

**Concurrent Currencies in History: Comparison of Traditional Monetary Systems between India and China**

**KURODA Akinobu**

**Session 15 Global Monies and Price Histories, 16<sup>th</sup> –18<sup>th</sup> Centuries**

## Concurrent Currencies in History: Comparison of traditional monetary systems between India and China

KURODA Akinobu

### 1. Diversity of Currency

Henri Pirenne stated, 'In a society in which almost all transactions took place in local markets, men were perfectly content with money which was current only within the frontiers of this or that territory' (Pirenne 1936: 111). According to this understanding, a society in which various currencies circulated must have been a joint of self-sufficient regions that had their own respective medium of exchange. Pirenne believed that medieval Europe had been exactly such a society as he described above.

D.B. Mitra pointed out that the monetary situation in pre- and early colonial Bengal resembled that in medieval Europe. The reports to the English East Indian Company by local Residents across Bengal in the late 18th century indicated that monetary circulation in Bengal much differed region by region. It is not surprising that the chaotic monetary situation of early modern Bengal led Mitra to conclude along the line of Pirenne's view that the diversity of current currencies represented a backwardness of market. However, apart from pre-modern European case Mitra could not possibly know any other historical cases that might help to take us to a different historical interpretation on diversity of current currencies.

Meanwhile, J.C. Sinha, an Indian economist in the pre-WW II period, indicated that Indian monetary system in his days was not very different from traditional monetary system. He tried to find out the very causes of the problems of contemporary Indian economy in the historical context; he argued that there were some responsible factors including seasonal fluctuation of demand for money and inefficiency in inland bill of exchange (Sinha 1938: 9-11). He seemed to notice that the new monetary system established by Britain could not eliminate the characteristics of the traditional system (1). However, unlike Mitra, Sinha tried a comparative approach by pointing out the similarity of chaotic monetary situation between China of the 1930s and Bengal of the 1770s.

The striking feature which was found in the reports on the local markets in Bengal is that even within a region they used different monies commodity by commodity; for example, the silver coin for trading rice was different from that for cloth (Sinha 1938: 4). A certain currency for trading a certain commodity frequently moved across regions along the route of the commodity. Pirenne's view appears not to be able to explain what this seemingly confused phenomenon meant. In fact, this phenomenon

was also confirmed in the commercial customs in local markets in China in the late 19th and the early 20th century. Although Mitra introduced this peculiar monetary aspect in his book, Sinha appears to offer a better explanation. None the less, it does not seem that even Sinha could go beyond the accepted view that lack of monetary unity simply showed the problem of economy, either.

The research on Chinese monetary history has helped me to find out the strong autonomy of local currency in traditional markets and its independence from inter-regional currency, and argue that the development of national economy for its initial conditions depends rather on the relationship between local currency and inter-regional currency than on the degree of peasants' involvement in markets. It seems to me that local autonomy of adjustment in demand-supply of money can give an effective explanation to the diversity of monetary circulation. However, it does not mean that, as Pirenne thought, the local market worked as a semi-closed unit. Rather currencies appeared to compete each other with fluctuating exchange ratio. That makes us recall the competing monies Klein and Hayek advocated (2).

India and China had been the largest absorbers of silver in the first stage of modern world economy's history. However, the huge influx of the precious metal to both societies did not bring monetary unification but further accelerated complexity in the monetary circulation. The purpose of this paper is, through comparative study on the monetary situation of India, especially Bengal, and China, to make clear what heterogeneous appearances in monetary circulation mean.

Many scholars have focused mostly upon silver when monetary system in India was discussed. Even when some referred to small denomination currencies such as copper coin and cowry (shell money), they tended to mention them supplementarily after analysing silver and gold. It seems to be natural for researchers to put more emphasis on the latter (3), because the former occupied smaller portion in the total amount of money. Here, however, I shall firstly focus on cowry, of which importance has largely been overlooked. The reason why I put the small denomination currency before precious metal currency will be explained in the next section.

