Reconsidering al-Maqrīzī's View on Money in Medieval Egypt

Hiroshi KATO

1 Muslim societies as market-oriented societies

As is well known, Karl Polanyi (1977) criticized conventional economic theory because it perceived all economies, including the primitive and the archaic, as variants of modern industrial economies and translated all economic institutions into market-economizing terms. Instead of conventional economic theory, Polanyi sought new conceptual categories that would permit analysis of both relationships between economic and social organizations, and direct comparison of economies.

Economic integration is Polanyi's key concept for this analysis, being applicable to both the market economy and the non-market-integrated economy, that is, the economy embedded in society. According to Polanyi, the economy could be integrated into the following three categories: (1) reciprocity; (2) redistribution; and (3) exchange. By exchange, Polanyi means market exchange.¹

Kin-ichi Watanabe (1986), a pioneer in the study of Byzantine history in Japan, analyzed Byzantine society as a redistribution society, using Polanyi's concept of redistribution as a heuristic model. In contrast, Kinya Abe (1991), a leading scholar in the study of the history of medieval Europe in Japan, emphasized the reciprocal character of early medieval European society, although he employed the concept of reciprocity rather than the concept of gift

¹ Reciprocity is the obligatory gift- and counter gift-giving between persons who stand in some socially, especially symmetrically, defined relationship to one another. The key point is that the social relationships involved are paramount and definitive, and these are face-to-face, familiar, personal relations; the closest term in our current social science terminology is community. Redistribution is a movement toward a center and out of it again, whether the objects are moved physically or only the usufruct over them is shifted. The key point is that centricity is a necessary institutional pattern for the operation of redistribution, and the movement cannot proceed without an established center from which the redistribution takes place. Reciprocity is the form of integration dominant in communal societies such as tribes. Redistribution is the form of integration dominant in politically centralized primitive and archaic societies. However, it must be pointed out that the forms of integration proposed by Polanyi are not evolutionary stages, although some did develop earlier than did others. Nor are the forms mutually exclusive. In any economy, two or sometimes three forms of integration are usually present, although one form tends to be dominant.

proposed by the French sociologist, Marcel Mauss.

Thus, Byzantine society and early medieval European society were characterized by the terms redistribution and reciprocity, respectively. What then is the characteristic of Muslim societies, seen from the point of view of Polanyi's theory on economic integration? In my view, it is the important role of market exchange that operates to link reciprocity and redistribution.²

In fact, it is well known that Muslim societies were market-oriented, in which money served various functions. The authority of the ruler was assured by the statement of his name in the preaching at Friday prayers and by the engraving of his name on the surface of the coinage. The words of confession $(shah\bar{a}da)$ and other Islamic messages, engraved on the coinage in various jurisdictions, demonstrate the unity of Muslim societies, embodying their common Islamic heritage.

However, it is certain that the coinage was, above all, the basis of economic transactions in both Islamic and non-Islamic jurisdictions. The circulation of currencies was needed in such a society as premodern Muslim societies, in which the market-oriented economy was highly developed. The political leaders of Muslim societies understood well the economic and social functions of money, and considered monetary operations to be tools for implementing government policies.

However, the monetary affairs in Byzantine society, early medieval European society and

² The waqf is the typical institution in whose management we can observe this mechanism of economic integration in Muslim societies. The waqf is the Islamic institution of religious endowment. It was, by nature, an institution of reciprocity based on zakāt (alms), one of the five obligatory acts for Muslims. The waqf is a contract of agreement by which the waqf donor promises to place property in the hands of a supervisor whom he himself appoints, and to give the resulting profits to charity. All the items concerning the establishment and management of waaf are settled according to the document (waqfiya) recording the intention of the waqf donor, and the waqfiya document has the same legal effect as the law. The waqf is composed of two factors. The first is the waqf property, which is the property whose ownership is frozen and whose profit is allotted to charity, and usually consists of real estate such as lands and buildings that can produce a profit that can be expected to continue for an unlimited time. The second factor is the waqf facilities, which are charitable and religious facilities, such as a mosque (place of prayer), madrasa (advanced religious school), sabīl (public fountain), hospital and cemetery to which the profit from the waqf properties are directed for their construction, maintenance and management. In general, the term waqf can mean the waqf properties themselves. The waqf system gave society abundant social capital, for the profit from waqf properties were allotted for charitable purposes. It is no exaggeration to say that almost all the public facilities of cities and towns in Muslim societies were maintained by the waqf system. Thus, the waqf functioned as a channel for the formation of social capital and the distribution of income and wealth. In other words, it functioned as an invisible center of redistribution built into society. Thus, the *waaf* fulfilled the functions of reciprocity and redistribution. These two functions were directly connected through the exchange mechanism managed by the waaf, as waqf properties were established to be leased and their rents were allotted for charitable purposes. The waaf properties are expected to produce a profit by lease, that is, through exchange. The waaf facilities are constructed and managed by the profit from the waqf properties reserved for charitable purposes. Thus, the waaf system was a kind of real estate trust, presupposing exchange, aimed at reciprocity and functioning as a means of redistribution of wealth. For more on this subject, and in greater detail, see Kato (2004).

