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Export Commodity and Regional Currency: The Role of Chinese Copper Coins in the Melaka Straits, Tenth to Fourteenth Centuries

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In the Melaka Straits, Chinese copper cash has been recovered archaeologically, in varying quantities, from land settlement sites dated to between the tenth and fourteenth centuries. Despite their apparent importance, their role and function in a regional context is still largely unknown. This article seeks to reconstruct the usage of these coins in the Straits region through the integrative use of Chinese textual information and archaeological data.

Throughout the Song and Yuan periods (960–1368), Chinese copper coins played an important role as an instrument of maritime trade in the transactions between China and its foreign trading partners. The divisibility of copper coin, due to its low value when compared to silver or gold bullion, made it a medium of exchange in the trade in both low- and high-value products at Chinese ports. The value of copper coins also resulted in them being in high demand among China's foreign trading partners.

In the Melaka Straits, Chinese copper coins have been recovered from several port settlement and shipwreck sites. However, they do not reflect an immediately apparent pattern in their geographical distribution, nor do they form a coherent picture from a chronological perspective. Added to this problem are two characteristics concerning the circulation of copper coins in the Melaka Straits. Firstly, coins minted in earlier Chinese dynasties continued to be in use, both in China and Maritime Southeast Asia, long after the dynastic periods during which they were produced came to an end. While Chinese coins recovered from shipwrecks have been effectively used, along with the other finds recovered from wreck sites, determining a precise date for settlement sites is almost impossible, unless other archaeological information is available. However, even if there is a convergence in information, such material does not provide any other information concerning the purposes or role of the copper coins in local and regional contexts.

Secondly, there is almost no direct textual reference on Chinese copper coins in the Melaka Straits until the early fifteenth century, apart from a very brief mention of the export of these coins to Java noted in the *Zhufanzhi*, which was published in 1225. From the disciplines of archaeology and history, it is almost impossible to reconstruct the

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role and functions of Chinese copper coins in the Straits during the tenth to fourteenth centuries. As a result, copper coins have often been disregarded as a useful source of information in furthering our understanding of the economy of the Melaka Straits during this period.

Several studies have attempted to understand Chinese copper coins within the Island Southeast Asian context. Studies on such coins recovered in Java, within the Javanese political, social and economic contexts of the eleventh to fourteenth centuries, serve as an example. They have been based largely on fairly detailed archaeological and epigraphic information obtained from East Java, particularly the Branta Delta area.[1] A number of reports and preliminary studies on the copper coin finds made in the region of the Melaka Straits have also been published.[2] These, however, are fairly cursory, and do not contain any in-depth discussion of the sources of these coins, and their role in the region's port settlements where they have been recovered.

This article will thus attempt to reconstruct the role that Chinese copper coins played in ports and polities in the Melaka Straits between the tenth to fourteenth centuries. This will be carried out against the backdrop of changing maritime trade policies in China governing the export of copper and items such as coins, and the changing nature of regional trade and politics during these four centuries. Integrative use of Chinese textual information and archaeological data, which has so far been accrued in the Melaka Straits, will be made.

Chinese administration of maritime trade and Chinese copper coins as a trade commodity

Given their scarcity in China and their vital role in the functioning of the Chinese economy, the Chinese court guarded the export of copper coins during the tenth to fourteenth centuries. Prior to 1041, anyone caught exporting more than 2,000 coins would be banished, or executed, if the amount was more than 3,000 coins. After 1041 the regulations became even more stringent; anyone caught exporting more than 1,000 coins would be executed.[3] In general, these restrictions appear to have been fairly effective in

1 Jan Wisseman-Christie, 'Money and its uses in the Javanese states of the ninth to fifteenth centuries A.D.', *Journal of the Economic and Social History of the Orient* (henceforth *JESHO*), 39, 3 (1996): 243–86; Arjan Van Aelst, 'Majapahit picis: The currency of a "moneyless" society', *Bijdragen Tot de Taal-, Land-en Volkenkunde* 151, 3 (1995): 357–93; and Robert S. Wicks, *Money, markets and trade in early Southeast Asia: The development of indigenous monetary systems to AD 1400* (Ithaca: Cornell University, Southeast Asian Program, 1992).

2 Wicks, *Money, markets and trade*; Brigitte Borell, 'Money in fourteenth century Singapore', paper presented at the 7th International Conference of the European Association of Southeast Asian Archaeologists, Berlin, September 1996; Edward E. McKinnon, 'Research at Kota Cina, a Sung-Yuan period trading site in East Sumatra', *Archipel*, 14 (1977): 19–32; and McKinnon, *Kota Cina: Its context and meaning in the trade of Southeast Asia in the twelfth to fourteenth centuries*; 2 vols. (Ph.D. diss., Cornell University, 1984).

3 H. R. Williamson, *Wang An Shih: A Chinese statesman and educationist of the Sung Dynasty Vol. 1 and 2* (London: Arthur Probsthain, 1935), pp. 246–7. For a detailed discussion on the exchange rate of Chinese copper coins to other metal currencies in circulation in the Song Chinese economy, and the role of Chinese copper coins in China's maritime trade during the Song period, refer to Peng Xinwei, *Zhongguo huobishi* (Shanghai: Shanghai renmin chubanshe, 1988), p. 382; Angela Schottenhammer, 'The role of metals and the impact of the introduction of Huizi paper notes in Quanzhou on the development of maritime trade in the Song period', in *The emporium of the world: Maritime Quanzhou, 1000–1400*, ed. Angela Schottenhammer (Leiden: Brill, 2001), pp. 95–176; and Jerome Chen, 'Sung bronzes: An economic analysis', in *Bulletin of Oriental and African Studies*, 28, 3 (1968): 613–26.

stemming the outflow of copper coins from China, at least during the tenth and eleventh centuries.

Even as China's international maritime trade expanded and underwent a process of monetisation during the late tenth and eleventh centuries, it is not apparent, both from textual records as well as archaeological information, that the volume of the copper coins traded abroad increased in tandem during this period. In the Taizong Chunhua era (990–95), for example, when Chinese maritime trade was increasing, the disbursements of copper coins from the imperial coffers to facilitate the conduct of maritime trade at Chinese ports were insignificant,[4] suggesting that the outflow of copper coins was minimal. Even when China's maritime trade economy began to be monetised during the reign of the Emperor Renzong (1023–63) with trade being valued in currency terms,[5] the intention of the move was to impact only on the domestic Chinese sector of China's international trade. Although China was already exporting silver and gold, the Song court vigilantly guarded against the outflow of Chinese copper coins. In China, copper coins were paid to foreign traders with the intention that the coins would be used to purchase Chinese products at coastal ports before foreign traders left China. Compulsory purchases, which the Song court's Mercantile Shipping Superintendencies made using currency and the increase in the production of copper coins during the reign of Renzong,[6] do not appear to have led to any significant increases in the outflow of copper coins to the Melaka Straits. Archaeological excavations conducted at settlement sites in Jambi and Palembang, the capitals of Srivijaya,[7] the pre-eminent port polity of the Straits region in the tenth to thirteenth centuries, and the key regional ports of the Straits region during that time, have uncovered relatively few Chinese copper coins.

Nonetheless, some Chinese copper coins did find their way into the Melaka Straits. Although there is no textual record of the export of copper coins to the region in the tenth century, archaeological data indicates that these coins were in fact represented, albeit in small proportions, in the region's trade by this time; 137 Chinese copper coins were recovered from the Intan wreck, a Southeast Asian vessel dated to the early tenth century, which appears to have been en-route from Palembang to Java when it foundered in the Java Sea.[8] This indicates that copper coins were already a Chinese export item in Sino-Straits trade by this time. However, while the export of Chinese copper coins to the Straits region did take place, the volume of this trade evidently was very small, and not on the scale of such other Chinese export products as ceramics, metal wares or textiles.

4 Zhonghua shuju bianjiaobu, *Songhuiyao jigao* (Beijing: Zhonghua shuju, 1957), Zhiguan (henceforth SHY ZG): 4: 2b–3a.

5 Wang Yunwu, *Ma Duanlin: Wenxian tongkao* (Shanghai: Shangwu yinshuguan, 1936), (henceforth WXTK): 20:201, 1; Tou Tou et al., *Songshi* (1345; henceforth SS), 186:24a. The version used in this paper can be found in Zhu Jianmin et al., *Yingjing wenyuange siku quanshu* (Taibei: Taiwan shangwu yinshuguan gongsi, 1984), 280: 1–288: 912; and, Shiba Yoshinobu, 'Sung foreign trade: Its scope and organization', in *China among equals: The Middle Kingdom and its neighbours, 10th –14th centuries*, ed. Morris Rossabi (Berkeley: University of California Press), p. 92.

6 Van Aelst, 'Majapahit picis', p. 374; Borell, 'Money in fourteenth century Singapore', Table II.

7 O. W. Wolters, *Early Indonesian commerce; A study of the origins of Srivijaya* (Ithaca: Cornell University Press, 1967); Wolters, *The fall of Srivijaya in Malay history* (Kuala Lumpur: Oxford University Press, 1970); and Wolters, 'Restudying some Chinese writings on Sriwijaya', *Indonesia*, 42 (1986): 1–42.

8 Michael Flecker, 'The archaeological recovery of the 10th Century Intan Shipwreck' (Ph.D. diss., National University of Singapore, 2001), pp. 148–51.