## 2. Important Presence of Small Denomination Currencies

In pre- and early colonial Bengal, silver rupee was too high in value to be a medium of exchange, especially for ordinary people. Therefore, currencies for small transactions such as copper coins or cowries were keenly needed. The ratio between silver rupee, copper pice and cowry was roughly 1: 64: 5120 (4 *kahans*), although in

reality the relative price of cowries fluctuated. Until as late as the Mughal period cowry had been a popular currency especially in Bengal, Orissa and Assam for petty transactions. Government revenue in some districts had also been collected in cowry until the first quarter of the 19th century.

Richardson, a Commissioner of Cuttack, Orissa, in 1814 estimated in his report that the total circulating 'capital' of Cuttack province was less than 2 million in rupee, of which gold was 1/40, silver 24/40, copper 4/40, and cowries 11/40. This proportion shows that cowry accounted for more than a quarter of the entire circulating money and that the two small denomination monies, copper coins and cowry, occupied nearly 40 per cent of the total (De 1952b: 17). It reminds us of an estimate that the total amount of copper cash and coins was almost half of the amount of silver money (silver one dollars and bullion) in China in the late 19th century (Peng 1965: 888-9). Although cowry did not prevail in all the regions of Bengal and Orissa, its portion of more than a quarter of the total can be considered extremely high, especially if we consider the exceedingly small value of one cowry.

We have to note that cowry was brought from the Maldivian islands in the East Indian Ocean. When European traders found that cowry was a chief currency in Orissa, Bengal and Maratha, they purchased cowries at Maldives, and sold them in India at profit; about 9000 cowries were purchased for a rupee at Maldives and sold at 2500 to 3200 a rupee in India (De 1952a: 9).

Furthermore, the price of cowry in India differed region by region. Tavernier who visited India in the mid-17th century found that 50 to 55 cowries were exchanged for a copper pice at Agra, while in the coastal region one could get 80 cowries in exchange for the same copper coin (De 1952a: 8). It was surely the high transportation cost that spurred the regional difference in the price of cowry. A report from Sylhet, Bengal, shows that the Collector of the East Indian Company could not transfer the balance in cowry to other districts, because it cost too much due to its bulkiness.

Besides, there was seasonal fluctuation in the demand of cowry which reflected itself in its relative price against rupee (Mahapatra 1969-70: 76). The periodical rise and fall of cowry-rupee exchange ratio resulted mainly from two causes. One was the fluctuation in the demand for cowry i.e. the demand for cowry was increasing in the harvest season due to the need to collect peasant products, and decreasing in the slack season. The other was the demand for rupee due to collecting and remitting taxes to other regions. The demand for rupee inevitably became higher in the taxing period, because taxes were almost levied in silver rupee. Although there was a region like Sylhet of which taxes were completely collected in cowry, such case was exceptional.

There was strong similarity between cowry in India and copper cash in China. Both shared the same characteristics as money; they represented small value fitted for ordinary daily transactions and were too bulky to be transferred to other regions without incurring heavy cost, although cowry was cheaper and bulkier than copper cash. These characteristics gave small-size money-exchangers chance to get profit. Local reports of Bengal told that moneychangers in the open market dealt with cowry, which seemed to be parallel to the report on rural markets in Shandong province in the 1920s that many petit-exchangers changed silver coins into copper cash.

Copper coins as well as cowry were in circulation in pre-colonial India. The characteristic of copper coins in India also resembled that of copper cash in China. The most striking feature is that the intrinsic value of copper coins could surpass its face value, although it did not occur frequently. The British for the first time noticed this phenomenon when they began to abolish cowry and circulate copper coins in Bengal. In the beginning they issued new copper coins according to the standard of Mughal regime. However, they found that in the remote areas copper was so precious that the metal value of coin was higher than its nominal value. As a result large quantity of copper coins was melted. This had repeatedly occurred in the long Chinese history (Kuroda 2000).

