal developments.

Morrison in her synthesis of the early historic period argues that the urbanism in south India had an indigenous growth (1997: 94). She states that the interpretations of the distribution of NBPW "can also be seen as uncritical archaeological transformations of arguments by historians about

the primacy of the Gangetic plain as an exporter of 'civilisation' to central and southern India, arguments that range from a notion of simple cultural and political 'influence' to outright control".

Rajan (2001) on the other hand put his argument that the states of Tamil country were well known in the third century BC and the foundation of which would have been laid much before around 500 BC. This argument is based on the fact that if the southern kingdoms were significant enough to be mentioned by the Asoka in third century BC, then their antiquity must go back to a much earlier period.

Ray is of the view that there must have been some local developments that led to urbanisation in the Peninsular India. She comments that it is important 'to unshackle the study of Peninsular India from its moorings in Mediterranean trade on the one hand, and early historic North India on the other' (Ray, 2002: 351).

Gogte (2002), based on the XRD-analysis, proposes that Rouletted Ware and the related fine ware pottery from Arikamedu, Alagankulam and other sites of the Coramandal coast, were produced in the Bengal region. Citing the similarity of bricks and other materials from Tamil Nadu and Bengal region, he argues that the megalithic people might have procured horse and Rouletted Ware in exchange of iron weapons from the traders from Bengal. He gives importance to the external factors as the catalytic agent for the emergence of cities, when he states that: "these 'trader-kings' (from Bengal) must have maintained an army, established ports at several places such as Arikamedu, and Kaveripumpattinam on the east coast of India between 250 and 200 BC and continued to operate them at least up to 200 AD. Thus they controlled the maritime trade from Bengal to Sri Lanka. They also ruled a sizeable region of South India during the early historic period. Trade in this instance could be described as a 'state owned' enterprise." (Gogte, 2002: 64)

Urban Centres in Ancient Tamil Country – A Review

The ancient Tamil country had several settlements that could be characterised as urban based on several criteria such as site size, brick architecture and manufacturing and trade activities (Champakalakshmi, 1996: 117–138). However, failure in identifying the settlements mentioned in literature on the ground, lack of horizontal excavations, absence of published
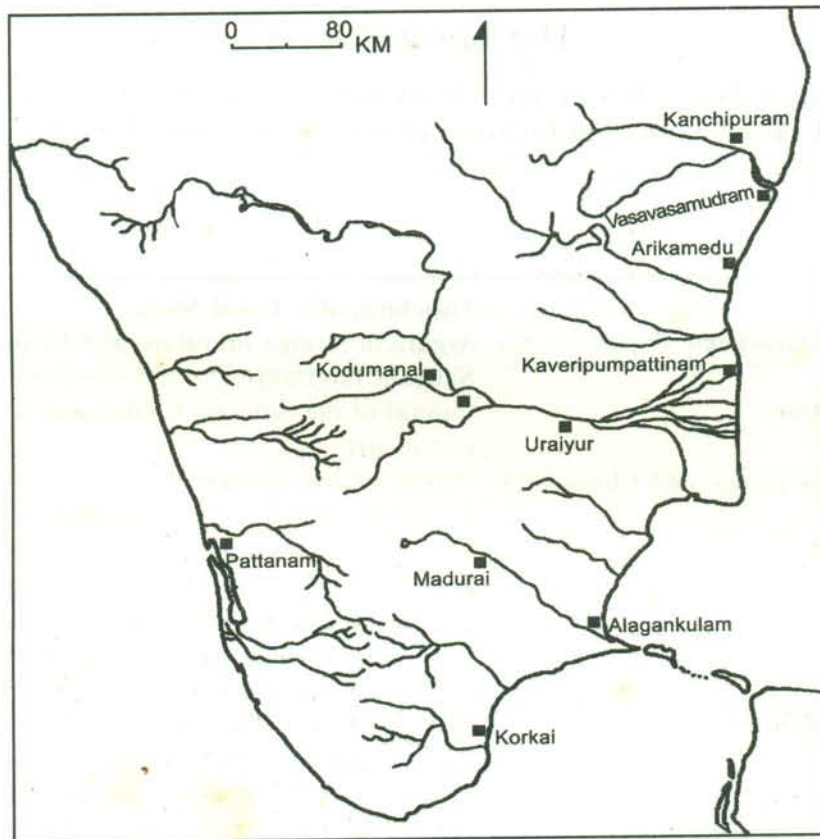
Fig. 1. Important Early Historic Sites in South India

reports on the excavated sites and paucity of data on settlements dimensions, precludes the possibility of drawing up a complete picture of the urban settlements in the ancient Tamil country. A review of a few important urban centres in Tamil country is presented here based on the published literature and the information from the Sangam literature (Fig. 1). In categorising the urban centres not only settlement size, but also their functions as political, commercial and manufacturing centres, and the presence of contemporary settlements in the micro region around the urban centres are taken into consideration. Most of the settlements are located in the river valleys, which acted as core regions, while the peripheries have very few urban settlements.

The Kaveri Valley

The Kaveri valley, ruled by the Cholas has four major urban settlements, namely, Uraiyur, Karur and Kodumanal in the mid-course of the Kaveri River and Kaveripumpattinam in the delta.

Uraiyur

Location	Tiruchirapalli, Tamil Nadu.
Literary Reference	Argaru in foreign literature and Uraiyur in the Sangam Literature
Site Function	Capital of the Sangam Cholas and a commercial centre
Cultural Sequence and Chronology	Period I-Early historic
	Period II- Medieval (IIA and IIB)
	The excavators do not provide any chronology. Based on the presence of the Rouletted Ware and Tamil-Brahmi inscriptions, the early historic period could be dated between second century BC and second century AD
Material Remains	BRW, RCP and RW
	Pottery with Tamil-Brahmi inscriptions, beads of glass, semi-precious stones, shell and terracotta, bangles of shell and terracotta, a brick structure identified as a dyeing vat
Reference	Raman, 1988; Champakalakshmi, 1996; Mahadevan, 2003