Figure 1 Location of tenth- to fourteenth-century shipwrecks located in Maritime Southeast Asia

Textual information on the export of Chinese copper coins to the Melaka Straits is not forthcoming until the second half of the eleventh century. From 1069 onwards, a series of economic and fiscal reforms for the purpose of expanding and monetising China's economic activities was promulgated under the stewardship of Wang Anshi, an official of the imperial court of the Emperor Shenzong (1068–85).[9] The reforms, related to maritime trade, which were implemented in 1072 as part of the restructuring of the Trade and Barter Regulations, were part of the Song court's efforts at raising the level of economic exchange between China and its foreign trading partners, as well as expanding the domestic economic activities that either serviced or complimented China's international maritime trade. The Song court could eventually benefit through the taxation of maritime trade and the sale of certain foreign products that were subjected to state monopoly.[10] In 1074, to further encourage an increase in foreign trade, the embargo on

9 For a detailed discussion of the Wang Anshi reforms, refer to Williamson, *Wang An Shih*.
10 Williamson, *Wang An Shih*, pp. 246, 247.

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the export of copper coins from China, which had been instituted at the advent of Song rule in 960, was lifted.[11] Increases in the production of copper coins were officially sanctioned to facilitate the smooth implementation of this new trade policy. The annual production of copper coins was increased from 1.3 million strings in the early eleventh century to around 6 million by 1078.[12]

The lifting of the embargo in 1074 led to massive quantities of Chinese copper coins being shipped out to ports along the Melaka Straits. The export of copper coins during this time occurred at all levels. At the state level, there was a shift in the nature of the reciprocal gifts presented by the Song court to state-level trade missions arriving in China, away from the presentation of prestige articles of gold, silver or copper, to the disbursement of only copper coins and silver bullion to the value of the shipment of foreign products presented. The recipients of such coin disbursements included the Cham missions of 1072 and 1086, the Dashi Arab mission of 1073 and the Chola mission of 1077.[13]

Polities along the Melaka Straits also were recipients of such currency payments. In 1078, Srivijaya dispatched a trading mission to China. In return for the shipment of white gold, camphor, frankincense and foreign products that it presented to the port authorities at Guangzhou, Srivijaya received 64,000 strings of copper coins as well as 10,500 taels of silver.[14] The 1078 mission would not have been the only instance during this period that copper coins entered the Melaka Straits region through state-sponsored trade. In all, Srivijaya dispatched nine state-level missions to China during the last three decades of the eleventh century,[15] during which time the key policies of the Wang Anshi economic reforms, including the permitting of the export of copper coins out of China, remained in force.

Regional traders and agents from the Melaka Straits region stationed at the Chinese port of Guangzhou, and at Quanzhou in South Fujian from 1086 onwards, would have also obtained Chinese copper coins through non-state sponsored trade.[16] The buoyant state of the China–Maritime Southeast Asian trade in the second-half of the eleventh century, which resulted in a significant growth in the latter's transshipment of Southeast

11 SS 133:2; 4; Van Aelst, 'Majapahit picis', pp. 361–2; Wisseman-Christie, 'Money and its uses in the Javanese states', pp. 268–71; and, Paul Wheatley, 'Geographical notes on some commodities involved in Sung maritime trade', *Journal of the Malaysian Branch of the Royal Asiatic Society*, 32, 2 (1959): 37.

12 Robert Hartwell, 'The evolution of the early Northern Sung monetary system, AD 960–1025', in *Journal of the American Oriental Society*, 87, 3 (1967): 284; and, Jerome Chen, 'Sung bronzes; an economic analysis', p. 619.

13 Grace Wong 'A commentary on the tributary trade between China and Southeast Asia, and the place of porcelain in this trade during the period of the Song dynasty in China', *Southeast Asian Ceramics Society (Singapore) Transactions*, 7 (1979): 10, 16, 18.

14 SS 489:14090; WXTK 332: 2610, 2.

15 SS 489:14090; WXTK 332: 2610, 2 and 3.

16 SS 11186:26a; SHY ZG 44:8a. For detailed discussions on the rise of Quanzhou as a maritime port, refer to So Kee Long, *Prosperity, region and institutions in maritime China: The south Fukien pattern, 946–1368* (Cambridge, MA: Harvard University Asia Center, 2000); Hugh R. Clark, *Community, trade and networks: Southern Fujian province from the third to the thirteenth century* (Cambridge: Cambridge University Press, 1991); and Clark, 'The politics of trade and the establishment of the Quanzhou trade superintendency', in *China and the maritime silk route: UNESCO Quanzhou international seminar on China and the maritime routes of the silk roads* (Fujian: Fujian People's Publishing House, 1991), pp. 375–94.

Asian, Indian Ocean and Middle Eastern products to China under the auspices of Srivijaya,[17] would have led to a significant export trade in copper coins through non-official means to the Straits during this time.

However, although textual evidence indicates that ports in the Melaka Straits were importers of Chinese copper coins from 1074 onwards, archaeological excavations of port settlement sites in the region, datable to the eleventh to thirteenth centuries, have yielded relatively few Chinese coins. The general absence indicates that the extension of the Chinese currency system into the international sphere of China's maritime trade, following the 1074 lifting of the export ban on copper and copper coins, did not have an impact on the way in which the Straits region conducted its commercial exchanges with China. Chinese copper coins do not appear to have been adopted as a form of currency in the region's transactions with China.

Neither did ports in the Melaka Straits appear to have adopted Chinese copper coins as a form of regional currency. Concerning Srivijaya-Jambi in the late twelfth and early thirteenth centuries, the *Zhufanzhi* notes that 'foreign traders, in conducting [their] transactions, use gold, silver . . .'.[18] Precious metals remained the key references to which calculations of the value of products were made. This practice was adopted in ports of the Straits region, and extended to the northeastern coast of the Malay Peninsula. The *Zhufanzhi* notes, for example, that at Langkasuka trade products were valued in gold and silver before barter exchanges were conducted.[19]

Chinese copper coins also do not appear to have been adopted as a form of domestic currency by most regional ports prior to the fourteenth century. In the case of Srivijaya-Jambi, the *Quanzhi*, an 1149 Chinese text recording forms of money used in China as well as by China's foreign trading partners, notes that 'this state uses gold, silver, copper, tin and [metal] alloys as money'.[20] Precious metals continued to be used in Srivijaya-Jambi as forms of currency in the thirteenth century. According to the *Zhufanzhi*, '[Srivijaya] does not have stringed coins. Broken pieces of white gold [are used] in trade exchanges.'[21] At twelfth- to fourteenth-century settlement sites in South Kedah, Sri Lankan coins, rather than Chinese copper coins, have been reportedly recovered in large numbers, suggesting Sri Lankan coinage was adopted by these settlements as a form of domestic currency. At Semudra-Pasai, a port-polity located along the northeastern coast of Sumatra, gold coins with Islamic script, modelled after the silver coins minted in the

17 For a detailed discussion of the development of maritime trade between Maritime Southeast Asia and China, refer to Jan Wisseman-Christie, 'Patterns of trade in western Indonesia, 9th through 13th centuries A.D.', 2 vols. (Ph.D. diss., School of Oriental and African Studies, University of London, 1982); Wisseman-Christie, 'Trade and early state formation in maritime Southeast Asia: Kedah and Srivijaya', *Jebat*, 13 (1985): 43–56; Wisseman-Christie, 'The medieval Tamil-language inscriptions in Southeast Asia and China', *Journal of Southeast Asian Studies* [hereafter *JSEAS*], 29, 2 (1998): 239–68; Wisseman-Christie, 'Asian sea trade between the tenth and thirteenth centuries and its impact on the states of Java and Bali', in *Archaeology of seafaring: The Indian Ocean in the ancient period*, ed. Himanshi Prabha Ray (Delhi: Pragati Publications, 1999), pp. 221–70; and, O. W. Wolters, 'Tambralingga', *Bulletin of the School of Oriental and African Studies*, 21, 3 (1958): 587–607.

18 Chen and Qian, *Zhufanzhi zhubu*, pp. 46–7.

19 Ibid., p. 71.

20 Hong Zunzhuang, *Quanzhi* (1149), 12:1b.

21 Chen and Qian, *Zhufanzhi zhubu*, p. 46.

Middle East, began to be produced in the thirteenth century.[22] By the fourteenth century, indigenous tin-based coinage was developed and used by a number of ports in northeast Sumatra and the west coast of the Malay Peninsula.[23]

Apart from not having been adopted as a form of currency with which international, regional and domestic transactions could be conducted, Chinese copper coins also do not appear to have been imported into the Melaka Straits to be smelted for their metal content. There is very little archaeological evidence, both from settlement sites and shipwreck sites in the region, to suggest that Chinese copper coins were a source of the region's copper imports. The availability of cheaper sources of copper ore located within Southeast Asia, such as western Sumatra, Thailand, the Philippines and Burma,[24] appears to have provided little incentive for copper coins, which were less available and hence expensive, to be imported as a source of workable copper. Java, for example, sourced for scrap copper within Southeast Asia for the workable copper that it needed. The Intan wreck, for example, carried a substantial cargo of scrap copper, most of which originated from such Southeast Asian objects as platters and mirrors. Other shipwrecks recovered in or near the Melaka Straits region, such as the early twelfth-century Pulau Buaya wreck and the thirteenth-century Java Sea wreck, which were carrying predominantly Chinese products as their cargo, did not carry large quantities of copper coins.[25] In addition, finds indicating that Chinese copper coins were melted down for their content have so far not been made in the Melaka Straits. Analyses of objects recovered through archaeological excavations in Maritime Southeast Asia also reveal that, in general, the metal composition of locally produced bronze objects do not contain a high proportion of lead, a characteristic exhibited by Song and Yuan period copper coins.[26]

