

Coins, Weights and Measures in the Arabian Gulf during the European Commercial Activity Period 1600-1800

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Abstract

This study examines the coins, weights and measures used in the Gulf region during the seventeenth and eighteenth centuries, as the region attracted traders from different nationalities during this period: Portuguese, English, Dutch and Indians. Some local people and people from the surrounding areas, such as Arabs, Persians, Turks and others practiced commercial activities in the region. Of course, all of them were paying for the goods they buy, which made the region teeming with different types of coins. That, in turn, made it somewhat complicated for researchers to find out the exact value of those coins, as well as to determine the time periods during which those currencies came to the region or for how long they were in use in commercial transactions. Despite the fact that the weights and measures that had been used in the region during the study period were varied, changing over time, and influenced-positively or negatively-by the surrounding states and countries, but we can talk more confidently thereon than currencies which were exchanged in the region.

It's worth mentioning herein; that many resources, references and reports, that have been referred to herein state many currencies and measures which had not necessarily been used although it was existed, also there were currencies, measurements and weights that were not mentioned therein.

Keywords: coins, weights, measures, the European commercial activity, the Gulf

1. Introduction

Two large monopolistic European commercial companies were established during the seventeenth and eighteenth centuries, namely: the British East India Company and the Dutch East India Company. The first has got its concession from Queen Elizabeth I in 1600, and the second got its concession from the Dutch government in 1602 (Amin, 1987).

Trade was the main objective of all European companies; buying Eastern goods and exporting it to European markets. It was not the policy of the directors of the two companies; English and the Dutch, in London and Amsterdam to be involved in any political or military commitments or any attempt of domination and occupation. Such practices may prevent the establishment of favorable conditions for profitable business, which indeed shall dispel the profits which such companies may acquire (Ibid).

During the period of commercial activities of European companies in the Arabian Gulf, the Arabian Gulf region attracted traders from different nationalities; Portuguese, English, Dutch and Indians. Some natives and other people of adjacent regions; Arabs, Persians, Turks etc., used to transacting commercial business as well. No doubt, all these traders were paying money for the goods & commodities they used to buy, which made the region packed of various types of Coins. (Al-Ma'ani, 2001).

2. Coins

Before identifying the different exchanged currencies during the period of European commercial activities in the Arabian Gulf region, we must say that it is very difficult to know their exact value. It is also difficult to determine the time periods in which these currencies entered the region or for how long they were in use in commercial transactions. There are other issues of utmost importance that make it impossible to secure or guarantee full accuracy in studying currencies issues. There are key points herein that we have to consider as follows;

First: The Asian currency and calculation units were varied and very complicated. Although the rates of European trading transactions during the seventeenth and eighteenth century did not witness speculation or strong fluctuation, however the European trading companies adopted accounting methods in line with its National currency standards. On the other hand, whereas the matter is relating to payment units through certain coins or accounting unit, it becomes difficult or even impossible to fix certain exchange rate, as the silver or coins prices are subject to fluctuation and strong speculations.

Second: The coins were considered as any other movable commodities, same as any other commodity, due to its coinage from gold or silver. Currencies were entering the region in accordance with the change in political and economic circumstances. In this regard, Neils Steensgaard says "it must be taken into account that gold and silver currencies in intercontinental trade must, in certain cases, be considered as commercial commodity; as precious metals were of higher value in Asia than they were in Europe in terms of commercial commodities" (Steensgaard,1974).

The words of Moreland in this regard were really nice, when he said, "In fact, the large size of currency units used causes a dilemma for the researcher, and the difficulties become greater and greater; while the weight units had greater stability and can be always identified with a multitude of certainty" (Ibid).

Perhaps what Moreland meant in this regard was how extremely difficult it was to know the exact value of currencies. However, we will try as possible as we can, to provide an idea about those currencies and the relationships between them during the seventeenth and eighteenth centuries.