Muslim societies were quite different from each other in the Middle Ages, although all three of these political forms were located around the East Mediterranean.

2 The monetary history of Muslim societies

Islamic monetary history begins with the monetary reform instituted by 'Abd al-Malik, the fifth caliph of the Umayyad Dynasty (reigned 685–705). He issued a new type of coinage, engraved only with Arabic letters, replacing the figures of Emperors or Kings. The monetary history of Muslim societies up to the present begins with this monetary reform.

The monetary authorities issued three kinds of coins: gold dinar, silver dirham and copper fals. In theory, the gold dinar and silver dirham of the three coins were legal currencies that were under the control of the state, and the rate of exchange was officially established between them. On the other hand, the copper fals was the subsidiary coin for use in the small transactions of everyday life. The relative worth of the three kinds of coins was determined with respect to the gold dinar or silver dirham.

At least in the early periods after the monetary reform by 'Abd al-Malik, each of the three coins had its respective circulation, from international trade to transactions of everyday life, corresponding to the value of its metal.

The state developed policies concerning gold, silver and copper, maintaining their different functions in the market and in society. The monetary policy of the state — if it was soundly executed — is thought to have been a very important means of stabilizing and developing its market economy.

In the international market, the Islamic monetary system based on gold and silver formed a wide economic circle, linking the economies based on gold in the Mediterranean region with those based on silver in the eastern regions of Iraq and Iran.

Monetary policy managing the three kinds of coins became difficult, and sometimes the monetary authorities tended not to adhere to the legal standards of the weight and purity of gold and silver coins. However, monetary policies seemed to be working well as long as there were abundant reserves of precious metals in the treasury. At times when an abundant stock of precious metals was available, the vested economic interests of the various social classes could be mediated, and economic conflicts among them did not arise.

However, Egypt gradually depleted its reserves of gold and silver in the 12th century. Conflicts arose at the time of fiscal crisis when the state lacked an abundant stock of precious metals and often simply resorted to monetary manipulation by the debasement of gold and silver coins to maintain a source of revenue. That meant international markets began to lose their trust in Islamic coinages, and they were replaced by Italian gold coins that had a unified standard of weight and purity.

3 The monetary crisis in Egypt at the beginning of the 15th century and al-Maqrīzī's book Ighāthat

The period from the end of the 14th to the beginning of 15th century was a major turning point in the history of Muslim societies. On the Iberian Peninsula, the "reconquista" was in its final stages, and in Europe, the Age of Great Voyages was just beginning, while in Muslim societies as in much of Europe, there was population decline caused by the Black Death, and many other social crises occurred.

Egypt was also in a critical situation because of the population decrease caused by the plague, with severe internal power struggles leading to the ruin of villages, and the associated decline of rural industry. This economic crisis was characterized by famine and inflation, leading to widespread food riots.

Aḥmad ibn 'Alī al-Maqrīzī (ca. 1364–1442), one of the most eminent historians in medieval Egypt and a student of Ibn Khaldūn, published a book (al-Maqrīzī 1940) entitled *Ighāthat al-umma bi-kashf al-ghumma* (Helping the Community by Examining the Causes of its Distress) in 1405; in this book (hereafter referred to as *Ighāthat*), he diagnosed "the famine and inflation since 1404," a period that al-Maqrīzī himself experienced, and offered a prescription for its treatment.

