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Knowledge Discovery and Destination Market Intelligence Framework of the Maritime Trade Route Connecting Ancient Port Towns. - A Survey on Tamilnadu Cultural Route and Smart Heritage Tourism

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Abstract

The international trade network of the ancient Chera, Chola, Pandyan kingdoms with Rome in particular since Sangam age has been studied well by various researchers. However, a recent archaeological excavation study at Thandigudi, Pattanam and Keeladi have generated a lot more data and throws more light with new research dimension and direction, particularly concerning the trade routes. The supply chain business intelligence of the various merchant guilds operating in all three Chera, Chola, Pandya territories are reviewed to provide a framework for knowledge destination and cultural heritage trade routes from the emerging new evidence. The proposed logistics network design and destination market intelligence of the trade routes naturally evolved into three clusters of towns and places - the outcome of the research survey concludes with a newly developed smart heritage cultural route of Tamilnadu.

Keywords: Destination market Intelligence, Knowledge Discovery, Tamil merchant guilds, Cultural routes, ancient trade routes, heritage tourism, supply chain logistics network, Smart tourism, value chain analysis.

Introduction

The Tamil merchant guilds of India and the trade network they built since Sangam age and even during prehistoric time is still an unexplored area and offers scope for interdisciplinary research. In olden days, mariners, artisans, traders, Monks used to set sail together, and this trend continued until the advent of modern shipping. The cultural route is a cultural project aimed at developing and promoting a route or network based on a historical route, a cultural concept, a figure, or a phenomenon of transnational importance that manifests heritage values. Cultural routes offer an impressive mix of various products and services to their customers. They attract a larger and larger number of visitors, thereby increasing the demand for their cultural goods and requiring related services. Ancient trade routes with proper value chain analysis, incorporation of its maritime history are now called cultural heritage route. The clustering process of trajectory points naturally evolves as a smart heritage tourism product with the help of Information and communication technologies. The journey of identifying the cultural routes of Tamilnadu is a multidisciplinary study.

Motivation

Promotion of new research findings and conceptual understanding of south Indian history based on its physical, intangible, cultural, and natural heritage to improve the public awareness about ancient trade routes and Tamil merchant guilds is the motivation behind this interdisciplinary research work.

Problem Description

The primary objective of this study is to identify the towns and places as trajectory data points of the interconnected land trade routes of Chera, Chola, and Pandya kingdoms and the international port towns through maritime trade contacts with inscriptional and literary evidence. The entire research theme is based on the promotion of this ancient trade route as a cultural route and the showcasing the inventory movement of the premium commodities like pepper, pearl, and stones from the various source points and further being exported to multiple countries. The black pepper was one such commodity, and the trade contract evidenced by Vienna Papyrus is the highlight of this survey. Such precious findings and linking with the recreation process with the heritage and natural tourism perspective of the trade route provides the necessary value addition to the trajectory data points for grouping the town and places as different supply chain clusters.

Solution Methodology

The proposed value chain integration of the culture route, by linking the appropriate literary and inscriptional evidence to the different groups of clustering towns and places, naturally evolves into a full-fledged smart heritage tourism product. The clustering process of the identified villages and ports from the source point to the destination of the supply chain efficiently used by Tamil merchant guilds, resulting in a cultural heritage route, is the research highlight of this study. The inferences of the detailed review of contemporary related works are presented in the next section.

Review of Literature

Cultural Route

Khovanova-Rubicondo I., (2011), stated that the Cultural Routes Program of the Council of Europe was established in 1987 to preserve the diversity of European culture and heritage, promoting understanding of Europe's history based on its physical, intangible and natural heritage, and raising public awareness of the unique European history and culture in its diversity. The council of Europe's Cultural Routes Programme comprises 24 certified Routes that cover 70 countries in the world. In these

nations, statistical analysis of the crossings of the CoE cultural routes revealed the extent of the cultural route networks.