The role of Chinese copper coins in the Sino-Melaka Straits trade appears, instead, to have been linked with developments in Java. Within Maritime Southeast Asia, Chinese copper coins have remained intact in form and significant numbers in only three locations: Java, Kota Cina and Temasik. Of these, Java was the only major political and economic entity of Maritime Southeast Asia during the tenth to fourteenth centuries. Excavations of Javanese sites dated from the eleventh century onwards, located in the Brantas River Delta area, have yielded enormous quantities of Chinese copper coins.[27] The data pertaining to the Chinese copper coins recovered reveal a consistent distribution pattern from the Tang to Northern Song periods. This pattern mirrors the period when the export embargo on copper coins was lifted by the Song court, as well as the phenomenal levels of copper coin production in China following their free export. Over

22 Michael Mitchiner, *The history of coinage of Southeast Asia until the fifteenth century* (London: Hawkins, 1998), pp. 219–20; and, Wicks, *Money, markets and trade in early Southeast Asia*, pp. 235–38, 241.
23 Personal communication, Jan Wisseman-Christie (2004).
24 B. Bronson, 'The iron industry and trade', in *Archaeological recovery of the Java Sea wreck*, ed. M. Flecker and William M. Mathers (Annapolis: Pacific Sea Resources, 1997), pp. 95–102.
25 Abu Ridho and Edward E. McKinnon, *The Pulau Buaya wreck: Finds from the Song period* (Jakarta: The Ceramics Society of Indonesia, 1998); and, Flecker and Mathers (eds.), *Archaeological recovery of the Java Sea wreck*.
26 Borell, 'Money in fourteenth century Singapore', p. 7.
27 Wisseman-Christie, 'Money and its uses in the Javanese states', pp. 243–86; and, Van Aelst, 'Majapahit picis', pp. 357–93.

90 per cent of the coins recovered from East Javanese sites belong to the Northern Song period. Of these, the main bulk was minted during the Shenzong Xining and Yuanfeng eras (1068–85).[28] The remaining coins date to the pre-Song and Ming periods, with almost no Southern Song coins having been recovered. This reflects a pattern of mass-scale import of copper coins into Java during the late eleventh century, which only came to an abrupt end when the Northern Song dynasty capitulated in 1126. Although the minting of copper coins by China was subsequently reduced dramatically during the Southern Song period as part of the fiscal discipline imposed by the Southern Song court, Southern Song coins, along with contemporaneous Jin dynasty coins, were in circulation in China. These coins have also been recovered from twelfth- to fourteenth-century settlement sites in the Melaka Straits where substantial quantities of Chinese copper coins have been recovered. The near absence of Southern Song coins in Java is thus a unique characteristic of Javanese coin finds.

Information from Javanese epigraphy indicates that by the thirteenth century Java had officially adopted Chinese copper coins as the currency to be used in low-value official transactions such as the tabulating and payment of taxes. This official move was most likely preceded by the adoption of these coins in ordinary market transactions in the twelfth and late eleventh centuries, as attested to by the archaeological data from East Java pertaining to Chinese copper coins.[29] The period during which Java began to restructure its lower denomination currency coincided with the lifting of the export ban on Chinese copper coins by the Song court in 1074. The large-scale export of Chinese copper coins from 1074 onwards provided Java with a suitable form of currency to replace the awkward small-denomination silver alloy coinage used until the eleventh century.[30] Java's high demand for copper coins was most likely the result of a build-up of demand that was based on its awareness of this Chinese item over a prolonged period of time.[31] For this purpose, one-cash value coins were adopted to be used in the domestic Javanese economy.

While direct trade with China undoubtedly fueled this currency development in Java, another important source of copper coins would likely have been the ports of the Melaka Straits. The region maintained trade with Java during this time, and acted as an economic interface between Java and China. In particular, key ports such as Palembang and Jambi, which conducted intense economic exchanges with China through both state-sponsored and private trade, would likely have been an important source of Chinese copper coins to Java in the second half of the eleventh and early twelfth centuries. The large payments of copper coins by the Song court in return for the shipments of foreign products brought by Srivijaya to the Chinese ports from the 1070s onwards, and their absence at the key port settlement sites of the Melaka Straits, suggests they were not intended for use in the region, but may have been re-exported to Java.

28 Van Aelst, 'Majapahit picis', pp. 374–5.
29 Wisseman-Christie, 'Money and its uses in the Javanese states', pp. 267–8.
30 Jan Wisseman-Christie, *A preliminary survey of early Javanese coinage held in Javanese collections* (Jakarta: Kundika, 1994).
31 Personal communication, Jan Wisseman-Christie (2004).

Chinese copper coins thus appear to have been generally regarded as a Chinese transshipment product in the Melaka Straits. Copper coins would have been akin to other such Chinese products such as ceramics, iron ware and textiles. The nature of the import pattern of these items in the Straits would have been reflected in the level of demand for these coins in the recipient markets at the end of the relay chain. In this case, that market was Java.

The transshipment of Chinese copper coins from ports in the Melaka Straits to Java was relatively short lived. The ability to play such a role was apparently fully dependent on the Song court's lifting of the export embargo on Chinese copper. Once the embargo was reinstated, the ability of the region's ports to act as conduits in the trade appears to have been severely curtailed. Following the advent of Southern Song rule in 1127, the export of copper coins was banned. This ban was reinforced again in 1133.[32] The import of foreign products was still paid for by China in copper coins. The 1156 Srivijayan trade mission, for example, was repaid at Guangzhou with an amount of coins equal to the value of the products it had presented to the Song court.[33] However, traders were now expected to use the currency in China for the purchase of Chinese products before leaving.[34] This was a return to the practice instituted by the Northern Song court, and mirrored the general reversion of the Southern Song court's administration of maritime trade to the system that was instituted prior to 1074 during the first few decades of its rule.

By the late twelfth century, copper coins were no longer used in China's official maritime trade transactions. An 1175 memorial, which lamented the massive outflow of copper coins via international trade, ordered that silks, ceramic and lacquer ware were to be used in the exchange for foreign products in place of metals and currency,[35] with the use of copper coins being specifically targeted. All subsequent state-level missions to China were consequently reciprocated with gifts of only non-metal Chinese products.

As a consequence of these administrative changes, the region's role as an intermediary in Java's import of copper coins appears to have been dramatically reduced. There appears to have been a steady decline in the legal export of copper coins from China into the Straits region, and ultimately to Java, from 1127 onwards. This curtailed role is reflected by shipwreck data from the Straits region. The Pulau Buaya wreck, possibly a Southeast Asian vessel dated to the early twelfth century, appears to have been heading for the port of Srivijaya-Jambi from China when it foundered in the Lingga Archipelago.[36] Only two Chinese copper coins, and one fragment, were recovered from the site of the wreck, even though the vessel was fully laden with Chinese products such as ceramics, iron wares, copper gongs and lead slabs. By the early thirteenth century, the trade in Chinese copper coins had become a negligible aspect of the Straits region's trade with China. The Java Sea wreck, a Southeast Asian vessel dated to the early thirteenth century

32 SHY ZG 44:12a, 17a.
33 SS 489:14090.
34 The 1134 Arab mission, for instance, converted the copper coins the Song court paid for the tribute into 600 lumps of silver, gold and silver wares, and rolls of silk; Wong, *A commentary on the tributary trade between China and Southeast Asia*, p. 19.
35 SS 186:33a.
36 Ridho and McKinnon, *The Pulau Buaya wreck*.

and *en route* from China to Java via the southeast coast of Sumatra when it foundered in the Java Sea, did not carry any Chinese copper coins. Maritime Southeast Asian participation in the export of Chinese copper coins had, by the thirteenth century, all but disappeared. The peak of transshipment trade in copper coins in the region thus appears to have been limited to a very short time span, confined mainly to the late eleventh century.

With the instituting of the export ban on Chinese copper coins and the adherence to the ban by China's Southeast Asian trading partners, Chinese traders became the only channel through which these coins could be exported from China. This was facilitated by the increase in direct Chinese trade to Southeast Asia from the late eleventh century onwards. In 1090, following the liberalisation of maritime shipping regulations, Chinese vessels were permitted to depart from and return to any place along the Chinese coastline as long as they registered with the local authorities before departing.[37] Consequently, the volume of Chinese shipping to Southeast Asia expanded steadily through the course of the late eleventh and twelfth centuries.[38] The direct commercial contact between Chinese traders and Java appears to have led to the continued export of copper coins to the latter. The *Zhufanzhi* notes that Chinese traders were shipping Chinese copper coins, by subterfuge, to Java in the early thirteenth century.[39]

Chinese copper coins thus appear to have continued to be a trade item in the commercial exchanges between China and Java during the early thirteenth century. However, despite the increase in the volume of Chinese shipping and trading presence in Southeast Asia through the course of the late eleventh and twelfth centuries, Chinese copper coins did not evolve into a form of currency in the economic interaction between these two economies. According to the *Zhufanzhi*, copper coins were smuggled out of China to be bartered for, not to purchase, pepper in Java. The valuation of international trade, such as the trade price of pepper, in Java continued to be made in silver.[40]

Despite the role of Chinese traders in the copper coin trade, the trade appears to have declined to negligible levels by the early thirteenth century. The illegal nature of the coin trade purveyed by Chinese traders meant that these coins were no longer exported to Java in the same volume as they had been in the late eleventh and early twelfth centuries. The near absence of Southern Song and Yuan period coins from East Javanese archaeological sites indicates that the supply of copper coins to Java declined dramatically after 1127. The repeated issues of bans against the outflow of Chinese copper coins through maritime trade appears to have been intended to address the export of coins to East Asian states such as Korea and Japan, both of which continued to import them in vast quantities up until the fourteenth century, a state of affairs evident from the large coin finds recovered from the Sin'an wreck,[41] rather than such Southeast Asian trading partners as Java.