Kaveripumpattinam

Location	Thanjavur, Tamil Nadu, near the mouth of river Kaveri
Literary Reference	Camara of Periplus and Khaberis Emporion of Ptolemy. Puhar and Pattinam in the Sangam literature
Site Function	Port town, commercial centre and political capital of the Sangam Cholas
Excavation details	Several sites around Kaveripumpattinam such as Vanagiri, Vellaiyaniruppu, Pallavaneswaram, Sayavanam, Manigramam and Kilaiyur were explored and a few of them excavated. Underwater explorations were also undertaken

Cultural Sequence and Chronology	Period I: 300 BC to 300 AD
	Later Periods: up to twelfth century AD C^{14} date of 315 BC on a wooden sample from the wharf
Material Remains	Brick-built structure identified as a wharf at Kilaiyur
	A semi-circular brick structure at Vanagiri
	BRW and Rouletted Ware
	Chola coins and a copper coin of Augustus Caesar. Beads and bangles
Reference	Soundararajan, 1994; Tripathi *et al.*, 1996

Karur

Location	Tiruchirapalli, Tamil Nadu on the banks of the Anporunai, a tributary of the Kaveri.
Literary Reference	Vanji in the Sangam literature, and Korura of Ptolemy
Site Function	Political capital of the Cheras and commercial centre.
Cultural Sequence and Chronology	Period I: second century BC to first century AD
	Period II: 1st to 2nd century AD
	Period III: 3rd to 4th century AD
	Period IV: 5th to 14th century AD
Material Remains	Roman amphorae, Rouletted Ware, and BRW with graffiti, Russet Coated and Painted Ware. Numerous coins on the riverbed. A brick pavement with a drain
Reference	Nagaswamy, 1995; Rajavelu and Thirumoorthy, 1995

Kodumanal

Location	Coimbatore, Tamil Nadu on the banks of the Noyyal, a tributary of the Kaveri
Literary Reference	Kodumanam of the Sangam literature as a famous bead-making centre
Site's Function	Commercial and manufacturing centre
Cultural Sequence and Chronology	Period I: Megalithic 250 BC-100 AD
	Period II: Early Historic 100 AD-250 AD

Material Remains	BRW and RCP Beads in various stages of manufacture Iron crucibles and furnaces A few punchmarked coins, and Roman silver coins Pottery with Tamil-Brahmi script and graffiti marks
Reference	Rajan, 1994; Rajan and Bopearachchi, 2002; Mahadevan, 2003

The Vaigai River Valley

The river Vaigai that flows in the southern region of Tamil Nadu mainly has two urban centres, Madurai and Alagankulam on its banks.

Madurai

According to the literature, the capital of the Sangam Pandyas was Madurai, a well-planned city with markets and fortification (Devakunjari, 1979). However, excavations at Kovalanpottal in Madurai have not revealed any substantial evidence in the form of architecture, but for a few megalithic burial urns, a Sangam Pandya coin and two sherds with Tamil-Brahmi script (Sridhar, 2004; Rajavelu and Thirumoothy, 1995). The concentration of rock shelters near Madurai with Tamil-Brahmi inscriptions suggests that Madurai must have been a major commercial centre.

Alagankulam

Location	Ramanathapuram, Tamil Nadu on the northern bank of the river Vaigai
Identified with	Nellin Unur in the Sangam literature
Site's Function	Port town and commercial centre
Cultural Sequence and Chronology	Period I: 400 BC to 100 BC Period II: 100 BC to 500 AD (C-14 dates and based on pottery)
Material Remains	Amphorae, NBP Ware, red Rouletted Ware. Roman coins and local coins
Reference	Nagaswamy, 1991; Abdul Majeed et al., 1992

The Tamraparani Valley

In the down south, the Tamraparani River played an important role in the early historic trade network. Adichchanallur is an important burial site covering a large area. However, no related habitation site has been identified.

Korkai

Location	Tirunelveli, Tamil Nadu
Identified with	*Kolhoi* of Ptolemy and *Colchi* of the *Periplus*
Site Function	Port city of the Pandyas, secondary capital of the Pandyas
Cultural Sequence and Chronology	Period I: 300 BC to 400 AD
	Period II: 400 AD to 1000 AD
	Period III: 1000 AD to 1400 AD
	(C^{14} date of 785 BC – 2755 ± 95 years)
Material Remains	Brick structure above a ring well
	NBPW (?) or a variant of Rouletted Ware
Reference	Nagaswamy, 1970; Sridhar, 2004

The Palar Basin

The lower reaches of the river Palar in Tamil Nadu, mainly covering the old Chingleput district have yielded two important early historic settlements—Kanchipuram and Vasavasamudram.

Kanchipuram

Location	Chingleput district, Tamil Nadu on the banks of the Palar
Site's Function	Capital of the Tiraiyars-Tondaiyars
Literary Reference	Kachchi in Sangam literature. With rampart wall and moat in *Perumpanarrupadai*.
Cultural Sequence and Chronology	Period IA: third to first century BC
	Period IB: first century BC to fourth century AD
	C^{14} dates of 480 BC and 195 BC (IAR 1972–72: 66)
Material Remains	BRW, Rouletted Ware
	Satavahana coins and a coin mould
	Brick structure (a Buddhist Vihara?)
Reference	Raman, 1987; Champakalakshmi, 1996

Vasavasamudram

Location	Chingleput, Tamil Nadu, near the mouth of Palar
Literary Reference	Nirppeyarru, a port city mentioned in Perumpanarrupadai
Site Function	Port and commercial centre
Cultural Sequence and Chronology	Third to fourth century AD, according to the excavator, however, the date must be of first century BC to third century AD because of the presence of amphora and Rouletted ware
Material Remains	Amphorae, Rouletted Ware, ring wells and remains of brick structures, shell bangles
Reference	Nagaswamy and Abdul Majeed, 1978

The Ponnaiyar Basin

The Ponnaiyar river basin in the east coast has given evidence for 'Indo-Roman' trade contacts at Arikamedu. Several megalithic burial sites are found in this region and a habitation site also has been reported from this area at Kottaimedu (Ravitchandirane, 1995).