The peculiar features of Indian local currency were also found in China. Regardless of copper coins or cowries, those small denomination currencies were far from such subsidiary monies as many researchers have believed. Before we argue further, we must examine how precious metal currencies circulated side by side with small denomination ones.

### 3. Variety of Current Silver Currencies

In 1789, the English East Indian Company planned to introduce the uniform silver rupee and gathered the opinions of Commercial Residents on this plan. A Resident of Dacca, in his reply, revealed his hope for establishing a uniform currency system, stating that as many as 52 kinds of coins of different weights and fineness circulated in Dacca and that shroffs (moneychangers) fully exploited the situation to their advantage (Mitra 1991: 54). In 1792, the Company issued the 19th sun Sicca rupee as a unified currency and declared the demonetisations of all the existing silver currencies. However, the withdrawal of the entire rupee except the 19th sun Sicca caused serious scarcity of rupees in circulation (Mitra 1991: 58). In spite of the strong desire of Residents, the unification plan did not work. This was exactly what had once

happened in 1777 when the Governor-General, Warren Hastings, had tried to establish a unified currency system based on the Sicca rupee.

We turn now to the peculiar situation mentioned above that many kinds of silver coins were required for different commodities. A typical case was found in Dinajpur, where the Sonauts issued in different times were mostly used for the trade of rice and grain, English and French Arcots for the purchase of ghee and oil and French Arcots only for the purchase of hemp and gunnies.

Mitra argues that shroffs played an important role in this peculiar phenomenon. The situation certainly served their interests. However, it should be pointed out that the need for the existence of various current monies preceded the presence of moneychangers. It was absolutely not the shroffs who created the diversified situation.

It could also be argued that this diversity might have resulted from the weakness of the central government. Mitra pointed out that, as the authority of the Mughal emperors declined through the 18th century, provincial governors or princes began to issue coins in their own name (Mitra 1991: 14, 20). Indeed this interpretation can perhaps explain the phenomenon of regional differences, but cannot explain why various currencies coexisted under a same governor. In addition, it gives no answer to why the English East Indian Company had to greatly struggle to establish the uniform currency.

A more important point is that the ratio among silver coins fluctuated. Although it moved even daily, we can also find seasonality in the relationship between silver rupees. In the district of Mymensingh, the Arcot rupee was the most popular currency. However, the Sicca rupee was also in circulation in towns. Main demand for the currency was the payment of revenues. The amount of the Sicca rupee needed for the payment of revenues was estimated at more than 1.2 million rupees. Huge exports of rice to Calcutta caused the return of the currency to this district to make advances for commercial transactions. Meanwhile, the Arcot rupee was in circulation mostly in the rural areas. Naturally the need for exchanging both rupees gave shroffs an opportunity to get profit from exchange. Especially demand for the Arcot rupee among peasants and artisans was so strong in harvest season that the rupee was traded at par against the Sicca rupee, while in the other seasons the Arcot rupee was quoted 15% lower than the Sicca rupee. Collectors in the district estimated the total amount of the Arcot rupee at 6.1 million rupees, but they suspected that the amount of the rupee in actual circulation was 2.4 million rupees. They also reported that Zamindars tended to accumulate their Arcot stock, and rather borrowed than broke the stock.

This situation in Bengal is very similar to that in China in the early 20th century. For example, in Jiujiang of Jiangxi province, the provincial silver dollars circulated side by side with various dollars including the Mexican dollar which was very popular in Shanghai. For exporting tea or porcelains abroad via Shanghai the Mexican dollar was used, while the provincial dollar was preferred in dealing in tobacco or beans for domestic market (Kuroda 1994: 111). Therefore, the ratio between silver dollars fluctuated daily according to demand and supply.

Therefore, causes for seasonal fluctuation among silver coins were not so different from the case of cowry-silver ratio fluctuation. The different demand cycles of various monies made it necessary to keep various currencies available for respective purpose. In addition, certain silver coins circulated for internal use within a region, while different silver coins were used for overseas and inter-regional trade.