According to al-Maqrīzī, this economic crisis occurred for three reasons: political corruption, the rise of land prices and the circulation of copper money. The most interesting description in the diagnosis of this economic crisis is the analysis of the circulation of copper money, in which al-Maqrīzī discussed in detail the influence of the flood of copper money, whose linkage with precious metals was cut, and its effect on the distribution of income and wealth between social classes.

He categorizes the social classes at the time of economic crisis into seven groups: (1) those who hold the reins of power; (2) rich merchants; (3) cloth merchants and small shopkeepers; (4) those who cultivate and plow the land; (5) lawyers and students of theology; (6) those who possess a skill, salaried persons, transporters; (7) the needy and the poor.

Al-Maqrīzī then discusses the effect of the economic crisis on the distribution of income and wealth within and between the seven social classes, considering the quantity of current money and the relative values of the price of goods, land rent, and the wages of labor. The economy that al-Maqrīziī describes in *Ighāthat* is precisely the "monetary economy," in which money directly influences the economy as an independent variable distinct from the substantive economy.

For example, the speculations and conflicts between social classes concerning the trends of the grain market constituted a typical market game. This game was very tough, since it was played under the condition that the information concerning market trends for the estimated crop for the year was given, as determined by the anticipated annual flood level of the Nile.

Al-Magrīzī vividly describes the conflicts of the three social classes regarding the trends of the grain market. The first of the social classes is the upper class, which constituted the ruling elites, including the Mamluks (a military caste), and powerful merchants. They were the class that substantially managed and controlled the grain market in Cairo, and they were feverishly busy speculating in the grain market by means of hoarding, manipulation of information and so on. The second class is the middle class, which was composed of middle and small merchants and of people in various professions. They were the class that intervened in the local economic process of production and circulation, and sought to maximize their profits as much as possible. The third class is the common people, 'amma in Arabic. They often participated in riots for food in an attempt to protect their livelihood and vested interests. In this tough competition in the grain market, the state was merely a participant in the game.

Al-Maqrīzī insists that his diagnosis of the economic crisis prescribed a return to the old monetary system, based on the precious metals, gold and silver. He recommended that economic control by state officials was necessary if the traditional monetary system based on the standard of precious metals was to be restored. On this point, al-Maqrīzī is typical of the ulamā' (Islamic religious leaders) who defined precious metal coinage as the only legal tender and considered monetary operations as the main tool for implementing governmental policies.

This paper does not aim to introduce the monetary view of al-Magrīzī in detail, but rather to highlight some features of the monetary affairs in Mamluk Egypt as viewed through the Ighāthat, for the characteristics of an institution or a society can be better observed in the period of a crisis than in that of peace.

4 Al-Magrīzī's view on money

Ighāthat is well known among researchers on the history of Muslim societies for the vividness and concreteness of its descriptions. However, it has not been effectively used for research because its discussion of monetary affairs is too complex to be easily understood, as will be explained below. For that reason, Adel Allouche (1994) published a translation with a detailed introduction and discussion of the problems concerning al-Maqrīzī's treatment. When quoting from *Ighāthat* here, I use the translation by Allouche.

4-1 Overcirculation of copper money

According to al-Maqrīzī, the state of monetary affairs at the beginning of the 15th century was as follows.

Know — May God grant you eternal happiness and felicity — that the currency that has become commonly accepted in Egypt is the *fulūs*. They are used in exchange for all sorts of edibles, all types of drinks, and other common goods. They are accepted for payment of land taxes, the tithe on the profits of merchants, and other imposts due to the sultan. They are used to estimate labor costs for all works, whether significant or insignificant. Indeed, the people of Egypt have no currency other than the $ful\bar{u}s$, with which their wealth is measured ($Igh\bar{a}that$, p. 77).

At a glance, it seems clear that the copper $ful\bar{u}s$, plural of fals, functioned as a standard currency. It was used as a tool for exchange, estimation of values and payment. Thus, it "has become commonly accepted," and the wealth of people "is measured" by it. However, whether copper money was circulated by tale (i.e., at face value) or by weight is not clear. The following text shows that copper money was also circulated by weight.