Arikamedu

Location	Pondicherry Union Territory, on the banks of the Ariyankuppam river.
Identified with	Poduca/Poduke of the *Periplus* and Virai of Sangam literature
Site Function	Port and commercial centre
Cultural Sequence and Chronology	Megalithic Pre-Arretine Level Before 50 BC Post-Arretine Level 50 BC to third century AD
Material Remains	Brick structures (warehouse and tanks) Amphorae, and Arretine (*terra sigillata*) Wares Rouletted Ware and BRW Bead and glass wasters Shell bangles and wasters Potsherds with Tamil-Brahmi inscriptions
Reference	Wheeler *et al.*, 1946; Casal, 1949; Begley *et al.*, 1996; Mahadevan, 2003

The Periyar Basin

According to literature the famous emporium of Muziris was in the Periyar basin. However, its exact location has not yet been identified. A settlement discovered at Pattanam (Shajan *et al.*, 2004; Selvakumar in the same volume) for the first time yielded evidence for an early historic settlement in Kerala.

Pattanam

Location	Ernakulam district, Kerala
Identified with	Muziris?
Site Function	Port and commercial city
Cultural Sequence and Chronology	Megalithic: Pre-first century AD
	Early historic: first to third century AD
	Medieval Post-fifth century AD
Material Remains	Amphorae, Rouletted ware and BRW
	Brick structures
	Beads in various stages of production
	A copper coin of the Sangam Cheras
Reference	Shajan *et al.*, 2004; Selvakumar, *et al.* 2005

Genesis and Development of Urbanism: An Analysis

The genesis and development of the urbanism in ancient Tamil country is discussed here through an analysis of some of the important criteria such as population growth, town planning, architecture, and trade and exchange networks.

Growth of Population and Territorial Divisions

Settlement Pattern: Site Hierarchy, Rural and Urban Settlements

Archaeological research reveals an increase in the number of settlements, their dimension and diversity of material culture in the early historic period when compared to the iron age. Despite the lack of comprehensive settlement data for the study area, data from a few regional studies support this contention. For example, studies in the upper Gundar basin revealed eight early historic settlements with Russet-Coated and Painted pottery in contrast

to only one site with iron age remains (Selvakumar, 1997). From the analysis of site dimension, it is clear–the settlements that can be characterised as rural in the Gundar basin usually cover less than 5 hectares and the same is the case in the upper Palar basin in northern Tamil Nadu (Darsana, 1997), while the urban centres of Tamil country range from 7.5 ha to 81 ha in size (Fig. 2) (cf. Shanmugam, 1997). There is a problem regarding the exact size of the settlements, since different publications give varying size for the same site (Table 1). According to Shanmugam, Arikamedu measures 33.75ha, however a systematic site map prepared by Begley *et al.* (1996) and surveys undertaken by the first author indicate that the site covers only about 7.5ha. Since the excavations are restricted to limited area and most of the sites have medieval deposits on top, it is always not possible to determine the exact size of early historic occupation at several sites. Kaveripumpattinam has multiple sites covering an area of 10 square km, with a few of them have medieval occupation, thus determining the site size during the early historic
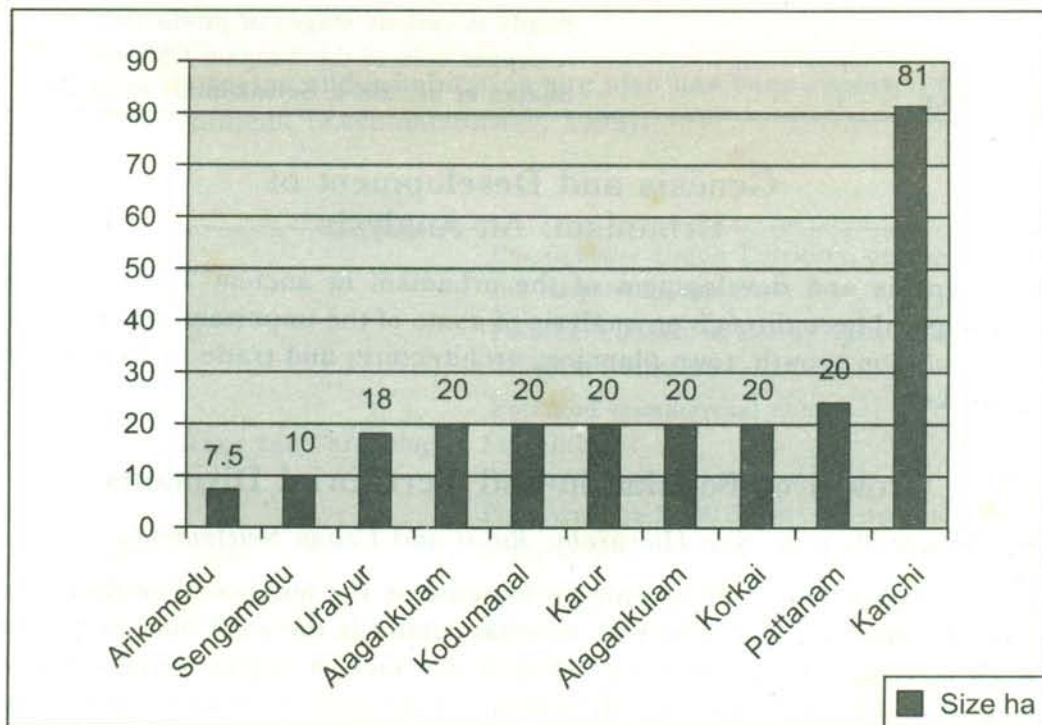

Fig. 2. Size of Urban Centers in Tamil Country

Table 1: Site Dimension of Early Historic Sites in Ancient Tamil Country

Sl No.	Name	Area in ha (After Shanmugam 1997)	Area in ha	Source
1	Kaveripumpattinam	400	–	
2	Kanchi	81	–	
3	Arikamedu	33.75	7.5	Estimate based on site map in Begley *et al.* (1996) and field survey by the first author.
4	Karur	20.25	–	
5	Alagankulam	20.25	7	
6	Korkai	20.25	–	
7	Kodumanal	20	–	
8	Uraiyur	18	–	
9	Sengamedu	–	10	Rajesh and Arun Raj 2003
10	Pattanam	–	24	Selvakumar *et al.* in press
11	Guttur*	4	–	
12	Vallam*	4	–	

* Rural settlements

period is not possible. Site hierarchy is reported in the Ponnaiyar and Vellar river basins (Rajesh and Arun Raj, 2003), and Pudukkottai region (Rajan, 2003), where the site area ranges from 2 to 20ha.