In the next section we turn to the relationship between silver and cowry.

#### 4. Monetary Diversity and Multi-Layered Market

Local reports across Bengal tell us vividly how English Residents suffered from the unpopularity of silver in the local markets. The Collector of Rajshahi discovered to his surprise that silver rupee was not available in the open bazaar (Mitra 1991: 176). The weavers of Golagore used to get their advances from the East Indian Company in silver rupees or gold mohurs to procure cotton and thread from the local markets. However, they had to convert these currencies into cowries before they purchased necessary materials in the local markets. It was simply because the value of silver rupee was too high for the local markets (Mitra 1991: 189). In addition to the large value difference between silver rupee and cowry there was also a problem resulting from the fluctuation of exchange ratio between them.

There were two inconsistent trends in the exchange ratio between silver and cowry. Under a well-worked division of function between silver as inter-regional currency and cowry as local currency, it would be natural that the quotation between them moved simply according to inflow and outflow of silver which was more transferable. Naturally increase of silver stock would lead the price of cowry against silver to rise, and vice versa.

However, historical evidence shows that in the certain periods decrease of silver stock was accompanied by the rising price of cowry against silver, while increasing silver flow caused the price of cowry to fall. It is impossible to explain these phenomena by the accepted view based on the quantity theory of money. In the end of

the 18th century when silver became scarce in Bengal the price of cowry against silver rose. Meanwhile in the early 19th century when silver influx increased, the price of cowry began to fall. It appears to be strange, if we stick to the view of the quantity theory of money. According to the accepted view, the value of cowry against silver should have fallen as silver became scarce, and should have risen as silver flowed in. However, we can find that such a paradoxical phenomenon is not just peculiar in India.

An essay written by a resident of Wuxi county of the Lower Yangzi in 1752 tells that in the early 18th century the use of silver was dominant and even as late as 1730 the usage ratio of silver and copper cash was 50:50. The use of copper cash instead of silver had become popular since around 1740. Meanwhile, the exchange ratio of copper cash to silver had risen from 840 *wen* against one *tael* to 700 *wen*. The year 1740 was when the Jiangsu provincial mint began to issue copper cash on a massive scale (Kuroda 1994: 84-5). This means that, as local supply of copper cash had increased, its value had been appreciated against silver.

The aforementioned two cases show that the exchange ratio of one money to another could fall in spite of its scarcity! At least two trends in both Bengal and Lower Yangzi tell us that the exchange ratio between two monies did not move simply in inverse proportion to quantities, but tended to fluctuate independently from them. It would be safe to say that the decisive factor which determined the price of small denomination currency like cowry did not necessarily relate to the price of precious metal currency like silver rupee. Also, we have to notice that the difference in the exchange ratio could not be just attributed to whether the currency was precious metal or not, because the exchange ratio even between two kinds of silver rupees with same weight and fineness could also fluctuate.

In my opinion the emergence of monetary diversity is closely related to the market structure of Indian and Chinese societies. In other words, without assuming multi-layered market we cannot understand what caused such a strong autonomy of local liquidity. According to Mitra transit duties was the greatest constraint on local and inter-regional trade network in the second half of the 18th century. Some transit duties were levied and collected by the Zamindars and their officials in *hauts* (periodic fair in villages) and *gunjes* (rural market town) within their estates (Mitra 1991: 115). It is true that political factor like this was important, but I would suggest that the multi-layered market system was a decisive factor for the emergence of monetary diversity.