Each $qint\bar{q}r$ of $ful\bar{u}s$ — a weight equivalent to 100 Egyptian ratls — corresponds to 600 dirhams [of account]. Therefore, one [Egyptian] ratl [of copper $ful\bar{u}s$, a weight of 144 dirhams, corresponds to six dirhams [of account]. One dirham [of account] of these is equivalent to a weight of two $\bar{u}q\bar{v}yahs$ [of copper $ful\bar{u}s$], that is, a weight of 24 dirhams ($Igh\bar{a}that$, p. 77).

To understand this sentence, we have to know the fact that the word dirham is used in $Igh\bar{a}that$ to mean a unit of weight and a unit of account as well. As a unit of weight, one ratl is equivalent to $12 \bar{u}q\bar{t}yahs$ and 144 dirhams.

As a unit of account, the silver coins, which had been circulated in the market and originally called dirham, were too adulterated to actually be copper coins until the economic crisis, and the dirham became an ideal money of account, whose relationship with the real silver coin had been cut.

In al-Maqrīzī's opinion, this monetary situation, in which copper money "has become commonly accepted," is not rooted in Muslim community law, and is an illegal innovation of recent origin from a religious viewpoint. He says,

This is an innovation and a calamity of recent origin. It has no root among any community that believes in a revealed religion, nor [does it have] any legal foundation for its implementation. Therefore, its innovator cannot claim that he is imitating the practice of any bygone people, nor can he draw upon the utterance of any human being (*Ighāthat*, p. 77).

Al-Maqrīzī means by the word of "an innovation" the introduction of an ideal money of account in the monetary system as explained below, and that this innovation was a real calamity, because it had caused the economic crisis. He says:

He can only cite the resultant disappearance of the joy of life and the vanishing of its gaiety; the ruination of wealth and the annihilation of its embellishments; the reduction of the entire population to privation and the prevalence of poverty and humiliation: "That God might accomplish a matter already enacted" [Qur'ān 8:42] (*Ighāthat*, p. 77).

4-2 A return to the monetary system based on precious metals

Al-Magrīzī analyzes the effect of this monetary situation on the redistribution of income and wealth of the social classes as mentioned above, considering the quantity of current money and the relative values of price of goods, land rent and the wages of labor. Then he moves to his diagnosis of the economic crisis, stating that:

Since the causes of these ordeals have been explained already, it remains — for those whose minds God has cleared and removed the veil of error from their sight — to know the ways to eradicate these calamities that have befallen the people, so that their situation would return to what it was previously (Ighāthat, p. 80).

Al-Magrīzī concludes his diagnosis of the economic crisis with the following sentence.

We shall say [in this context]: Know — May God guide you to your own righteousness and inspire you to follow the straight paths of your fellow humans — that the currencies that are legally, logically, and customarily acceptable are only those of gold and silver, and that any other [metal] is unsuitable as a currency. By the same token, the situation of the people cannot be sound unless they are obliged to follow the natural and legal course in this regard [i.e., the currency], namely, that they should deal exclusively with gold and silver for pricing goods and estimating labor costs (*Ighāthat*, p. 80).

For al-Maqrīzī, "the only currencies legally, logically, and customarily acceptable, are gold and silver." By the terms "legally, logically, and customarily," he means religiously, scientifically, and historically. In other words, he insists on a return to the monetary system based on the standard of precious metals (gold and silver). It is "the natural and legal course in this regard."

4-3 Rates of exchange between gold, silver and copper monies

Al-Magrīzī presents a complex discussion on the exchange rates between gold, silver and copper monies.

This is an easy matter for those for whom God has smoothed the way: the price of 100 dirhams of pure and unadulterated silver is six mithqāls of gold, to which is added 1/4 dinar at current prices to be paid to the mint as a fee to cover the price of copper [used in the alloy], the taxes due the sultan, the cost of firewood, the wages of workers, and the like (*Ighāthat*, p. 80).

Al-Maqrīzī first points out that the price of 100 dirhams of pure and unadulterated silver is six *mithqāl*s of gold. The *mithqāl* is the measure of weight for gold. Since pure and unadulterated silver coins were not circulated in those days, the dirham in this case was the ideal silver coin and the ratio mentioned here was supposed to be the gold–silver ratio in the market.