The mention of various classes of settlements such as *kudi/ur* (settlement), *sirukudi* (small settlement), *perur* (large settlement), *pattanam* (port or coastal town), *nagar* (city), *maanagar*, and *moodur* (old city) in the Sangam literature also point out to the existence of settlement hierarchy. Cities are mentioned in the literature as rich in wealth ('the rich *Muciri*', *Ahananuru* 149: 11) or encircled by fortifications (Devakunjari, 1979; Suresh, 1989) or as the residence of chieftains, while a settlement of the fishing community, the *parathavars*, is mentioned as *sirukudi* (small settlement, *Ahananuru*, 140:1) and that of shell bangle makers as *ceris* (*Maduraikanchi*, 136). This emphasises the settlement hierarchy and disparity in the economic prosperity of the settlements. The descriptions found in the literature reveal that the cities were foci of a number of activities and non-local traders were present at many cities. From the allusions in the Sangam literature, clear distinction is also noticed in the life-ways of urban and rural settlements (Balasubramanian, 1994: 29–33).

The growth in the number of settlements and the site hierarchy in the early historic period are indicators of population growth and concentration of population in varying density at these settlements. The increase in population cannot be entirely explained in terms of external factors, internal dynamic such as effective use of technology (i.e. iron) and increased agricultural production had also played crucial roles. Different types of settlements such as markets and ports, pastoralist settlements and, hunter's settlements were present. The urban centres were generally multi-functional, combining manufacturing, market and political activities. Besides, multireligious groups were present in some cities (e.g. Madurai). The interactions among the Tamil micro zones led to the formation of territorial divisions called *nādus*, controlled by chieftains from their settlements (*mudur*), which began to grow as commercial centres subsequently.

Movement of People

Literature refers to the movement of people from one *tinai* (landscape) to another *tinai* in order to earn wealth, especially from *Kurinji* (mountainous zone) and *Mullai* (pastoral zone) to *Marutam* (riverine zone) and *Neytal* (coastal zone) where cities began to develop. The poems frequently mention about the hero being away in search of wealth, while the heroine was in deep distress in separation (e.g. *Ahananuru,* 123). The *panans* (bards) who were on movement to the courts of the chieftains praising them for gifts are discussed in *Arrupadai* literature. There are also references to people, who went to areas where foreign languages were spoken in search of wealth, and the belief that not travelling for earning will lead to poverty (*Ahananuru* 127: 17). The merchants were also on the move as suggested by the references in the literature (*Sirupanarrupadai*). These movements and interactions of people seem to have triggered the formation of urban centres at a few places. Migrations from the regions of Andhra, North India and Sri Lanka could have been encouraged by the overseas trade activities.

Town Planning and Architecture

Most of the settlements that are designated as urban display evidence of architecture of burnt bricks (generally measuring 39–42 × 16–18 × 5–7 cm) and the roof-tiles (triple grooves with double perforations), datable mainly

to the later phases (post-first century BC) of the early historic. However, Kaveripumpattinam has evidence for early brick construction. The literature does give reference to large mansions, wide streets, markets, and fortifications (*Maduraikanch,* 11, 18–20; 350–356; *Pattinapalai* 142–145; *Ahananuru* 124:6; 227). Some of the cities had fortification walls around (Suresh, 1989) and Madurai was a fortified town and there are also references in the literature to moats and ramparts in this city (Devakunjari, 1979: 44–48). However, archaeologically no such monumental buildings have been identified, except the warehouse at Arikamedu. This is perhaps due to the lack of horizontal excavations. Arikamedu, the only extensively excavated site, has exposed drains, tanks and warehouses, probably used for industrial purposes, and the orientation of the buildings at this site reveals some element of planning. Remains of a *chaitya* were found at Kanchipuram (Raman, 1987). Further, excavations might disclose a complete picture of the towns of the early historic period. The material assemblage (certain ceramic forms, bricks and tiles, Selvakumar 2005) found at sites such as Arikamedu, Kaveripumpattinam, Korkai and Pattanam shows pan-Indian similarity, and perhaps resulted due to external contacts.

Crafts and Craft Specialisation

Archaeological and textual sources shed light on the craft productions and craft specialisation in ancient Tamil country (Table 2) (Rajan, 2001; Selvakumar in press). Among the crafts, iron smelting (Arulraj 2000; Srinivasan and Ranganathan, 2004), pottery making and stone-bead making had been perhaps well established in the iron age itself as fulltime, specialised crafts and these craftsmen had been distributed all across the landscape, because of the widespread demand for these craft products. In the early historic period, gem stone cutting, shell and glass bead industries became active. Weaving must have been a major industry as revealed from the evidence of spindle-whorls, a piece of woven cloth from Kodumanal, and a structure identified as dyeing vat from Uraiyur, and the reference to various types of clothes in the Sangam literature and Greco-Roman literature. Perhaps the craftsmen were concentrated in or near the urban centres or near the source of raw material. According to Champakalakshmi (1996) full time craft specialisation was not established in this periods. Details on nature of the craftsmen and their organisation, if any, like their counterparts of the Deccan who had their own guilds (Ray, 1985), are not available. However,

Table 2: Crafts and Craft Specialisation in Ancient Tamil Country

Crafts	Type of Evidence and reference
Shell working and	Arch: Shell bangle and waster fragments from pearl fishery archaeo logical sites (Begley et. al., 1996) Lit: Ref. to shell cutters (*Maduraikanchi* 511–522), and pearly fishery (Athiyaman 2000)
Stone bead making and gem cutting	Arch: Glass beads in various stages of manufacture (Kodumanal, Rajan, 1994, 2001) Lit: Ref to people who perforate beads (*Maduraikanchi* 511–522)
Glass bead making	Arch: Bead wasters at Arikamedu (Francis 1987).
Carpentry/ wood working	Arch: Wooden artefacts from Arikamedu (Francis 1987) Ins: Ref to *Tacchan*, Carpenter (Mahadevan, 2003: 142) Lit: Ref. to different types of boats and wood workers
Pottery making	Arch: Ceramics and terracotta from archaeological sites. Lit: Ref to potters
Iron working	Arch: Furnace, slag of iron from archaeological sites Lit: Ref to blacksmiths and their equipment in literature
Textile Manufacture	Arch: Brick tank identified as dyeing vat at Uraiyur (Raman, 1988); Spindle-whorls; woven cotton fabric from Kodumanal (Rajan, 1994, 2001) Ins: Traders in clothes, as in Alagarmalai inscription (Mahadevan 2003). Lit: Ref to clothes of various types.
Gold Working	Arch: Gold ornaments from Megaliths and habitation sites. Ins: *Ponkolvan* (gold trader) in Alagarmalai inscriptions; a touchstone (*perumpadankal*) in Khuan Luk Pat (Thailand): (Mahadevan, 2003: 142) Lit: Ref to goldsmith (*Maduraikanchi* 511–522)
Bronze Working	High-tin bronze artefacts from megaliths and copper coins of the Sangam kings. Silver Working Silver rings with Tamil-Brahmi inscriptions.