37 SHY ZG 44:8a, b.

38 Derek Heng Thiam Soon, 'Economic interaction between China and the Malacca Straits region, tenth to fourteenth centuries' (Ph.D. diss., University of Hull, 2005), pp. 182–7.

39 Chen and Qian *Zhufanzhi zhupu*, pp. 88, 101.

40 Ibid., p. 89, 101.

41 Kim Wondong, *Chinese ceramics form the wreck of a Yuan ship in Sinan, Korea – with particular reference to celadon wares, vols. I and II* (Ann Arbor: University Microfilms International, 1989), pp. 179–85.

By the fourteenth century, Maritime Southeast Asia's trade in Chinese copper coins had gone into near complete decline. The small-scale minting of coins by the Yuan court, following the adoption of paper currency as the chief medium of exchange in China during its rule, culminated in China ceasing to be a major source by the late thirteenth century. The *Daoyi zhilue*, a treatise written by the Chinese trader Wang Dayuan (*c.* 1349),[42] does not note copper coins as an item demanded or used by any Maritime Southeast Asian port. Javanese copper coins, or imitation coins minted after the Tang period 'Kaiyuan tongbao' copper coins, based upon the major Tang and Northern Song copper coins, were instead minted in Java from the mid-fourteenth century onwards to meet the currency demands of the Javanese economy.[43] It was only in the late fourteenth century, when the minting of copper coins resumed under the Ming court, that these coins were once again made available to Java and imported in significant quantities. This is evident from the data on the Rang Kwien wreck, located in the Gulf of Thailand, a late fourteenth-century wreck from which around 200 kilograms of Chinese coins, dating to between the fourth and fourteenth centuries, have been recovered.[44]

Copper coins as a means of exchange in the Melaka Straits

While the export of Chinese copper coins as a trade item to the Melaka Straits took place between 1074 and 1126, they were present in a number of the region's port settlements that existed between the tenth and fourteenth centuries. The number of coins recovered from the settlement sites varies significantly. At Palembang and Jambi, archaeological finds of these coins remain sporadic, while at Sungai Mas, Pengkalan Bujang and Kompei, very small numbers of these coins have been recovered. Conversely, at Kota Cina and Temasik, significant numbers of these coins have been recovered.[45] It is the coin finds of the latter two port settlements that this article will now address.

To date, a total of 1,060 Chinese copper coins were recovered from Kota Cina, a port settlement on the northeastern coast of Sumatra that existed between the twelfth and early fourteenth centuries. These date from the Sui to Southern Song periods, of which 87 per cent are from the Northern Song period.[46] While most of the copper coins are of one-cash value, a few coins of two-cash value have also been recovered.[47] The majority of the coins recovered were minted during the reigns of the Emperors Renzong (1023–56) and Shenzong (1065–85), while the latest coins recovered were minted during the reign

42 Su Jiqing, *Daoyi zhilue jiaoshi* (Beijing: Zhonghua shuju, 1981).
43 Wisseman-Christie, 'Money and its uses in the Javanese states', p. 270; Van Aelst, 'Majapahit picis', pp. 376–89.
44 Roxanna Brown, 'The Ming Gap and shipwreck ceramics in Southeast Asia' (Ph.D. diss., UCLA, 2004), pp. 23–4.
45 Abu Ridho, 'Penelitian keramik di situs-situs arkeologi provinsi Jambi', in *Laporan: Hasil penelitian arkeologi dan geologi propinsi Jambi 1994–1995* (Jambi: Pemerintah Daerah Tingkat I Provinsi Jambi, 1995), pp. 198–231; Nik Hassan Shuhaimi bin Nik Abd. Rahman and Othman Mohd Yatim, *Antiquities of the Bujang Valley* (Kuala Lumpur: Museum Association of Malaysia, 1990); S. J. Allen, 'Trade, transportation and tributaries: Exchange, agriculture and settlement distribution in early historic period Kedah, Malaysia' (Ann Arbor: U.M.I. diss. Information System, 1988); Edward E. McKinnon and Tengku Luckman Sinar, 'A note on Pulau Kompei in Aru Bay, northeastern Sumatra', *Indonesia*, 32 (1981): 49–73; McKinnon, *Kota Cina*, pp. 106–12; and, Borell, 'Money in fourteenth century Singapore', p. 7.
46 McKinnon, *Kota Cina*, pp. 106–12.
47 McKinnon, 'Research at Kota Cina', p. 34.

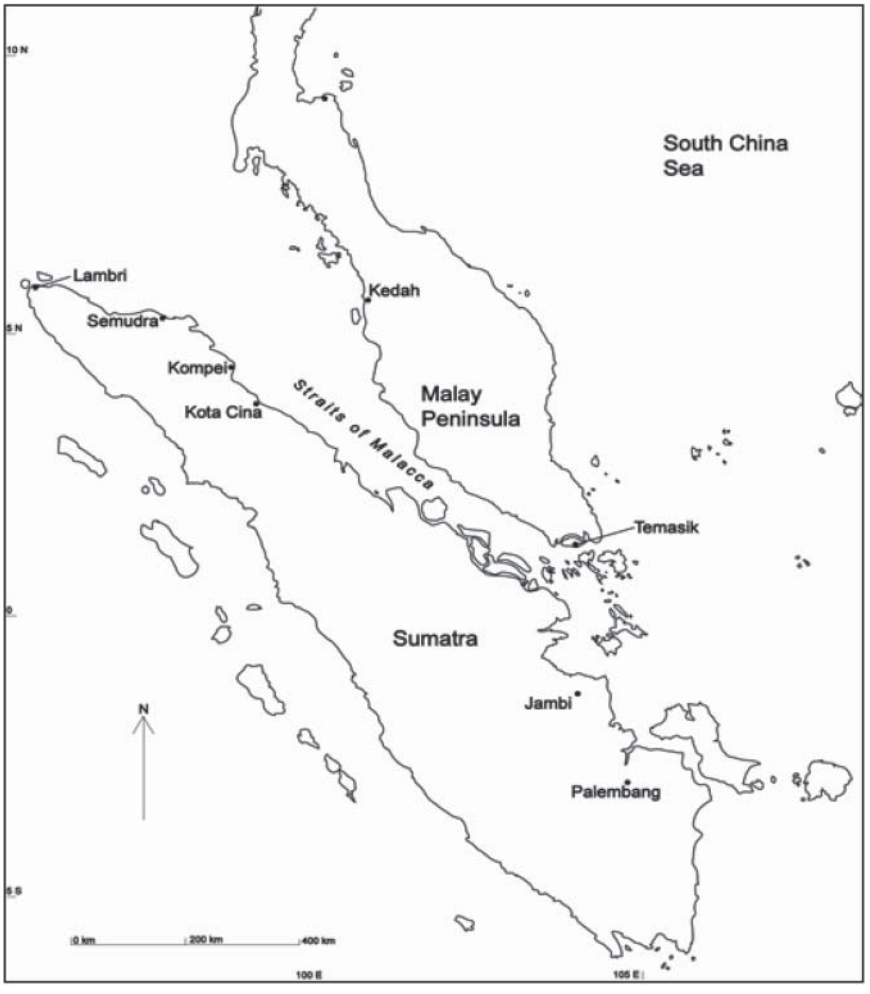

Figure 2 Melaka Straits Region coastal port settlements, tenth to fourteenth centuries

of the Emperor Duzong (1265–74). The vast majority of Song period Chinese copper coins minted in the eleventh century are a common characteristic of coin finds in South-east Asia and China.[48] However, small numbers of coins minted during the reigns of Xiaozong (1163–89), Guangzong (1190–94), Ningzong (1195–1224), Lizong (1225–64) and Duzong (1265–74) are present, a characteristic distinct from Javanese coin finds.

A total of 206 copper coins have been recovered from three archaeological sites – the Parliament House, St Andrew's Cathedral and Singapore Cricket Club sites – at Temasik, a fourteenth-century port settlement located on the north bank of the Singapore River; 127 copper coins were recovered from the Parliament House site, of which 20 are of two-cash value, one is of ten-cash value, and the remainder of one-cash value. Of these coins,

48 Van Aelst, 'Majapahit picis', fig. 1, 2.

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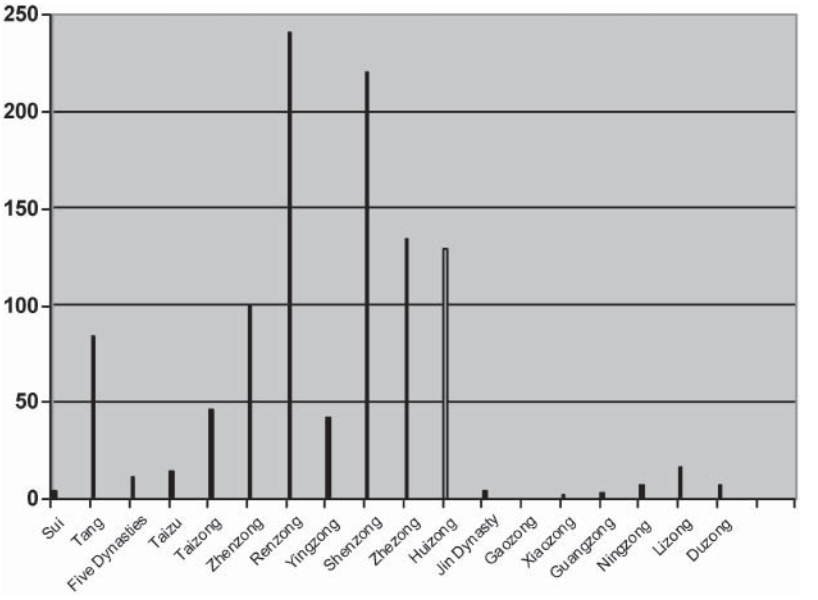