Then, he mentions the mint fee that is equivalent to 1/4 dinar. The dinar, which is usually the name of gold coins, is synonymous with $mithq\bar{a}l$ in this case. Thus, the final product of 100 dirhams of silver is $6\frac{1}{4}$ $mithq\bar{a}l$ s. Al-Maqrīzī then calculates the exchange rates of monies, using the price of monies including the mint fee.

Once minted, [a weight of 100 dirhams of pure silver] becomes 150 silver dirhams in coins at a cost of 61/4 *mithqāl*s of gold, as has been mentioned above. Hence, the exchange rate for one *mithqāl* of minted gold is 24 silver dirhams in coins (*Ighāthat*, p. 80).

It is apparent that al-Maqr $\bar{\imath}z\bar{\imath}$ recognizes three different kinds of exchange rate between gold and silver monies. The first is the ratio between 1 $mithq\bar{a}l$ of minted gold and pure silver where 1 $mithq\bar{a}l$ is equivalent to 16 pure silver. The second is the ratio between one $mithq\bar{a}l$ of minted gold and silver dirhams in coins, where one $mithq\bar{a}l$ is equivalent to 24 silver dirhams in coins. The third is the rate between one $mithq\bar{a}l$ of minted gold and the dirham of account, where one $mithq\bar{a}l$ is equivalent to 140 dirhams of account. Al-Maqr $\bar{\imath}z\bar{\imath}$ concludes the discussion on the exchange rate of monies with the following sentence.

The same $mithq\bar{a}l$ of gold is equivalent nowadays in minted copper, called $ful\bar{v}s$, to 231/3 ratls, [each ratl is worth six dirhams of account, and] each $mithq\bar{a}l$ is calculated by the [present] administration to be the equivalent of 140 dirhams of account: this is the exchange rate of the dinar in dirhams of account at this time ($Igh\bar{a}that$, pp. 80–81).

The word dinar is synonymous with *mithqāl*. Thus, al-Maqrīzī confirms in this sentence the formal exchange rate. However, that is not the point here — the point is how copper money is linked with the gold and silver monies. He calls the minted copper coin, *fals*, and links it with gold in weight and also in dirham of account. As such, it is ambiguous whether copper money is circulated by tale (face value) or by weight.

Incidentally, al-Maqrīzī insists from his diagnosis of the economic crisis on a return to the former monetary system, based only on gold and silver, and he describes what will happen

after the execution of this prescription.

Whenever God guides the person who is entrusted with the destiny of His subjects to the right path, he should respect the gold-silver ratio when striking silver currency. This will lead to an end to this general decay and to a return of prices and costs of labor to the level that existed prior to these ordeals, God willing (Ighāthat, p. 81).

This will greatly benefit the population and [cause] prices to drop. Shortly thereafter, people will rush to the mint and bring forth such large quantities of [hoarded] silver that it will surpass the capacity of the mint. Consequently, the situation will improve, conditions will ease, wealth will be abundant, and prosperity will increase infinitely. "God knows and you know not" [Qur'ān 2:216] (Ighāthat, p. 81).

5 Is copper coinage standard money?

Although al-Maqrīzī insists on a return to the former monetary system based on gold and silver, he does not prohibit the issuing of copper coinage, because he saw that this was impossible given the scarcity of precious metals. In fact, numismatic evidence shows that gold and silver coins were regularly issued and circulated throughout the Mamluk dynasties except at times of economic crises.

It is certain that al-Magrīzī considers the overcirculation of copper coins in the market as the cause of the economic crisis. However, he does not deny the utility of copper coinage in itself, but rather emphasizes that it was not formally linked to the values of the gold and silver coinages, or more precisely, to the gold and silver metals as such. However, at the same time, he recognized that copper coinage was linked with gold and silver monies by an ideal unit of account, that is, the dirham of account.

This discussion leads us to an important but complex question in the monetary history in Mamluk Egypt, one that is difficult to answer. It is whether copper money was a real coin or only an ideal money of account, and if it was a real coin, whether it was used or circulated by tale or by weight. These two questions are connected with each other. To answer them in the context of the economic crisis at the beginning of 15th century Egypt, two events in the monetary history of Mamluk Egypt should be recalled.