The trade contacts of India with South East Asian countries contributed to the growth of the socio-economic conditions of both the regions. Indian art, culture, religion spread over South East Asia. The cultural route is a new category of cultural goods that creates an interaction between a monument that needs protection and development and the cultural or regional context with which it needs to be fully understood and appreciated. The main findings of the Council of Europe's research project are summarized as given below. Council of Europe has concluded that since the commencement of the research program, within 25 years of existence, their routes have achieved a notable progress, generated multiple positive impacts on the communities along their destinations, and shown enormous, enormous potential for SME development, cross-border cooperation, networking, competition and the promotion and integration of European identity.

It also emphasized that cultural routes differ not only in their thematic focus but also in their network structures, management capacity, development approaches, geographical dimensions, target groups, and quality standards for products and services. The cultural ways of the Council of Europe have significant potential for the growth of cultural tourism as well as for the fostering of political, social, and regional unity in Europe. Khovanova- Rubicondo I., 2011, has concluded that the outcome was the design and development of special management tools and models applied to individual routes with the help of Information and Communication Technologies (ICT). Based on the above-cited research project, the author has identified a new cultural route of Tamil Nadu.

Thandikudi - Mountain Village- Source Point of the Trade Route

During the Sangam period, the best trade routes of the Western Ghats went through dense forests. These roads were just as crucial to the army as they were to the merchants. It was the state's duty to protect the merchant caravans from robbers and wildlife on these trade routes. Main roads, known as

Peruvazhi, were built that connected the distant parts of the country. Thandikudi, one of the mountain villages in the Lower Palani Hills, occupies a unique position as essential trade routes well connected to this village. The archeological remains uncovered here have attested to the continuous occupation since the pre-Iron Age times. The occurrence of Dolmens, Cists, Cairn-circles, and Urns points out to the convergence of different cultural traits. The available data accumulated through explorations and excavations give an idea of drawing up the artistic process of the Palani hills, in particular, the Thandikudi, which played an active role in trade during the Middle Ages, as evidenced by trade guild inscriptions. This village is well connected with the significant traditional trade routes. One of the trade routes connects Musiri on the West Coast, and Madurai in the hinterland passes through Palani, Pollachi, Dindugal, and Madurai. The villages of Palamalai, Perumalmai, Machchur, Pannaikadu, Thandikudi, and Kadavumalai, are located along this ancient trade route. Sangam age poet Tayan-Kannanar throws light on the pepper trade of the Chera country (west coast). He explains how the magnificent ships of the Yavanas came stirring the white foam of the Periyar river (of the Keralas) sailed in with the gold and sailed off with pepper making Muziri (the port-town) prosperous.

Korkai - Port Town - Destination Point of the Trade Route

Korkai is the oldest port and heritage site in the Tamil country, possibly since the beginning of the first millennium BC. However, its development as a significant emporium may have been only around the fourth and fifth century BC. The Periplus of the Erythrean Sea recognizes Korkai (8°40'N; 78°5'E) as Colchis and by Ptolemy as Kolkhoz. Correct identification came in 1838. Early archeological excavations by Caldwell in the Tamiraparani delta of the 19th century confirmed its present site almost in ruins near the place called Eral.

Algankulam - Destination Point of the Supply Chain

Alangulkulam (Ramanathapuram Dist) is also a great site at the mouth of the river Vaigai. The

site was probably occupied for a time from the 1st century B.C. To the 4th and 5th centuries A.D. Azhagankulam was a relevant trading post between the Sangam Pandyas and the Romans from circa 50 BCE to circa 500 CE.

Impact on Economy

A brief reference to the implications of the newly discovered Vienna Papyrus, dating back to the middle of the second century AD, contains the text of an agreement between two shippers under which one contracted to serve as an agent for the cargo belonging to the other and to oversee its transport to Alexandria. The names of the traders are lost, but the details of the shipment from Muziris, which appeared at one of the Red Sea ports, are unusual. It consisted of pepper, nard, ivory, and textiles with a total value of 131 talents, which, according to Casson (1999), could have acquired almost 2,400 acres of Egyptian farmland. It shows the private control of the shipping company and the compact nature of the commodities involved. The total weight of the shipment was not more than 7,190 pounds or three and a half tons (Casson, 1989).