The Arabian Gulf region-accordingly-was known to be trading with different types of coins, whether European or Ottoman, and it were coined of metals such as gold and silver. These coins were often exchanged with national currencies (Al-Ma'ani)

The English traveler John Fryer says (Fryer, 1912) that "There were different types of gold coins used by traders very often, some of which have a high value, and the others have low value. The same applies for the silver coins." There are three categories of cash used in trading: the (Good), which was prevalent by its virtual or face value; the (Poor) which prevailed according to the ratio of good metal it contained; and the (Bad), which was not prevalent at all (White, 1920). A writer confirmed this fact by saying: "There is no prudent and cautious man receives coins unless he gets this money examined by a professional coins and money exchanger. Travelers often find out that the metal coins they receive in the morning are useless in the evening" (Ibid).

As the Portuguese were the first to arrive at the East-more than one hundred years before the Europeans-and they managed during the sixteenth century to lay the foundations of a vast empire stretched from the Malay Archipelago eastward to the Arabian Gulf, the Red Sea, and East Africa (Amin); the region had known their currencies of which the Cruzado was the most important. The Cruzado is a gold coin which disappeared from circulation in mid-sixteenth century, but continued as a unit of account-one Cruzado equals to 400 riyals (Steensgaard).

Table 1. Portuguese currencies used in the region during the sixteenth century and their corresponding value in riyals

Currency	Corresponding Value in Riyal
New Muzaffar Shahi of 23.5 tanghaz (gold)	1410
Old Muzaffar Shahi of 21 tanghaz (gold)	1260
Portuguese gold coins "Santhome"	1000
The Venusiano, The Sultani, The Ibrahimi	420
The Cruzado	400
The Barado	360
The Ashrafi in Eden and Maldives	360
The Ashrafi in Hormuz (Ormuz), Ceylon	300
The Tanga	60
The Fanam	40

One of the Portuguese currencies is also the Real. It represents the basic unit of currency in Portugal during the sixteenth century (White). Its value fluctuated a great deal in the sixteenth century, mainly due to the frequent

depreciation of the metal currency (Jayne). There was also a copper local currency called "bazarucos", five of which equal to six Reals, and later it replaced the "Leal". That was before the Portuguese authorities began to make their currency from gold or silver (White). The following Table 1 shows the most important Portuguese currencies used in the region during the sixteenth century and their corresponding value in riyals.

Travelers who were traveling in the Arabian Gulf region mentioned that the Larin was one of the most actively traded coins in the Gulf and in trade with India in that period (Duran, 1996). It was very famous, coined in different odd shapes including the shape of hair tweezers, fish hooks and rings. The Larin was commonly used in Iraq, the Gulf region and the Indian sub-continent during the period between the fifteenth and eighteenth centuries. It was named after the city of Lahr capital of the Kingdom of Hormuz. Larins were being coined in Basra, Karachi, Ceylon and the Maldives; and all of them were used in the Arabian Gulf region (Alfaris, 2000). A Larin weighs not more than five grams, and in 1619, it was clarified that the usual rate of exchange in Persia is 4.5 Larins per one piaster or one peso, which is not a good ratio as it involves the loss of 1.8 Shahi per piaster. Tavernier estimated a Larin to be equal to nine Sous (Tavernier & Batista)-a French coin minted of copper or nickel-Dutch resources described it as a piece of silver coin equal to six tenths of a Dutch guilder (Slot, 1993).

During the eighteenth and nineteenth centuries; Ottoman, European, Persian, Indian and Mongolian currencies were traded in the region (Duran). The most famous of those currencies was the Maria Teresa riyal, or the French riyal, as it was known in the region. It depicted the Archduke of Austria, Queen of Hungary and Bohemia. The use of this currency in the Gulf region, the Arabian Peninsula and the countries of East Africa, lasted for many years. It was equal to 2.5 rupees and the proportion of silver in it was as high as 90%. It was versatile-in addition to being a unit of weight; it was used as an ornament for women (Ministry of Media).