In the case of Jessore, trade for rice and other grains was done with the Sicca rupee, while the French Arcot was used for salt trade (Mitra 1991: 81). However, almost

half of rice cultivation in the district depended on credit advance made by grain merchants. We can find a similar situation in Dinajpur mentioned above (Mitra 1991: 196). Thus we can suppose that the preference of a certain rupee for the transaction of a certain commodity was related to payment of advances in that rupee. However, naturally all the bargains were not done by future transaction. Consider the case of rice trade in Bengal. Most of rice bought by merchants, in general, was stored in warehouses located at *gunge*, and distributed to other regions. There were two ways to collect rice from villages to *gunges*. One was that merchants in *gunges* directly collected rice from peasants based on forward contract. The other was that petty merchants living in villages brought rice which had been bought in *hauts* from peasants based on spot contract. The latter transaction was thought to be preferable to peasants (Miki 2000: 72-3).

It is reasonable to suppose that in the case of future contract, since the size of transaction was larger and the price was stable, a silver rupee was easily accepted. In contrast, in the case of spot contract in *haut*, since the size of each transaction was far smaller and the price fluctuated more swiftly, small denomination currency like cowry was needed.

In Bengal province peasants engaged in market transaction more frequently and were less influenced by the caste regulations than other provinces in India. Through the 18th century the number of rural markets like *haut* increased. The situation was similar to traditional China, especially the Lower Yangzi delta. In both societies increasing involvement of peasants into rural markets made the autonomy of local markets and the independence of local currencies stronger. In sum, with the development of multi-layered market system in India and China there naturally developed a strong need for autonomy of local liquidity independently from liquidity for overseas and inter-regional payments. Therefore, inter-regional currencies like silver rupee or gold mohur failed to satisfy the specific need for local liquidity effectively and left some functions to be fulfilled by the small denomination local currencies.

##### 5. What Did Silver Influx Really Do to Both Countries?

Through the 16th to the 18th century both China and India continued to absorb large quantity of silver. What did silver inflow cause and how did the silver work in the both countries? Kindleberger thought silver imported to Asia to be hoarded or sterilised, whereas Chaudhuri insisted on its activeness as money. Recently Flynn and Giraldez present a view that silver was imported rather as commodity needed than as money in

general. However, all failed to give a full explanation of how silver itself circulated in imported countries. As shown above, more specific demand for silver rather than general demand for money did matter.

Metal money, especially silver, in history can be diversified through lowering or raising the purity. There was a tendency that, the more commercialised local markets become, the lower the purity of local silver currencies become. The circulation of mahmudi of low purity in Gujarat (4) and of diyin (debased silver) in the Lower Yangzi in the 17<sup>th</sup> century show examples. Meanwhile, both central governments of Mughal and Qing dynasty kept the purity of official silver unit higher than local current ones. That is, Sicca rupee and Kuping *tael*. The opposite was the case in Ottoman Turkey and Tokugawa Japan whose government issued more debased money as time went by. In the official trade between China and Japan in the form of tribute Japanese side had to melt its current silver ingots to raise the purity, because Chinese side did not accept silver of lower purity than its official unit of account (Sakihara 1975). Indeed, Indian and Chinese government kept the purity of their official silver unit high and, at the same time, kept the numerous independent silver accounts of different purity.

So far we have focused on similarities between Mughal India and Qing China, but we must not overlook differences between both, especially in the usage of silver. The most important and striking difference was that China, except a few occasions, had not issued silver-based money in her two thousand year history, in contrast India had done so through the free minting system in which official mints issued rupees to merchants who brought silver after levying a small charge. Until the early 20<sup>th</sup> century silver in China had mostly been circulated in the form of ingots measured by weight (*tael*). However, hundreds of *taels* coexisted and different *tael* was used region by region, sometimes commodity by commodity. The government set the Kuping *tael* as unit of laying land tax, but that is just one of numerous *taels*. Although silver coins from Mexico and other parts of the world gradually became popular in its coastal areas, the exchange ratio fluctuated between *tael* and dollar as well as among *taels* and among dollars. The degree of diversification in silver use in China appeared to be not less than in India.