Figure 3 Number of Chinese copper coins recovered from Kota Cina, according to the dynastic reigns or reign titles of the Song emperors

97 have been identified. These were minted in the Song period, with the majority having been minted in the Northern Song period;[49] 44 Chinese copper coins were recovered from the St Andrew's Cathedral site, of which two are of ten-cash value, six are of two-cash value, and the remainder of one-cash value; 23 of the recovered coins have been identified, of which all but one were minted in the Song period, with Northern Song coins constituting the majority of those identified. The exception is a ten-cash coin from the Yuan period minted during the reign of Wuzong (1308–11). A Vietnamese coin, measuring 24mm, with the legend 'Guangzhong tongbao', was also recovered; 35 copper coins were recovered from the Singapore Cricket Club site, of which all are of one-cash value. All but 13 have been identified. These were minted in the Song and Jin periods, although Northern Song coins constitute the majority of those identified; eight one-cash coins were fused together – six appear to have been fused by corrosion due to the acidity of the soil, while another two are warped, having fused together due to high heat.

Although the Chinese copper coin finds at Kota Cina and Temasik are fairly similar in terms of their minting dates, the two port settlements existed in different periods in time, overlapping only briefly in the late thirteenth and early fourteenth centuries. The regional contexts during which the two settlements existed were different. In the case of Kota Cina, the twelfth century witnessed the increase in direct participation of Chinese traders and shipping in Southeast Asia following the liberalisation of private Chinese

49 A coin with the legend 'Kaiyuan tongbao', most likely a fourteenth-century Javanese imitation coin, was also recovered; Borell, 'Money in fourteenth century Singapore', p. 7, table 1.

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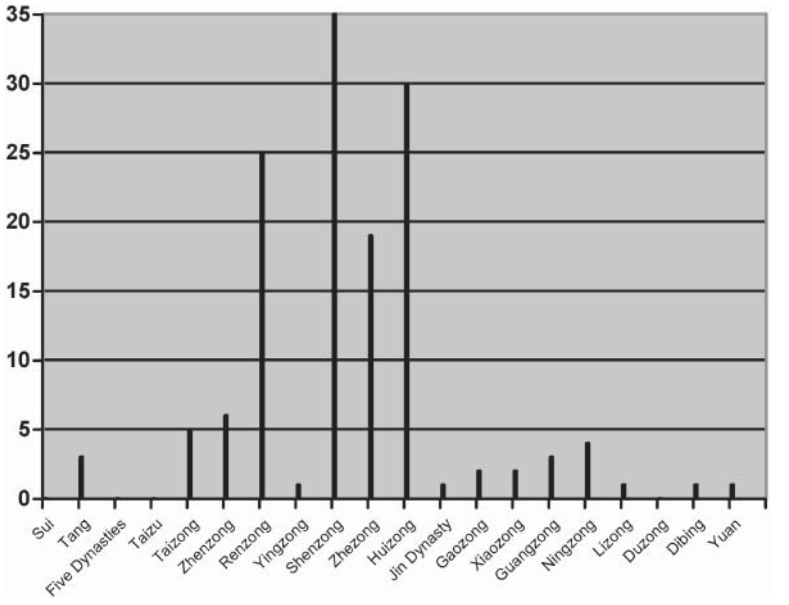

Figure 4 Number of Chinese copper coins recovered from the St Andrews Cathedral, Parliament House and Singapore Cricket Club sites, according to the dynastic reigns and reign titles of the Song emperors during which they were minted

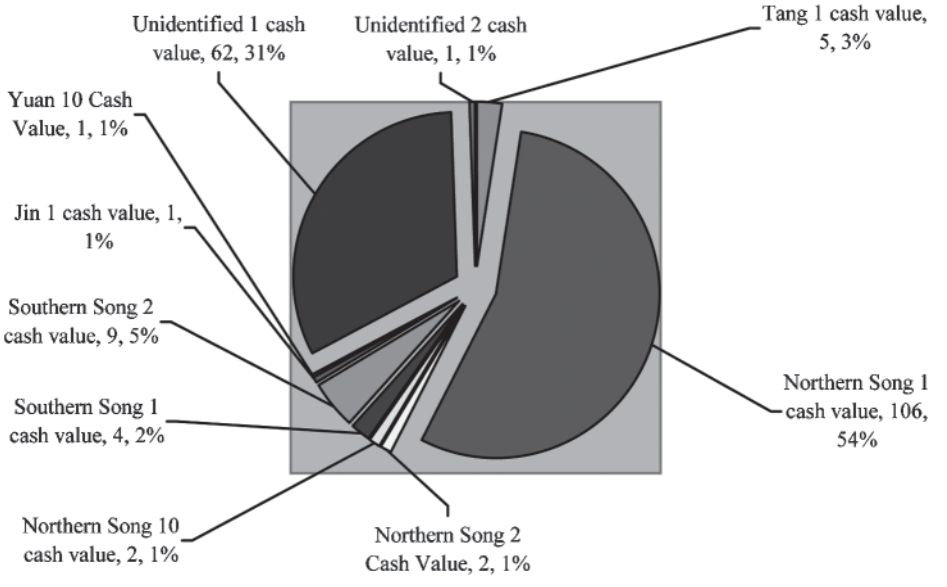

Figure 5 Quantities and percentages of Chinese copper coins recovered from the Parliament House, St Andrew's Cathedral & Singapore Cricket Club sites, according to their coins value and dynastic dating

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shipping by the Song court in 1090. This development led to the rise of collection centres that functioned, at least at the regional level, in direct competition against the more established international emporiums of the Melaka Straits, such as Palembang and Jambi. By the beginning of the thirteenth century, such key regional ports as Lambri and Samudra in the northern Melaka Straits region began to be noted in such Chinese records as the *Zhufanzhi* and the *Yunlu manchao* by Zhao Yanwei, which appeared in 1206,[50] while Kedah became increasingly important to Indian Ocean traders. The northern part of the Melaka Straits was going through a process of establishing itself as an economic zone that was distinct from the sway held by Srivijaya-Jambi in the southern part of the Straits region.

By the time Temasik came into existence in the late thirteenth century, however, the regional context had changed dramatically. The hitherto international emporium of the region – Srivijaya-Jambi – was sacked by Java in 1275, leaving in its wake an economic and political vacuum in the region that remained unfilled until the fifteenth century.[51] By the second half of the fourteenth century, the southern areas of the Melaka Straits, including the Riau-Lingga Archipelago, was under the sway of Majapahit Java.

Geographically and economically, the respective external orientations of Kota Cina and Temasik were also distinct from each other. Analyses of the ceramic finds recovered through archaeological excavations conducted at both settlements indicate that ports located in the northern part of the Melaka Straits were most likely orientated towards the Indian Ocean, reflected by the predominance of earthenware shards of Southeast Asian and Indian origin, and the comparatively smaller proportion of Chinese ceramics, amongst the ceramics recovered,[52] while ports located in the southern part of the Melaka Straits were most likely orientated towards the South China Sea, reflected by the predominance of South Chinese coarse stoneware shards amongst the ceramics recovered. The external currency networks to which both settlements were linked would have been different. The reasons for these settlements bringing in Chinese copper coins would most likely have differed as well.

Kota Cina: Chinese copper coins as a selective means of exchange between local and Chinese traders

The ports in the immediate economic region within which Kota Cina was located – the north Melaka Straits region – appear to have been orientated towards the Indian

50 This text can be found in Zhu Jianmin et al. (eds.), *Yingjing wenyuange siku quanshu*, 864: 259–409. For an English translation of the section in this text that refers to Maritime Southeast Asia, refer to So Kee Long, 'Dissolving hegemony or changing trade pattern? Images of Srivijaya in the Chinese sources of the twelfth and thirteenth centuries', *JSEAS*, 29 2 (1998): 303.

51 Heng, 'Economic interaction between China and the Malacca Straits region', p. 258.

52 McKinnon, *Kota Cina*, pp. 116–18, 129–286; McKinnon, 'Mediaeval Tamil involvement in northern Sumatra, c11–c14 (the gold and resin trade)', *JMBRAS* 69, 1 (1996): 85–99; Leong Sau Heng, 'A study of ceramic deposits from Pengkalan Bujang, Kedah' (MA Thesis, University of Malaya, 1973); Shuhaimi and Mohd Yatim, *Antiquities of the Bujang Valley*; Claude Guillot, 'La nature du site de Lobu Tua a Barus, Sumatra', in *From the Mediterranean to the China Sea: Miscellaneous notes*, ed. Claude Guillot, Denys Lombard and Roderich Ptak (Wiesbaden: Harrassowitz Verlag, 1998), pp. 113–30; K. P. Rao, 'Kottapatnam – A South Indian port trading with eastern lands', in *In search of Chinese ceramic-sherds in South India and Sri Lanka*, ed. Noboru Karashima (Tokyo: Taisho University Press, 2004), pp. 9–15, plate 5.2; and, Viswas D. Gogteand, 'The Chandraketugarh-Tamluk region of Bengal: Sources of the early historic rouletted ware from India and South East Asia', *Man and Environment*, 22, 1 (1997): 69–85.