Arch: Archaeological, Ins: Inscriptional, Lit: Literary

the reference to the craftsmen with specific name and the exclusive *ceris* (colonies) of shell bangle makers mentioned in the Sangam literature points to their specialised nature and are suggestive of some kind of organisation among the craftsmen and perhaps full-time work in the urban areas.

Distinct references to goldsmiths and gold merchants perhaps an indication that the craftsmen and traders were separate categories in certain commodities.

The commodities produced from the crafts were internally consumed, as revealed from the distribution of gold ornaments, glass beads, shell bangles and stone beads, in the settlements of interior Tamil Nadu, and as evidenced by the literary sources (*Ahananuru* 125:1). Definitely these commodities were also exported to other regions. Ptolemy's reference to the cloth variety of *Argartic* is an evidence for the increased demand for such fine products outside the Tamil country. Thus the internal consumption and external trade appear to have facilitated fulltime specialisation, especially in the post-first century BC scenario.

Intra-Regional Exchange and Trade

Exchange of commodities among the various regions was one of the factors responsible for the rise of commercial centres/markets at nodes that later developed into urban centres. Direct barter was a common mode of exchange as known from the literature (*Purananuru* 33: 1–6). Paddy and salt were popular in the barter trade 'as a common measure of value' because of their demand and storability (Singaravelu, 1966). The salt merchants travelled on their bullock carts exchanging salt for paddy (*Ahananuru* 140: 7). Indirect evidence for exchange of goods is also available from the archaeological record. The occurrence of shell (*Turbinella Pyrum*), fish bones, and cowrie (*Moneta moneta*) shells of marine origin in the interior regions of Tamil country (upper Gundar basin, about 200 km form the east coast) is an obvious archaeological evidence for the exchange of goods (Selvakumar, 1996; cf. Smith, 2002: 140–141). The trading was a profit-oriented activity and thus attracted the *paratavars*, who were mainly fishermen and salt makers (Maloney, 1969), suggesting the participation of local people in the trade activities.

The variation in the landscape and the differential distribution of resources created a structural disparity that seems to have encouraged the trade and exchange activities. The development of interest for products of the hill region (venison and areca nut) in the coastal region and *vice versa* (i.e. fish and salt from the coastal region) definitely shows active interaction among the various regions. Perhaps such a demand for a variety of

goods among the regions required specialised traders. The term 'vanikan' was used to denote traders and 'cattu' to caravans. Traders moved in groups and employed 'yavanars' (foreign bodyguards) for their protection from robbers. The Tamil-Brahmi inscriptions at Mangulam and Kodumanal refer to *nigama* (guild or corporate bodies) which demonstrates the organised nature of the traders. The Alagarmalai inscription of first century BC refers to the salt merchant (*uppu vanikan* or *umanar*), the jaggery or toddy (?) trader (*panita vanikan*), and the trader in ploughshare (*kolu vanikan*) (Mahadevan, 2003) as the donors of caves for heterodox sects. The *Cirupanarrupadai* mentions that the carts of salt traders travelled long distance for selling salt. *Pattinappalai* has a reference to paddy that came by boats moored at Kaveripumpattinam. The cities of Puhar and Madurai had very active markets known as *angadis* (Champakalakshmi, 1996: 106). It appears that various groups right from the tribal of the hill areas to the fishermen of the coastal area participated in the trade (Stiles, 1993; Gupta, 2002; Selvakumar, 2002) (see Table 3). The extensive nature of the trade network is attested by the presence of fragments of Rouletted Ware and pottery with Tamil-Brahmi inscriptions at the interior (rural) settlements such as S. Pappinayakkanpatti and T. Kallupatti in the Gundar basin.

Table 3: Specialised Traders of the Early Historic Period

Item of Trade	Name of the Trader	Type of Evidence and Reference
Salt	Umanar or uppu vanikan	Arch: Pottery from Uraiyur Ins: Algarmalai Inscriptions Lit: Cirupanarrupadai; Ahananuru 140
Jaggery/toddy(?)	Panita vanikan	Ins. Alagarmalai and Pugalur
Ploughshare	Kolu vanikan	Ins. Alagarmalai
Gold	Pon vanikan/ponkolvan	Ins. Alagarmalai
Bead or Gem testers	Mani vannakkan	Ins. Alagarmalai & Pugalur
Textile	Aruvai vanikan	Ins. Alagarmalai

Ref.: Mahadevan 2003: 60 & 141
Arch: Archaeological, Ins: Inscriptions, Lit: Literary

Long Distance Trade and Contacts

Trade and Contacts with North India

The ancient Tamil country in the beginning of the early historic period rose above the intra eco-zone trade to active inter-regional trade with other provinces of the subcontinent. This inter-regional trade must have begun much before the first century BC, when the trade with the Mediterranean region commenced as attested by the presence of Rouletted ware in the Pre-Arretine level at Arikamedu. More research is necessary to ascertain this. The Indian Ocean trade must have incorporated the already existing local trade networks and exchange systems The evidence of NBPW from Alagankulam and Korkai, references to the pearls of the Pandyan country in the Kautilya's *Arthaśāstra* (Arunachalam, 1952), the possible source of rouletted ware— abundantly found at the coastal sites of Arikamedu and Alagankulam— being the Bengal region, the presence of Tamil-Brahmi inscriptions with a mix of Prakrit words, concepts such as *nigama*, performances of sacrifice (e.g. *Rājasuya*) by the chieftains of the Sangam Age, rock shelters with beds dedicated to the Jaina monks with inscriptions, bricks and tiles comparable in form and size to those from the North Indian sites, presence of the Mauryan punchmarked coins, and Red Polished Ware sherds from Arikamedu and Kaveripumpattinam highlight contacts with the Deccan and the north. There must have been migration of people from North India, though one is not sure about the nature, intensity and the precise chronology of these migrations. Some of the traders perhaps migrated from North India and participated in trade activities. The terms such as *Nigama* and *Visaki* in the Tamil-Brahmi inscriptions at Kodumanal are taken to indicate the presence of merchants from Deccan and Andhra Pradesh (Champakalakshmi, 1996). There are references to 'vaṅgam' as a type of ship and 'kaliṅgam' as a type of cloth in the Sangam literature. It appears that 'kaliṅgam' cloth was made in the Kalinga region. Does vaṅgam refer to a type of boat made in Bengal?