Contemporary scholars in the 17<sup>th</sup> century China insisted on abolishing silver use and returning to copper-cash based economy. Their claims seemed to be out of date, but their views to some extent reflected instability caused by silver use. Local societies were, also vaguely but commonly, sharing the view. Huang Zong-xi listed seven merits of abolishing silver, in one of which he argued that silver easily flew away while copper cash was so heavy that it tended to remain within regions (Huang 1985: 38). About

hundred years later huge issues of copper cash by the Qing dynasty led local markets to return to quoting prices in terms of copper cash from silver-based prices. Therefore, their proposals, return to copper cash use, became true. Meanwhile until the end of the 18th century silver continued to be imported in so large a quantity that another half of their proposals, the abolishment of silver use, became unfulfilled. However, silver ingots with various purity had been in circulation side by side and even a ingot of same purity could be used for different units of account region by region. If Huang Zong-xi could have information to compare his country with other countries using silver, he would have felt at ease a little bit. For he would notice that less convertibility of silver did not cause so much instability to local economies as he had worried.

What less convertibility of silver resulted from? In the previous sections we examined how strong the independence of demand for local currency was. The Lower Yangzi had once declined to use debased silver in the 17th century in daily transactions, but returned to copper cash in the 18th century. That means that both uses were to some extent substitutive. Hence, we can infer that between two demands for local currency and inter-regional currency with high convertibility silver-use was developed in the two directions. As a result tri-layered monetary circulation, high-purity silver (or gold in India), debased silver and copper currency (or cowry), emerged.

The diversified monetary situations in China and India seem to show as if Hayek's theory of the competing monies were working. In fact, as he assumed, most currencies were in circulation independently from government's policy and the relative rate of exchange among them fluctuated depending on their supply-demand balance. However, reality was more complicated than he imagined. We have to consider various factors including large seasonal fluctuation of demand for money in an agrarian society. Therefore, it can be concluded that the historical reality of competing monies had reasons to exist, but is not always so ideal as Hayek assumed.

Here let me show a proposition induced from the historical facts.

**Conditions:** There are some concurrent currencies for which demands have different trajectories of seasonal fluctuation.  $D_1, D_2 \dots D_n$  are the trajectory of demand for each currency  $C_1, C_2, \dots C_n$ .  $D$  is the trajectory of the aggregation of  $D_1, D_2 \dots D_n$ .  $D$  represents the movement of demand for  $C$  which is a single currency representing total demand for  $C_1, C_2, \dots C_n$ .

**Assumption:** The propensity to hoard a currency increases as the width of seasonal cycle in demand for the currency becomes wider and the duration of slack season longer.

**Proposition:** If the above assumption is valid, the total amount of hoarding of  $C_1, C_2, \dots C_n$  is more than that of  $C$ . For the width of seasonal cycle and the duration of slack

season in D is less than the aggregation of widths and durations of D1, D2 -- Dn.

In this case hoarding is rather unintentional than intentional as Keynes thought. In the latter the currency is kept as an asset away from actual circulation once and for all, but in the former it is inevitably done to prepare for the next surge of demand. The above proposition implies that, in a condition that total demand for currency is definite, a society with concurrent currencies need, or can absorb more money than a society with a single currency. So it is not strange that India and China continued to absorb a large quantity of silver as long as their trade conditions allowed.

But what cause an agrarian country with seasonal fluctuation to be able to converge monetary usage? This is beyond this paper's task (5), but we must remind that the English East Indian Company in Bengal for a long time had to struggle to establish a single currency. At least we can notice the strength of monetary administration is not enough to answer the question.

#### Notes

- (1) Keynes often mentioned in his *Indian Currency and Finance* published in 1913 that strong seasonality in demand for money seriously affected the financial market in India.
- (2) Hayek himself raised 'the Far East in recent times' as an instance of 'concurrent circulation of currencies', although he seemed to admit that it had problems (Hayek 1976: 37-8). Klein also mentioned parallel use of silver and copper cash in China as only example of competing currencies without fixed ratio.
- (3) One of exceptions is Frank Perlin's work (Perlin 1993).
- (4) The rate of exchange between mahmudi and rupee also fluctuated (Mallick 1991: 14 15).
- (5) See Kuroda 'Seasonal Fluctuation, Multi-Layered Market and Monetary Diversity: How to Make or not to Make a Single Domestic Currency' for Session 22 'Comparative Analyses of Economic Performance across Eurasia in Age of Early Industrization'.