Ocean, suggested by the presence of Indian Ocean and Middle Eastern coins at these port sites, and from the minting of gold coins with Islamic script that were modelled after the Middle Eastern dinar by the thirteenth century.[53] By the fourteenth century, the polities of the northern Melaka Straits had developed a tin-based currency that was adopted by a number of the ports in the area.[54] The significant quantity of Chinese copper coins recovered at Kota Cina is therefore unique to the region in the twelfth to early fourteenth centuries. The sources of Kota Cina's copper coins, and their possible role, are important issues that would have to be addressed.

The relative profusion of Chinese copper coins at Kota Cina may be linked to the extent to which the port settlement maintained trade links with states whose economies relied on such coinage. In the twelfth and thirteenth centuries, these included Java, and its trading sphere in central and eastern Indonesia, and China. However, Java does not appear to have been an important source of copper coins in Kota Cina. The presence of Southern Song coins suggests that the source was more likely to have been China than Java, since very few Southern Song coins have been recovered in Java. Kota Cina also appears to have been outside the economic sphere of influence of Java. Although trade between the northern Melaka Straits and Java must have taken place, the importance of this trade prior to the fourteenth century was apparently not great enough for Chinese copper coins to have been introduced into the region's economy to facilitate this trade. This is evident from the insignificant quantities of Chinese copper coins recovered from contemporaneous sites in the northern Melaka Straits, such as Pengkalan Bujang in southern Kedah and Kompei near Kota Cina in northeast Sumatra, all of which would have maintained some form of trade with Java during the twelfth to early fourteenth centuries. Indeed, the economic influence of Java during this period was not sufficiently strong to cause even the ports in the southern part of the Melaka Straits to adopt Chinese copper coins to facilitate their trade with Java. This is supported by information in such textual records as the *Quanzhi* and *Zhufanzhi*, which do not note the presence or use of Chinese copper coins at such ports as Jambi,[55] as well as the absence of archaeological information indicating that Chinese copper coins of this period have been recovered from such sites as Palembang and Jambi.

Indeed, the presence of Southern Song coins at Kota Cina suggests that China, rather than Java, was the key source of the Chinese copper coins that continued to be fed into Kota Cina throughout the period of the port settlement's existence. Chinese traders, who were becoming increasingly active in Southeast Asia from the late eleventh century onwards, appear to have been the main channel through which Chinese copper coins were made available to Kota Cina throughout the course of its existence.

Chinese copper coins were apparently not the only foreign currencies to have been accepted as a means of exchange at Kota Cina. Eight Sri Lankan coins, minted in the twelfth and early thirteenth centuries, were also recovered at Kota Cina. These finds suggest that, in spite of the general use of barter as a form of conducting international transactions at the ports of the Melaka Straits region, foreign currencies brought by traders from such key Asian economies as India and China were accepted by Kota Cina.

53 Mitchiner, *The history of coinage of Southeast Asia until the fifteenth century*, pp. 219–20.
54 Feng Chengjun, *Yingya shenglan jiaozhu* (Beijing: Zhonghua shuju, 1955), pp. 24, 30–1.
55 Hong Zunzhuang, *Quanzhi* (1149), 12:1b; and, Chen and Qian, *Zhufanzhi zhubu*, pp. 46–7.

The presence of significant numbers of Chinese copper coins, however, is unique to Kota Cina within the regional context. The only other exception was Temasik. The presence and usage of Chinese copper coins at Kota Cina appears to have been the result of certain characteristics that set it apart, in terms of its external or domestic economy, from the other northern Melaka Straits region port settlements of that time. The presence of Chinese copper coins at Kota Cina appears to be linked to the presence of a sizable community of Chinese settlers. Oral traditions concerning Kota Cina note that the settlement was so named because it was originally established as a Chinese trading settlement,[56] a feature of Kota Cina that was unique in the regional context. In contrast, other settlements in the region appear to have supported foreign populations that originated from the Indian Ocean littoral, evident from the Islamic influence in northeastern Sumatra port polities, such as Samudra, and the Buddhist and Hindu influences at Sungai Mas and Pengkalan Bujang in South Kedah.[57] The presence of large quantities of Chinese copper coins at Kota Cina, as opposed to the large quantities of Sri Lankan coins and the insignificant number of Chinese copper coin finds that have been reported at contemporaneous sites in southern Kedah,[58] suggests that differences in the demographics of the respective populations may have been an important factor in the presence and use of Chinese copper coins at these ports.

It is likely that port settlements in the Melaka Straits with a significant Chinese presence, such as Kota Cina, may have adopted the Chinese currency as a means of conducting commercial transactions with Chinese traders, as a compliment to barter trade and Indian Ocean littoral currencies that were prevalent in the region during that time. The presence of both one- and two-cash value coins at Kota Cina suggests that facilitating transactions with Chinese traders was an important factor of the currency adoption, and this led to a degree of synchrony with the currency system in China. Chinese copper coins were most likely a means of exchange used in transactions between local residents and Chinese traders who arrived and then departed annually according to the monsoon seasons.

The use of copper coins by Chinese traders in the Melaka Straits during the twelfth to early fourteenth centuries is substantiated by archaeological data obtained from the Quanzhou wreck, a Chinese trading vessel dated to the 1270s that was operated and funded by Chinese traders, including Song imperial clansmen.[59] From the cargo recovered from the wreck, the vessel appears to have returned from a trading voyage to the Melaka Straits when it foundered or was intentionally scuttled at Quanzhou Bay.[60] 504 Chinese copper coins and five iron coins, dating from the Tang and Song periods, with the most recent coins minted in 1272, were recovered from the wreck site. These were

56 McKinnon, *Kota Cina*, pp. 362–3.

57 Alastair Lamb, *Chandi Bukit Batu Pahat: A report on the excavation of an ancient temple in Kedah* (Singapore: Eastern Universities Press, 1961).

58 Borell, 'Money in fourteenth century Singapore', pp. 9–10.

59 Fu Zongwen, 'Houtu guchuan: Song ji nanwai zongsi haiwai jingshang di wuzheng', *Haijiaoshi yanjiu*, 2 (1989): 77–83.

60 Janice Stargardt, 'Behind the shadows: Archaeological data on two-way sea trade between Quanzhou and Satingpra, south Thailand, 10th–14th century', in *The emporium of the world*, ed. Schottenhammer, p. 375.

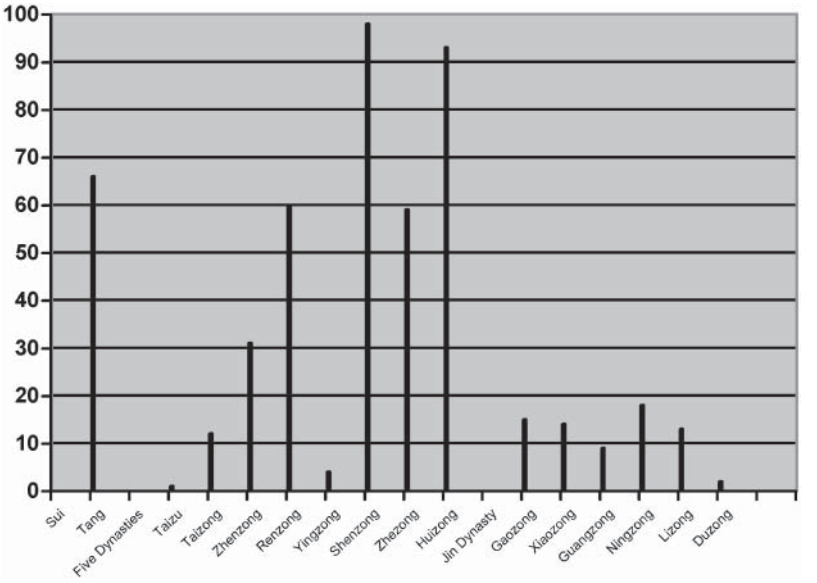

Figure 6 Number of Chinese copper coins recovered from the Quanzhou Wreck, according to dynastic reigns and reign titles of the Song emperors during which they were minted

recovered from all the 12 cargo holds of the vessel, although most were recovered, scattered on the hull floor, from holds three, six and seven. The coins comprised those of one-, two- and ten-cash value coins, the three coin denominations used in China.[61] No wooden tag noting ownership of the coins, or that the coins were an export cargo of the vessel, was recovered. These characteristics of the Quanzhou wreck copper coin find differ greatly from the nature of the copper coins found at another thirteenth-century Chinese wreck that foundered off the coast of the Korean Peninsula – the Sin'an wreck. Approximately 8 million copper coins were recovered from the Sin'an wreck, and these appear, from the wooden tags recovered from the wreck site, to have been stored in containers, most likely ceramic jars.[62] A number of wooden tags, noting the owner of the copper coin cargo and the quantity in each container that they were stored in, were recovered from the Sin'an wreck as well.[63] Whereas the copper coins on the Sin'an wreck were clearly shipped out of China as a form of export commodity, the coins from the Quanzhou wreck were intended for a different purpose.

The copper coins from the Quanzhou wreck appear to have been carried by the Chinese traders on the vessel on its outward journey, and subsequently traded into the Melaka Straits region for indigenous and transshipment products. Despite their usage, they do not appear to have been widely accepted at regional ports as an external currency

61 Quanzhouwan songdai haichuan fajue baogao bianxiezhu, 'Quanzhouwan songdai haichuan fajue jianbao', *Wenwu*, 10 (1975): 14, table 4.
62 Wondong, *Chinese ceramics form the wreck of a Yuan Ship*, pp. 179–85.
63 Ibid., pp. 173–4.