Gogte (2002) argues for the colonisation of the Coromandel coast by the traders from Bengal and political control based on the material cultural evidence especially that of Rouletted Ware. How does the appearance of bricks and new types of pottery can be explained? Do these new material remains indicate new groups of people? Though these material remains could have been introduced by the migrant traders, it is far fetched to assume that the traders from Bengal single-handedly set-up and operated the ports and

'ruled substantial part of South India' without a critical analysis of the material remains and the historical processes. For example, there are references to the Chola king collecting duties on the commodities at Kaveripumpattinam (*Pattinappalai* 120–136), which is a clear evidence for the political control of the Cholas over the port. Similarly, Arikamedu/ Virampattinam was under the control of Thithan of Virai according to the literature.

Trade with the Mediterranean and East Asia

Long distance trade connected the Tamil country with the Mediterranean region and Southeast Asia through the Indian Ocean trade network (Warmington, 1974; Begley and DePuma, 1991; Gupta, 1997; Rajan, 2002. The impact of the overseas trade was high in the peninsular India, especially the Tamil country, since the direct sea-route to the Mediterranean region was very active after the 'discovery' of the monsoon winds by Hippalus. The luxury items such as Roman gold, silver, wine and tableware were imported and spices, beads of semiprecious stones and fine clothes were exported. The Greco-Roman texts and the discovery of coin hoards point to the large amount of gold that went to India because of the pepper/spice trade. Amphorae, a jar used for importing wine and other commodities (*garum* sauce and olive oil) occur at many sites on the Coromandel coast such as Vasavasamudram, Kaveripumpattinam, Arikamedu, Alagankulam, Kudikadu, and Korkai, and on the Malabar coast at Pattanam. Apart from the Mediterranean pottery such as amphorae and Arretine (*terra sigillata*) found in India, the materials of Indian origin found at Jaffna in Sri Lanka, Beikthano in Burma (Thaw, 1968: 64), Thailand (Shanmugam, 1993), Indonesia, Quseri-al-Qadim and Berenike on the Red Sea coast, Egypt, (Tomber, 2000; Mahadevan, 2003) attest to this trade. The Sinhalese-Brahmi inscriptions identified at Arikamedu, Alagankulam, Kaveripumpattinam and Kanchipuram points out to the strong foreign contacts. The Sangam literature mentions that the people of Kaveripumpattinam could speak many tongues, as numerous traders visited the port from various regions. The traders from all regions – Tamil country, Andhra, Sri Lanka and North India could have involved in the overseas trade. The distribution of the Roman coins and other aretfactual remains in the Tamil country suggest that the wealth generated through this trade was distributed among the local population. This trade must have been a major source of economic gain for the

various groups involved in the trade, since a definite increase in the variety of archaeological remains from the excavated sites is seen with the onset of this trade.

Coinage

The discovery of coin hoards of Roman origin is a pointed evidence for the strong trade relations that existed between the ancient Tamil country and the Mediterranean region (Turner, 1989; Krishnamurthy, 1997; Mitchiner, 1998). It has been argued that the Roman coins were not used as the medium of exchange, but as bullions. The copper coins of the Sangam kings found at various sites suggest the use of coins as a medium of exchange especially at urban centres or among traders and certain sections of the society. According to Monica Smith the distribution of local coins with different weight standards in different regions suggest their use as a standard of values and a medium of exchange (Smith, 2002: 142). Coin moulds have been found at Kanchipuram (Raman, 1987) and Satavahana coins with Tamil script and local coins of Cheras and Cholas and Pandyas along with the punchmarked coins definitely indicate the usage of coin at least among certain sections of the society, while the barter system also existed side by side.

Religion and Ideology

The ideology and religious beliefs of the Tamil country was mixed, while majority of the people were practising animism or ancestral worship in the form of megalithism. The ideology of war and plunder was prevalent among the chieftains, while the Brahmanical deities and beliefs had also penetrated among certain sections, especially the *ventars* who used to perform Vedic sacrifices. The Sangam literature mentions about the worship of five deities for the five-fold landscape, namely, Indra, Varuna, Viṣṇu, Durgā and Skanda, who are Brahmanical and related to a particular landscape. Jainism had also its presence as indicated by the rock shelters with Tamil-Brahmi inscriptions. Buddhism was perhaps confined to the coastal region of the Tamil country. The location of the rock shelters with Tamil-Brahmi inscriptions on the trade routes speaking about the donation of the merchants reveals the alliance between the monks and the traders. Perhaps the merchants found the necessity in supporting the monks for their trade activities.

The literature refers to *maravars* who attacked and robbed the traders and passers-by, as '*kalla maravar*' (those who have not learnt moral values). These monks would have played a role in spreading the good virtues among these 'tribal' groups, which attacked the merchants. The petty chieftains in peripheries indulged in plunder raids to generate resources. The ideology of plunder raids, and heroes who sacrifice their life are glorified in the Sangam literature. Presence of Jainism in Madurai is well attested by the literary and inscriptional evidence and it is believed to have arrived from Karnataka (Ekambaranathan, 1993: 18–19) and the Jain and Buddhist places of worship are also mentioned in the city of Madurai (*Maduraikanchi* 475–488). A structure at Kanchipuram is identified as a *stupa* (Raman, 1987: 63). A *chaitya* has been excavated at Kaveripumpattinam datable to the fourth-fiftth centuries AD (Soundararajan, 1994).