Survey Outcome and Inferences

The author has identified the source point and destination port towns with various interconnecting supply chains by which many items were traded. They are grouped into three clusters. The process metrics associated with the conversion of mere supply chains into cultural heritage enriched value chains are further elaborately discussed in the following section. Hence it is imperative to provide the Inscriptional evidence and literary quotes wherever necessary.

Proposed Cultural Route

Based on the above findings duly cited, our journey begins by exploring the source point of Thandikudi mountain village of Tamil Nadu. The proposed cultural heritage rich supply chain network follows the principles of the Sangam age Thinaï Marabu. It is observed from the literary evidence that an equal quantity of paddy and salt had been exchanged mutually between two sects of merchant guides or the common public in their commercial

transactions. There are many references in the Sangam anthologies. The merchant guilds were operating in all towns, which were the middlemen. They worked in a group called ‘Vanika Chathu.’ The Major port towns considered for the focussed study are Azhagan Kulam (Marungoor Pattinam), Thondi, and Korkai. The popular merchant guilds of the Sangam age were Inootruvar, Mani Grammathar, Pathinen Visaayathar, etc. who are specialists in the procurement of various commodities, and were responsible for the respective inventory movement in trade routes (Vaniga peruvazhikal), pricing and timely supply to the customers. One of the various essential commodities of the roman trade was Black Pepper, which was grown in the Mountain ranges of Pandya Nadu and Chera Nadu. It is quite evident from the fact that the supply chain connects the Kurinchi thinai Marbau to the Mullai Thinai Marbau in the first phase of the inventory movement. The value addition must have happened in the next phase, i.e., from Mullai Thinai to Marutham thinai based geographical locations. Hence, the merchant guilds opted for the trade routes, which were evolved since ancient times, by the side of the river nearby quite naturally. In our case study, the river happens to be Vaigai. The commodities other than the premium products like pepper and pearls, which were meant only for bulk export, would have been exchanged between two merchant guilds or common public for the terms mutually agreed upon.

The clustering of towns of the trade routes and the estimation of the natural supply chains evolved thousands of years ago, and the storage points or warehouse depends on geographical locations and road conditions. Numerous Merchant Guilds, the commodities they grow and traded, mode of transport, and the surplus quantity for export are the various factors involved in the process of inventory movement.

Our journey begins from Thandigudi, an important source point for mountain-grown items.” Thandigudi, Kunnruvarayan Kottai, Kuruvithurai, Sholavanthan, thiruvudagam, Thenur, Thirupparankundram, Anaiyur, keeled, Thiruchuli, Arruppukkotai, Panthalkudi, Perungulam, Korkai. Thondi, Azhagankulam are the supply chain network nodes for which cultural heritage factors are to be

embedded as a value chain to provide the ancient flavor and antiquity.

Cluster 1: Thandigudi, Kunnruvarayan Kottai, Kuruvithurai, Sholavanthan, Thiruvudagam, Then

Cluster 2: Thenur, Thirupparankundram, Anaiyur, Keeladi, Thiruchuli, Arruppukkotai, Panthalkudi

Cluster 3: Panthalkudi, Perungulam, Korkai. Thondi, Azhagankulam

Conclusion

Hence, it is suggested that the collaborative practices promote the cultural route need to be enhanced by professionally applied network governance models. The availability of funding for key skills development, capacity building, training, networking, and cross-marketing activities depends on collective representation. Likewise, the supply chain business intelligence of the ancient trade route with which the Tamils practiced the trade for thousands of years, the identified cluster of towns and places are included in the proposed smart heritage culture route. The design and development of knowledge discovery framework and Decision support system for destination market intelligence of the proposed culture route, which can showcase the inscriptional evidence and the geographical mapping of culture route, is the future scope of research direction.

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