The first is the change from by tale to by weight in determination of the value of the minted copper, that is, *fulūs*. Al-Magrīzī states:

Hence, it was proclaimed in 695/1295-96 that they would be valued by weight and that one fals would be the weight of one dirham [of minted copper]. Then it was announced that the exchange rate of one ratl of fulus would be two [silver] dirhams. This was the first time in Egypt that [the value of] the $ful\bar{u}s$ was determined by weight and not by tale ($Igh\bar{a}that$, p. 71).

The second event is the introduction of an ideal money of account, that is, the dirham of *fulūs* or the dirham of account, into the Egyptian monetary system. This is the event that al-Maqrīzī calls "an innovation and a calamity of recent origin" as mentioned before. In his chronicle, al-Maqrīzī (1970–73, 3, p. 1111) points out the year 803/1401 as the first time that the gold dinar was calculated in terms of dirhams of account.

The exact dates when these two events occurred are not important. What is important, in the context of al-Maqrīzī's discussion, is what happened when these two events were connected. In other words, in the analysis of al-Maqrīzī, the reason for the overcirculation of copper coinage that had caused the monetary crisis was the connection between the change from by tale to by weight in the determination of the value of minted copper and the introduction of an ideal money of account into the monetary system.

Al-Maqrīzī describes in *Ighāthat* (pp. 55–72) how the Mamluk monetary system was based on a series of metals, gold, silver and copper, successively, which has been explained as meaning a succession of metallic standards in monetary history. However, we must question whether this is correct, especially after the introduction of an ideal money of account.³

Al-Maqrīzī says that in the year 806/1403–4, in the depths of the economic crisis, an official decision fixed the value of copper coins ($ful\bar{u}s$) by weight at the rate of 6 dirhams of account per ratl. If there were a standard money, it was not a money of any metal, but the dirham of account, that is, an ideal money of account. He also commented on the exchange rates of monies as follows.

As already mentioned, it is clear that one *mithqāl* of gold will be exchanged for 24 silver dirham coins, and that 24 silver dirhams are exchanged for 231/3 *raṭls* of *fulūs*, and each silver dirham is equivalent to [a weight of] 140 dirhams in copper coins, which will be spent for purchasing insignificant goods and for [daily] household expenses (*Ighāthat*, p. 81).

Here, as Warren Schultz (1999, p. 200) explains, there is no standard money and one coin is not based on the other; rather their respective values are defined in terms of the other. The rate listings reflect what was the appropriate coinage for the transaction being discussed, or perhaps what coin was most commonly available, but do not by themselves prove that coins of that type formed a monetary standard.

This nonexistence of a "metallic standard" makes the discussion of al-Magrīzī on copper

³ Warren Schultz (1999, pp. 198–200) also discusses the nonexistence of a "metallic standard" in the Mamluk monetary system before the introduction of an ideal money of account.

money complex and difficult to understand. As mentioned before, the key point on this subject is that it is not clear whether copper money was used or circulated by tale or by weight.

It is clear that bad copper coins cocirculated with good copper coins; bad coins did not drive out good ones from circulation. This monetary situation is implied in the phrase mentioned above that "each silver dirham is equivalent to [a weight of] 140 dirhams in copper coins, which will be spent for purchasing insignificant goods and for [daily] household expenses."

In his essay, Warren Schultz (2001, pp. 33, 37) questions why a weight standard for the fulūs can be seen for what it was, and answers as follows. It can be recognized as "an attempt to ensure that the same petty coins could be used in confidence both by tale and by weight" and also repeatedly "an attempt to insure that fulūs could be used for both small-scale and larger transactions; that those who took them by tale could also use them by weight".

This answer seems appropriate to explain the reason for the complex monetary situation that is described in al-Magrīzī's *Ighāthat*. As mentioned above, al-Magrīzī does not insist on issuing of only gold and silver monies, as he allows for issuing of copper coinage, but argues for a return to a monetary system based on gold and silver values.

Al-Magrīzī recognizes the linkage between them by an ideal money of account. Thus, what al-Magrīzī criticizes is the fact that the government abandoned the monetary policy of linking copper money to gold and silver monies, which is why al-Maqrīzī points to political corruption as the most important reason for the economic crisis in 1404.