Script and Literacy

The use of script came into being in the early historic period as evidenced by the Tamil-Brahmi inscriptions from rockshelters, pottery, seals, and rings from several settlements (Mahadevan, 2003). These inscriptions are in a hybrid language with 69% of the stems in Tamil and the rest in Indo-Aryan languages of Prakrit and Sanskrit (Mahadevan, 2003: 103–4). Such Tamil inscriptions are also found in Sri Lanka, Thailand and Berenike and Quseir-al-Qadim in Egypt (Salomon 1991; Mahadevan, 2003:51). Most of these inscriptions are donative in nature and give insight into the personal names of the donors who were chieftains, kings and traders, territorial divisions and crafts, religious conditions. The earliest available Tamil-Brahmi inscription is dated to second century BC (Mahadevan, 2003). From this period onwards, a rise in literacy can be noticed as known from the occurrence of Tamil-Brahmi inscriptions even in the remote settlements such as S. Pappinayakkanpatti (Selvakumar, 2000) and Mayiladumparai (Rajan, 2004) in common media such as pottery. Mahadevan surmises that due to the widespread literacy in their own tongue (Tamil), many changes such as transformation of tribal chieftaincies into states with more centralised administration, urbanisation of royal capitals, ports and commercial centres and external trade relations based on trade contracts took place (2003: 164). The script has been used as possession of ownership in a few cases, especially those on pottery, rings and other items.

Political Organisation

The earliest reference to the political set-up of the Tamil country is found in the Asokan inscriptions which refer to the Pandyas, the Cholas, the Keralaputras and the Satyaputras as the southern neighbours. The Sangam literature speaks about the Cholas, the Pandyas and the Cheras as *ventars*. The conventional historical research considered these formations as states and kingdoms. Recent studies on social formations have proposed a chiefdom level of organisation for the political formations of the Tamil country, and contend that there is no evidence for early state in the early historic Tamil country and state formation took place only in the early medieval period (Gurukkal, 1995, 1998, 2002). *Kilars, velirs* and *ventars* are the categories of chieftains in ascending order of the Sangam Age, according to Gurukkal. The kinship ties were strong among the *kilars* and *velirs*, while the *ventars* were influenced by the Sanskritic rituals. There was no dominant kingdom controlling the entire Tamil country and the chieftains were fighting to have control over the regions by creating alliances. Plunder raids were the means of generating resources. Though these political formations cannot be considered to represent state systems, political control had evolved and there were attempts by the kings to emulate their North Indian counterparts. Karikalan, the Chola king, is said to have converted the forest for cultivation, dug tanks built an embankment across the Kaveri (*Pattinapalai* 283–284) and a Chera ruler is believed to have defeated the pirates who were troubling the overseas trade networks. At the port of Kaveripumpattinam, it is mentioned that the Chola emblem, tiger, was imprinted on the goods while collecting duties. The chieftains received tributes (*Purananuru* 51, 387; *Ahananuru* 124, 127: 6–7) and supported (*Purananuru* 45) bards, warriors, warrior chiefs, and performed sacrifices such as *Rajasuya* (*Purananuru* 166) to legitimise their position. The Sangam poets also seem to have advised the kings not to levy heavy taxation (*Purananuru* 184). There are also references to the existence of committees (*aimperunkuzhu/narperunkuzhu, Madurakanchi* 11: 191–192) to advise the kings. Titles '*kaviti*' and '*enadi*' are mentioned in the literature, and the former term is found in a 'Tamil-Brahmi inscription. Kaviti is considered as the title offered by the kings to ministers (Devakunjari, 1979: 43), superintendents or vellalars and vaisiyas (Mahadevan, 2003: 123). Village assembly (*Perayam*) is also mentioned in Tamil-Brahmi inscriptions (Mahadevan, 2003: 125). The above evidence reveals some kind of political control over the trade and the territories, and

collection of taxes. However, there was no centralised, powerful state like the Mauryas and in the lawless territories merchants were troubled by highway robbers (*Purananuru* 60, 116; *Ahananuru* 39, 167, 245, 291). Some kind of control must have been there in the fertile tracts, which perhaps saw the rise of political powers earlier than other territories. Thus the political organisation was heading towards state formation in the early historic period, especially in the fertile tracts, where there is evidence for agricultural intensification.

Transport and Navigation

Advancement took place both in inland and overseas transport as movement of bullock carts laden with salt, chariots drawn by horses mainly used by the chieftains and kings (*Ahananuru* 124; 125: 16; 130: 10; *Purananuru* 130:11) and boats and ships carrying commodities find mention in the literature. The pictorial graffiti depicting a boat from Alagankulam (Casson, 1996) and a seal of chariot from Arikamedu (Sidebotham, 1996) indicate the influence of western mode of transport. There are references to various types of ships and boats in the Sangam literature. Water transport was an easy means of transport. The emergence of coastal towns as trading centres was due to popularity of water transport. There were trade routes connecting major towns serving as a means of communication of ideas and material remains— the inland routes connected the Tamil country with the Karnataka region, and the coastal/overseas route connected Andhra and Ganga valley. There are numerous references to ships anchored with commodities and horses arriving by sea. It seems that the Roman ships never went beyond the west coast and then the coastal route from the Ganga valley to the west coast must have been a popular route.

Discussion

The early historic cities of North India were much larger in dimension and earlier in chronology than those of the Tamil country. Commenting on the urban settlements in North India, Erdosy observes that these settlements 'never met the criteria set by Weber for truly urban settlements in spite of their transitory magnificence. Society remained correspondingly inert in the absence of the stimulus expected from its largest congregations of populations' (1988: 152). This raises the question whether the comparatively

smaller settlements of Tamil country, which do not display the exuberance of North Indian cities, deserve the appellation 'urban'. The nature and intensity of urbanisation processes in the pre-industrial societies were not the same as that of the modern period. The intensity and nature of the urbanisation processes of the Indus civilisation and the early historic North India were not identical. The study of the nature and characteristics of the settlements in ancient Tamil country clearly points out that they meet several of the criteria mentioned by Childe for early cities and they also have distinct characteristics from the small ('rural') settlements. Therefore, the term 'urban' can be used to describe them. The sites that are discussed above, as urban centres, were multi-functional acting as political centres, manufacturing centres, markets and ports. Besides, they are also strategically located on the riverbank or river mouth or at nodes, or near the raw material sources. Furthermore, some of these centres have a concentration of satellite settlements with Tamil-Brahmi inscriptions or megalithic burial having rich grave goods or Roman coin hoard sites, within the micro region. Therefore, there is no doubt that the processes of urbanisation definitely began in the early historic Tamil country.