#### References

Chaudhuri, K. M. (1986) "World Silver Flows, Monetary Factors as a Force of International Economic Integration 1658-1758(America, Europe and Asia)", in W.

- Fischer, R. M. McInnis and J. Schneider eds., *The Emergence of a World Economy, 1500-1914*, vol. 1, Stuttgart, Franz Steinbar Verlag Wiesbaden GmbH.
- De S. C., (1952a) "The Cowry Currency in India", *Orissa Historical Research Journal* 1-1.
- De S. C., (1952b) "Cowry Currency in Orissa", *Orissa Historical Research Journal* 1-2.
- Flynn F. O. and Giraldez A. (forthcoming) "Cycles of Silver: Global Economic Unity through the mid-18th Century".
- Hayek F.A. (1976) *Denationalisation of Money*, London; Institute of Economic Affairs
- Huang Z.X. (1985) *Mingyi Daifang Lu* in *Complete Works of Huang Zongxi*, Hangzhou, Zhejiang Guji Chubanshe.
- Keynes, J.M. (1971) *Indian Currency and Finance*, London and Basingstoke, MacMillan.
- Kindleberger, C. P. (1989) *Spenders and Hoarders: The World Distribution of Spanish American Silver 1550-1750*, Singapore, Institute of Southeast Asian Studies.
- Klein, B., (1974) "The Competitive Supply of Money", *Journal of Money, Credit and Banking* 6-4.
- Kuroda A. (1994) *Chuka Teikoku no Kozo to Sekai Keizai* (Structure of the Chinese Empire and the World economy), Nagoya U.P.
- Kuroda A. (2000) "Another Monetary Economy: The Case of Traditional China", A. J. H. Latham and H. Kawakatsu eds. *Asia Pacific Dynamism 1550-2000*, London, Routledge.
- Mahapatra P.R., (1969-70) "Currency System in Medieval Orissa", *Quarterly Review of Historical Studies*, 9-2,.
- Mallick, B.S. (1991) *Money, Banking and Trade in Mughal India (Currency, Indigenous Fiscal Practices and the English Trade in 17<sup>th</sup> Century Gujarat and Bengal)*, Jaipur, Rawat.
- Miki S, (2000) "18seikimatu 19seikizenhan ni okeru Bengaru no Kokumotsu Ryutsu Sisutemu(The English East India Company and Indigenous Trading Systems: A Case Study of the Grain Trade in Late Eighteenth and Early Nineteenth Century Bengal)" *Shankai-Keizaishigaku* 66-1.
- Mitra D. B. (1991) *Monetary System in the Bengal Presidency*, Calcutta, K.P. Bagchi.
- Pamuk S. (1997) "In the Absence of Domestic Currency: Debased European Coinage in the Seventeenth-Century Ottoman Empire", *Journal of Economic History* 57-2.
- Peng X.W., (1958) *Zhongguo Huobi Shi*, (Monetary History of China) second ed., Shanghai, Shanghai Renmin Chubanshe,
- Perlin F. (1993) *The Invisible City: Monetary, Administrative and Popular*

*Infrastructures in Asia and Europe, 1500-1900*, Aldershot, Variorum.

Pirenne H., (1936) *Economic and Social History of Medieval Europe*, translated by I. E. Clegg, London, Routledge & Kegan Paul.

Sakihara, M. (1975) "Totogin to Satsu-Ryu-Tyu Boeki (Silver for Export to China and Trade among Satsuma, Ryukyu and China)", *Nihon Rekishi* 323.

Sinha, J. C. (1938) *Indian Currency Problems in the Last Decade (1926-1936)*, University of Delhi.