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in the conduct of trade with Chinese traders. Their use in the twelfth to early fourteenth centuries was fairly limited. Chinese copper coins appear to have been used as a form of external currency only by a few of the region's port settlements. This is reflected in the sizeable amount of copper coins that remained unused at the end of the trading voyage of the traders on the Quanzhou wreck vessel.

It is possible that Chinese copper coins were used domestically as a means of exchange as well. There was no indigenous coinage produced at Kota Cina. The domestic use of Chinese copper coins at Kota Cina would mirror the contemporaneous situation in southern Kedah, where the recovery of large numbers of Sri Lankan coins suggests that they were adopted as a form of currency by the population, probably until the fourteenth century, when an indigenous tin-based coinage was produced. It would appear that in the absence of an indigenous coinage, the ports of the Melaka Straits would have either adopted such precious metals as gold, silver and tin as a means of exchange in the domestic and external economies, as in the case of Jambi and Palembang, or the currency of a major Asian state with which the port maintained economic links. In the case of southern Kedah, this currency appears to have been the Sri Lankan coinage system, while in the case of Kota Cina this currency appears to have been the Chinese copper coinage.

In general, however, there is an absence of any information, textual or archaeological, indicating such a usage for these coins prior to the fifteenth century in key ports in the Melaka Straits that had better access to supplies of these coins, such as Palembang and Jambi, and other regional ports such as those in southern Kedah or Semudra-Pasai. At Kota Cina, this problem is worsened by the fact that the exact nature of the distribution of the Chinese copper coin finds has so far not been detailed in any report.[64] Thus, any suggestion that such a practice was likely to have taken place at Kota Cina is at best speculative.

Temasik: The interface of extra-regional currency systems and the establishment of a regional currency in the Riau-Lingga Archipelago

By the late thirteenth century Temasik – another port settlement in the Melaka Straits where significant numbers of Chinese copper coins have been recovered – grew in activity. Three key characteristics of the coin finds from the three Temasik sites of Parliament House, St Andrew's Cathedral and Singapore Cricket Club may be noted. Firstly, Chinese copper coins minted in the Tang, Song, Jin and Yuan periods were imported into Temasik. Secondly, the majority of the copper coins imported and used in Temasik were of one-cash value, although all the denominations that were used in the Chinese domestic economy during that time were made available in Temasik as well. Finally, Javanese copper coins, modelled after Chinese coins of the Tang period, as well as Vietnamese coins, were also made available to and imported by the settlement, albeit in much smaller numbers than Chinese copper coins.

The copper coin finds from the Temasik sites suggest that this port settlement shared certain common characteristics with Kota Cina. Firstly, China remained an important source of copper coins to the Melaka Straits region. The issuing of an edict by

64 McKinnon and Sinar, 'A Note on Pulau Kompei in Aru Bay', pp. 49–73; and, McKinnon, *Kota Cina*, pp. 106–12.

the Yuan court in China in 1283, officially banning the use of this item in the conduct of maritime trade, followed by another ban on the clandestine use of copper coins in maritime trade in 1286,[65] indicates that the outflow of copper coins from China to its foreign trading partners continued into the Yuan period. The presence of a Yuan period coin amongst the copper coins recovered at Temasik suggests that Chinese traders continued to bring these coins to the Melaka Straits in the fourteenth century, and most likely exchanged them for trade products at places where they were accepted either as a form of currency or as a trade item.

The acceptance of Chinese copper coins by traders at Temasik may have been based on similar reasons for their acceptance at Kota Cina. Temasik shared a key demographic characteristic with Kota Cina – the presence of a resident Chinese population. The *Daoyi zhilue* notes that Temasik's satellite settlement, Longyamen (Keppel Straits), had Chinese residents who were from Quanzhou.[66] More importantly, Longyamen was the only trading settlement amongst the 99 recorded in the *Daoyi zhilue* to have been noted as having a resident Chinese population. In addition, this Chinese population lived alongside the settlement's indigenous population. It is likely that the main settlement, Banzi (north bank of the Singapore River), where all the archaeological excavations of Temasik have so far been conducted, had a resident Chinese population as well. Indeed, the population of a number of port settlements in the southern end of the Melaka Straits began to comprise significant proportions of Chinese residents during the fourteenth century. Of these, those that have been documented in Chinese textual records include Temasik and Palembang.[67] The presence of a resident Chinese population would have facilitated the adoption of the Chinese currency as a means of exchange between Chinese traders and those at Temasik. The presence of one-, two- and ten-cash value copper coins at Temasik, all the denominations of Chinese copper coins, suggests that this settlement may have also attempted to synchronise the use of copper coins with the currency system of China.

Temasik's use of Chinese copper coins as an external currency, however, appears to have extended beyond being just a convenient mode of exchange in facilitating trade with traders from China. The economic links that the port settlement maintained with states whose monetised economies relied on such coinage as a means of exchange, both in domestic and international trade, may have necessitated the availability of such coins at the port for the purpose of trade. In the late thirteenth- and fourteenth-century context, these were China, Vietnam and Java and its trading sphere, which by the fourteenth century included the Riau-Lingga Archipelago. This supposition is supported by the presence of a Vietnamese copper coin recovered from the St Andrew's Cathedral site, and Javanese coins, minted after the Song period 'Kaiyuan tongbao' copper coins, recovered from the Parliament House and Singapore Cricket Club sites, suggesting that copper coins of Chinese, Javanese and Vietnamese origins were used in commercial exchanges between Temasik and Vietnamese, Chinese and Javanese traders. The recovery of two Sri Lankan coins, one from the St Andrews Cathedral site and one from the Parliament

65 *Yuanshi* (henceforth YS), 94:25a. The version used is in Zhu, *Yingjing wenyuange siku quanshu*, 292:1–295:739.

66 Su, *Daoyi zhilue jiaoshi*, p. 213.

67 Feng, *Yingya shenglan jiaozhu*, pp. 15–18; Feng Chengjun, *Xingcha shenglan* (Beijing: Zhonghua shuju, 1954), p. 18.

House site,[68] suggests that in spite of the general use of barter as a form of conducting international transactions, Temasik also accepted foreign currencies brought by traders from such key Asian economies as the Middle East, India and China in exchange for such products as middle quality *jiangzhen*, top quality hornbill casques and cotton.[69]

While the role of copper coins in its trade with China and Vietnam appears to have been essentially characterised by Temasik's willingness to accept these coins in exchange for products made available for export, the role of copper coins in the trade between Temasik and Java, on the other hand, may have been more complex. Chinese textual information from the early fifteenth century hints at the establishment of a regional currency system in the Riau-Lingga Archipelago, based on the Javanese currency system, in the preceding century. The *Yingya shenglan* is an account of the early fifteenth-century voyages of the Ming admiral Zheng He. Compiled in 1433, it notes of Palembang that:

> [its] name [amongst] foreigners in Pu-lin-bang (Palembang). [It is] a vassal of Java .... Many of the people of this state are Guangdong, Zhang[zhou] and Quanzhou people, who had fled [China] and resided in this place .... Transactions at the market place are conducted with the use of Chinese copper coins, as well as the use of textile and such like.[70]

Thirteenth- and fourteenth-century Chinese accounts, such as the *Zhufanzhi* and the *Daoyi zhilue*, do not note that Palembang used Chinese copper coins as a form of currency. It would thus appear that the adoption of copper coins by Palembang dates to some time between 1339, when the second trading trip undertaken by Wang Dayuan ended, and the early fifteenth century, when the Zheng He's fleet passed through the Melaka Straits and the usage of Chinese copper coins by Palembang was noted.

The extension of the Javanese currency system to such key ports near the Riau-Lingga Archipelago as Palembang by the second half of the fourteenth century appears to have followed the extension of Majapahit's political influence over this region during this time. Information in the *Suma Oriental*, which notes that Parameswara, the founder of the Melaka Sultanate, was originally a prince of Palembang who had unsuccessfully led a revolt against Javanese rule at Palembang and had to flee to Temasik, indicates that by the late fourteenth century Java's political influence over Palembang, and most of the Riau-Lingga Archipelago, was already firmly established for some time.[71]

68 John N. Miksic and Lim Chen Sian, 'Archaeological research on the Padang and in the St. Andrew's Cathedral Churchyard: St. Andrew's Cathedral archaeological research project progress report summary September 2003–June 2004', p. 3; and, Borell, 'Money in fourteenth century Singapore', pp. 8–10.
69 Heng, *Economic interaction between China and the Malacca Straits region*, pp. 382–6.
70 Feng, *Yingya shenglan jiaozhu*, pp. 15–18.
71 Armando Cortesao, *The Suma Oriental of Tomè Pires and the book of Francisco Rodrigues* (London: The Hakluyt Society, 1944); Wolters, *The fall of Srivijaya in Malay history*, pp. 108–18. Majapahit also subjected Temasik to similar political advances during the fourteenth century. In the *Negarakertagama*, a fourteenth-century Javanese court poem, Temasik was noted as one of the port polities in the Melaka Straits to have been subject to Javanese overlordship. Attempts at establishing political influence over Temasik included punitive military actions. These attempts culminated by the end of the fourteenth century, according to the *Sejarah Melayu*, in Temasik capitulating to Javanese forces; S. O. Robson (trans.), *Mpu Prapoanca, Desawarnana (Negarakertagama)* (Leiden: KITLV Press, 1995), p. 34; and C. C. Brown (trans.), *Sejarah Melayu or Malay Annals: An annotated translation by C. C. Brown* (Kuala Lumpur: Oxford University Press, 1970), pp. 21–3.