What caused the genesis of the urban process in the ancient Tamil country? The increase in the number of settlements in the early historic period can undoubtedly be taken as a result of population growth and emergence of settlement hierarchy. The 'megalithic' (iron age) society was not a static entity – the production of iron, carnelian beads, shell objects and horse affiliation (in the form of horse stirrups) prove that they were also actively trading with other communities. The increase in settlements in the early historic cannot just be a consequence of mass migration of people into the Tamil country. Though small groups of people speaking Indo-Aryan language (Brahmins and traders) could have migrated, this might not have alone accounted for such an increase in the early historic settlements. Interaction within the micro regions, improvement in technology and greater resource utilisation might have triggered the population growth, which subsequently led to the emergence of territorial divisions (*nādus*) and political control. The territories were controlled by a political centre which simultaneously emerged as commercial centres/markets. Perhaps these developments caused the genesis of urbanisation.

The developments in North India and its increased contacts with South India from the mid-first millennium onwards definitely influenced and served as the first catalyst for the development of the urbanisation processes in the

rather than urbanisation process and the socio-economic organisation. The research focus has to shift to regions from sites and to socio-economic organisation rather than the 'foreign trade'.

Systematic Archaeological Research

Absence of systematic mapping of urban and rural settlements and lack of horizontal excavations to expose their internal structure are vexed issues. Only a few sites have detailed and systematic maps (e.g. Arikamedu) and the reports give vague dimensions of the sites. The lack of horizontal excavations and the absence of detailed reports on the excavations pose a problem. The information published in *IAR* reports is not sufficient. Even in some of the excavation reports, it is noticed that, importance has been given to the glorification of sites as mentioned in the literature rather than on the factual account of the site and interpretation.

Focus on the Iron Age

The iron age antecedents of Tamil Nadu and Kerala have been very poorly understood and the habitation remains of this period have not been sufficiently excavated to understand the internal cultural developments. Hundreds of megalithic burial and habitation sites with Black and Red Ware are found in the area, however, their chronological context is uncertain, i.e. which site belongs to iron age, which belongs to the early historic and how did these settlements appear? Until the pristine iron age site and deposits are excavated extensively, the iron age developments and the internal dynamics of this region could not be understood properly. T. Kallupatti, Teralandur and Paiyampalli are the some of the few habitation sites of the iron age period in Tamil Nadu. The development of early iron age settlements needs to be investigated to understand the process of urbanisation and internal developments.

Contacts with Northern Part of the Subcontinent

The Prakrit names in Tamil-Brahmi inscriptions and the use of terms like *nigama*, the numerous references to Brahmin poets (interpreted from the Sanskritised names) and several references to the Sanskrit elements in the Tamil literature point to contacts with the north. However, the use of terms

like *vanika* or *nigama* may not necessarily point to non-local people. Though these concepts and terms were north Indian in origin, the may well have been adopted by the local people.

The possibility of (maritime or overland) contacts between Tamil Nadu and Northern and Eastern India in the iron age or earlier has not been given much importance. The presence of white painted Black and Red Ware pottery that appears in the chalcolithic site of Ahar and those of Bengal in the iron age context at T. Kallupatti in Madurai calls for a closer examination of the contacts between North India and South India from the iron age onwards.

Chronological Resolution

The sites are usually dated through correlation with literary references and ceramic typology. Only a few sites (Korkai, Kanchipuram and Kaveripumpattinam) have C^{14} dates. This has created a serious vacuum in understanding the early historic culture in its temporal context. The upper limit of early historic period could be extended back to 500 BC, however more C^{14} dates are necessary (Chakrabarti, 1999:290). Sri Lanka has produced early dates for the beginning of the early historical period (ca. 500 BC) and the origin of Brahmi (Deraniyagala, 1992). Hence fresh research is necessary to ascertain the upper limit of the early historic period in the ancient Tamil country.

Episode to Process

The emergence of the regional trade network needs to be treated as a process and not as a single episode such as traders from Bengal setting up the ports (Gogte, 2002). The urbanisation is to be treated as an outcome of processes that operated both internally and externally.

Material Culture and Ethnicity

The megalithic culture with Black and Red Ware in Tamil country is generally presumed to be indigenous development. The grey ware, different from the megalithic and neolithic ceramics, used by the first settlers in the Northern Sector of Arikamedu is identified with sailors or merchants (Begley, 1996: 20). It is not clear if this deposit represents a new group of people other than the Black and Red Ware using people. It has to be remembered that the relationship between material culture and ethnicity is a complex issue and

an assemblage cannot be directly equated to an ethnic group without proper analysis. It is not certain from which period that the Indo-Aryan language speakers had contacts with the Tamil country. The Sangam literature displays the impact of Indo-Aryan languages and attests to the presence of migrants from north in the Tamil country. Can these groups be distinguished archaeologically? Did only the Dravidian-speaking groups in the south practice the megalithism? Can we identify the origin of the Sangam Tamil kings? Asko Parpola has attempted to answer these questions (Parpola, 1973, 1984). However, the conventional dichotomisation of Aryan and Dravidian, and North Indian and South Indian and identifying material cultural remains with linguistic groups are fraught with difficulties (cf. Champakalakshmi, 1975–76: 118).

Conclusion

In the ancient Tamil country, the urbanisation process was more active in certain territories such as the river valleys and the areas with rich resources. The genesis for the urbanisation seems to have been internal, while the fillip for the development coming from two sources: (i) interactions with the northern part of the subcontinent and (ii) the Indian Ocean trade or external trade. However, further studies are essential to understand the genesis and development of urbanisation in this region. The future research needs to focus on the developments in the iron age. In the investigation of urban processes, the traditional linguistic categorisation of North India representing the 'Aryan' and South, the 'Dravidian' should not be imposed on the archaeological record, which needs to be investigated independently.

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