This conclusion leads us to an interesting fact regarding the functions of money in the market. Akinobu Kuroda (2003) has clarified the circumstances of the coexistence of many monies with different functions and the complementarity between them. However, this fact shows on the contrary that the money of the same metal, copper in this case, could have two functions under specific circumstances such as a scarcity of precious metals, and its customers using it by tale for small-scale transactions and using it by weight for larger transactions.

Nevertheless, there came a tipping point when this monetary system could not be maintained or managed. That was the time when the nominal price of copper money became very much cheaper than the price of copper metal in the market, in which case copper coins were melted down just like copper goods and exported to the East. In fact, this is exactly what happened during the final stages of Mamluk rule.

References

Abe, Kinya 1991 The View on Universe in Medieval Europe, Kodansha, Tokyo (in Japanese) Allouche, Adel 1994 Mamluk Economics. A Study and Translation of al-Magrīzī's Ighāthat, University of Utah Press, Salt Lake City

Ashtor, Eliyahu 1971 Les métaux précieux et la balance des payements du Proche-Orient à la

- basse époque, S.E.V.P.E.N
- Grierson, Philip 1960 "The Monetary Reforms of 'Abd al-Malik," *Journal of the Economic and Social History of the Orient*, vol. 3
- Ibn Khaldūn 1958 *The Muqaddimah. An Introduction to History*, translated by Franz Rosenthal, 3 volumes, Princeton University Press
- Kato, Hiroshi 2004 "A Historical Study of the Market Society Reflected in the Waqf system in Muslim Societies", *Annals of Japan Association for Middle East Studies (AJAMES)*, 20–1.
- Kuroda, Akinobu 2003 World Hisory of Monetary Systems (in Japanese), Iwanami-shoten, Tokyo
- Al-Maqrīzī 1940 *Ighāthat al-umma bi-kashf al-ghumma*, ed. M. M. Ziyāda and Jamāl al-Dīn al-Shayyāl, Lajnat al-ta'līf wa'l-tarjama wa'l-nashr, 2d ed. 1957, Cairo
- Al-Maqrīzī 1967 *al-Nuqūd al-islāmīya; al-musammā bi-shudhūr al-'uqūd fi dhikr al-nuqūd*, ed. Muḥammad al-Sayyid 'Alī Baḥr al-'Ulūm, al-Maktaba al-ḥaydarīya, Najaf
- Al-Maqrīzī 1970–73 *Kitāb al-sulūk li-ma 'rifat duwal al-mulūk*, ed. Sa 'īd 'Abd al-Fattāḥ 'Āshūr, vols 3–4, Maṭba 'at dār al-kutub, Cairo
- Mauss, Marcel 1923–24 "Essai sur le don. Forme et raison de l'echange dans les sociétés archaïques", *L'Année sociologique*
- Pamuk, Şevket 2000 *A Monetary History of the Ottoman Empire*, Cambridge University Press, Cambridge
- Polanyi, Karl 1977 *The Livelihood of Man*, edited by Harry W. Pearson, Academic Press, Inc., New York
- Raymond, André 1973 Artisans et commerçants au Caire au XVIIIe siècle, 2 volumes, Institut Français de Damas, Damascus
- Schultz, Warren C. 2001 "Mamluk Egyptian Copper Coinage before 759/1357–1358: A Preliminary Inquiry," *Mamluk Studies Review*, vol.5
- Schultz, Warren C. 1999 "Mamluk Monetary History: A Review Essay," *Mamluk Studies Review*, vol. 3
- Schultz, Warren C. 1998 "The Monetary History of Egypt, 642-1517", in Carl F. Petry (ed.) *The Cambridge History of Egypt, vol.1, Islamic Egypt, 640-1517*, Cambridge University Press, Cambridge
- Shoshan, Boaz 1993 Popular Culture in Medieval Cairo, Cambridge University Press
- Walz, Terence 1978 Trade between Egypt and Bilād as-Sūdān 1700–1820, IFAO, Cairo
- Watanabe, Kin-ichi 1986 "Byzanz: Modell Redistributions->Gesellschaft," The Mediterranean Studies Research Group ed., *Studies in the Mediterranean World. Past and Present* X, Hitotsubashi University, pp. 1–9