The enlargement of Java's political sphere into the Riau-Lingga Archipelago through the course of the fourteenth century may have been complemented by the imposition of the Javanese currency system in port polities such as Temasik, and appears to have gone beyond the mere adoption of one-cash value Chinese copper coins and Javanese imitation coins. Other aspects of the Javanese currency system also appear to have been adopted. A number of Javanese weights, each measuring 1 *kupang*, were recovered from the Parliament House site at Temasik.[72] These weights were part of the system of weights in Java from the ninth century onwards specifically as a measurement of gold and silver, which was in turn used to express the value of monetary transactions.[73] This suggests that Temasik's adoption of the Javanese currency system may have also included an adoption of the Javanese system of weights.

Temasik's adoption of Chinese copper coins and Javanese imitation coins suggests not only a direct economic link between Java and the port settlement, but also a wider currency network. In the fourteenth century a number of port settlements of the Riau-Lingga Archipelago adopted the Javanese currency system as a superimposition of Java's expanded economic sphere into the region upon the traditional intra-regional economic linkages between the ports of the archipelago, linking the economies of these ports with that of Java, and Java's traditional trading sphere of the central and eastern Indonesian Archipelago.

The role of Chinese copper coins at Temasik were most likely much more complex than that evident at such Melaka Straits region port settlements as Kota Cina during the preceding centuries. Since Chinese and Vietnamese traders, who would have used Chinese copper coins as a means of exchange, traded for products at Temasik, it is unlikely that Temasik traders would have been able to use these same coins to purchase the products brought by these same foreign traders to the port settlement. The pattern of the use of copper coins in the trade between Temasik and traders from these two states would have been characterised only by inflows into Temasik, and not by outflows to these states. It was only with Java and the ports in the Riau-Lingga Archipelago that the pattern of usage was likely characterised by a two-way usage of Chinese copper coins.

Temasik's acceptance of Chinese copper coins from Chinese and Vietnamese traders in exchange for locally available products may have been supported by the ease with which one-cash value Chinese coins could be used in the trade with the Riau-Lingga Archipelago and Java. Chinese copper coins, or at least the one cash value coins, may thus have had an intrinsic monetary value in Temasik. The two- and ten-cash value coins, on the other hand, would not have had a similar monetary value. It may be of no surprise, therefore, that two and ten cash value coins account for only 16 of the 206 Chinese copper coins recovered from the three sites.

Temasik appears to have possessed the ability to adopt copper coins as a means of exchange in its trade with China, Vietnam and Java, states that were important to its external economy, as well as its immediate economic hinterland comprising the

72 Borell, 'Money in fourteenth century Singapore', p. 12; For a detailed discussion of the use of the Javanese currency weights system, refer to Wicks, *Money, markets and trade in Early Southeast Asia*, pp. 281–83.

73 Wisseman-Christie, 'Money and its uses in the Javanese states', pp. 259–61; and, Wisseman-Christie 'The medieval Tamil-language inscriptions in Southeast Asia and China', p. 166.

Riau-Lingga Archipelago. Temasik thus appears to have been able to operate its international economy through its acceptance and use of two of the major currencies of fourteenth-century East Asia – those of China and Java. This interchangeability made the coinage from one state or economy usable in another, and appears to have enabled Temasik to act as an interface between the different currency systems, and to accept coins from China and Vietnam, which would otherwise have been worthless except for their copper content.

It is possible that the value of copper coins at Temasik also stemmed from their being a source of workable copper for local metal smiths. The coin finds from the Temasik sites have another interesting feature that is absent from the Kota Cina finds. Two copper coins of one-cash value, fused together by high heat, were recovered from the Singapore Cricket Club site. Another six coins of one-cash value, arranged in a stack and fused together by corrosion, were also recovered. It is possible that Chinese copper coins were melted down by the inhabitants of Temasik to be remade, since a number of bronze objects have been recovered from the Temasik archaeological sites. At the Parliament House site, ten copper prills and 233 wire fragments of pure copper, a number of bronze and copper fish hooks, several bronze bars measuring several centimetres in length and two or three millimetres in diameter, and two bronze bells have been recovered.[74] The coin finds were largely concentrated in one location, and the level of purity of the copper items is very high. It is possible that two and ten cash value coins were regarded as pieces that did not have any value as money in the local and immediate regional economies, but were nonetheless valuable enough to be accepted as payment from Chinese traders for locally available export products, and then smelted for their copper content. However, this point remains speculative, as no two- or ten-cash value coins that have been fused or warped by high heat have so far been recovered at any of the Temasik archaeological sites. No concentration of copper coins was apparent near the location of the concentration of copper finds recovered at the Parliament House site.

The adoption of Chinese copper coins as a form of currency appears to have been undertaken by the general population of Temasik, and not apparently confined to only one ethnic group. This is supported by the geographical distribution of the copper coins at the three archaeological sites referred to in this paper, and from the recovery of coins from all of the archaeological sites located on the north bank of the Singapore River and on Fort Canning Hill. The use of copper coins in the conduct of external commercial transactions thus appears to have been a general phenomenon at Temasik. It is also possible, from the widespread geographical distribution of the coin finds at Temasik, that the general population of the port settlement may have used Chinese copper coins as a form of domestic currency in the conduct of internal market and official transactions. This would mirror the general adoption of Javanese political, economic and cultural practices by Temasik, evident from the artistic styles of Javanese metalwork in the gold jewellery produced by Temasik artisans and the temple architecture on Fort Canning.[75]

74 Shah Alam M. Zaini, *Metal finds and metal-working at the Parliament House complex, Singapore* (Ann Arbor: University of Michigan, 1997), p. 27.

75 R. O. Winstedt, 'Gold ornaments dug up at Fort Canning, Singapore', *JMBRAS*, 6, 4 (1926): 1–4; and Derek Heng Thiam Soon, 'Reconstructing Banzu, a fourteenth century port settlement in Singapore', *JMBRAS*, 75, 1 (2002): 69–90.

Temasik was by no means unique in the multifaceted use of Chinese copper coins. Fourteenth-century port settlements in the Riau-Lingga Archipelago that managed to attract traders from China, mainland Southeast Asia and the Java Sea would have exhibited similar levels of adaptability in their adoption of Chinese copper coins as a form of external currency. The extension of the Javanese sphere of influence into the archipelago would have further compelled port settlements in this region to adopt copper coins as a form of currency. Nonetheless, this characteristic currency was confined to port settlement in the southern end of the Straits; Java's currency system did not extend northwards beyond the southern end of the Melaka Straits. According to the *Yingya shenglan*, tin was used as a form of currency at Melaka, while at Semudra, locally minted gold coins, called 'di-na-er' (dinar), and tin money were in use.[76] Thus, by the fifteenth century, Melaka developed its own currency for trade in the region, while ports in the northern Straits developed their currency system to cater to the Indian Ocean trade. Only ports in the southern Straits continued to use Chinese copper coins well into the nineteenth century.

Conclusion

During the tenth to fourteenth centuries, Chinese copper coins served two primary functions in the Melaka Straits: as a Chinese trade product and as a means of exchange. As a trade product, Chinese copper coins lasted for a very specific period between 1074 and 1126. The shipping of copper coins from China to the Straits region was part of a larger exodus of one cash value coins to Java and subsequently integrated into the Javanese currency system. More importantly, the lifting of the export ban on copper coins by the Song court during these five decades did not lead to a similar adoption of copper coins in regional ports either in the local economy or for regional and international trade. This is in spite of a sustained increase in the volume of Chinese shipping and mercantile activities in maritime Southeast Asia through the course of the eleventh to thirteenth centuries following the liberalization of Chinese shipping in the late eleventh century and the permitting of Chinese traders to sojourn abroad for prolonged periods of time. The only exception to this was Kota Cina, where at least a section of its local population appears to have accepted Chinese copper coins in the conduct of international trade exchanges.

It was only in the fourteenth century, when a key state in the more immediate region – Java – extended its political and economic sphere into the southern Melaka Straits, that Chinese copper coins appears to have been adopted by port settlements in the region both as a local and international means of exchange. This, however, would have been an indigenous development in the maritime Southeast Asian context, rather than a development that resulted from a change or development in China's maritime trade policies. The adoption of one-cash value Chinese copper coins by Java from the late eleventh century onwards provided a context of coincidence in the fourteenth century, which would have enabled ports in the southern Melaka Straits to accept copper coins from such foreign traders as the Chinese and Vietnamese in exchange for products that were made available locally for export, as these coins would have had an intrinsic

76 Feng, *Yingya shenglan jiaozhu*, pp. 24, 30–1.

monetary value that could be used in the domestic and immediate regional economies of these ports.

Currently, compared to finds of statuary, ceramics and crafted metal objects, Chinese copper coin finds continue to be regarded as unimportant. This articles shows, however, that, at least for Temasik and Kota Cina, it is possible to construct a picture of the role and function of these coins in the domestic, regional and international economies of the port settlements in the Melaka Straits through a detailed study of the coin-finds data and available textual information. Care thus should be taken to record in detail the data pertaining to the coin finds from sites already excavated, as well as future sites, in the region. As more detailed information becomes available, a more complete picture of the functions of Chinese copper coins, and at a higher level, the development and uses of currencies in maritime Southeast Asia, can then be reconstructed.