One of the currencies that were widely used in the Arabian Gulf region was the "rupee"-a silver coin minted for the first time during the era of the Mongolian Empire in 1542. The British East India Company started minting currencies under permission from Queen Elizabeth I in 1600. Over the next hundred years or more, the company coined unified currencies for all India regions composed of silver rupees and copper annas. Those were the currencies that traders brought to the Gulf region (Abu Dhabi Oil Company, 1977). The status of the Rupee in the Arabian Gulf was enhanced after the stabilization of the influence of the British East India Company in the region in the early nineteenth century; and the development of the pearl trade with India markets. One of the resources indicates that the English-Indian Rupee became the main unit for governmental transactions and other official records in Bahrain, the most important market for pearls in the Arabian Gulf in the late nineteenth century. But that did not affect other currencies position; for example, pearl fishers continued to receive their payments in Maria Teresa Riyals, the conventional currency with which they had become accustomed long time ago (Duran). This is evident in Amnesty's report which was written in 1790 that Arab traders until that period were dealing with different types of gold and silver coins, and stated for example, Venice and German money were traded for goods (Samuel & Harford, 1790).

During the reign of William IV, who ruled Britain during the period (1830_1833) a currency was coined in his name; then came the rupee of Queen Victoria (1837_1901) and her rupee was known in the Arabian Gulf region as "Um Al-Bint" because of her image on it, next came the rupee of King Edward VII (1901_1910) and it was called "the bald", after that came the rupee of George V (1910_1937) and it was called "Al-Shayeb" (the old man), then came the rupee of King George VI (1937_1952) and it was called "the boy" (Al-Mughni, 1992). There were no differences between any of them in terms of value or division.

Holden Furber says "the two most commonly used currencies which are inconsistent and fluctuate the same as the sterling pound during the seventeenth and eighteenth centuries, were the "silver rupee" which had a value much lower than two shillings to slightly higher than two shillings; and the gold pagoda from six or seven shillings to eight or nine shillings in some cases (Furber, 1976). The rupee-especially in the eighteenth century-was not only a metal monetary currency, but a unit of account as well. Lorimer says: "the Turkish government sent to Al-Qatif in 1905 13000 Indian rupees to buy dates, and allowed tax collection in rupees or riyals in addition to the official currency. And they didn't allow using "Almradouf" and "Al-Muhammadiyah" in official accounts, and its popular assessment was higher than was officially recognized" (Lorimer, 1908).

There are other European coins that have sprung up in the East and the Arabian Gulf region, such as the Dutch guilder or the Florin, which weighed 10-11 grams of pure silver; the English Crown which weighed 27.527 grams of pure silver in 1604, while it was equal to 5.57 grams of pure silver after 1601. If we are to evaluate these English and Dutch currencies in Spanish currency, we find that a piaster equals to 2.5 Dutch guilders and 4.5 English shelling (Steensgaard). The local currency, as Boxer says, "Was being exchanged in accordance with the prevailing rates of the currency, which varied greatly. The Dutch guilder or florin incorporates 20 stuivers,

and can be considered equal to the English florin. It was not the dominant currency in the east, but the accounts of the East India Company were estimated in Dutch guilder and its units of stuivers. The phrase "a ton of gold" that comes up frequently in the Dutch records and documents means only anything that is worth 100,000 guilders" (Boxer, 1965).

Of the currencies that were commonly used in the eighteenth century is the Batavia rix-dollar, which was equal to nearly four shillings, higher than the Tranquebar rix-dollar which amounted to approximately three shillings (Furber).

The Piaster, or (Al-Qirsh), a Spanish coin minted in the sixteenth and seventeenth centuries as an imitation of the European dollar, was also commonly used. It was a highly stable silver coin containing 25.57 grams of pure silver. When comparing Portuguese currency with Spanish currency we find that one Cruzado equals 1.25 piaster. In Asia, the rate of exchange must be taken according to each individual case (Steensgaard).

During the reign of the Afrasiab family (1534-1596), Al-Basra witnessed trading a range of local and European currencies. Some of the local Ottoman currencies were "Al-Akjah" which the Europeans called "Asper", meaning "the new"-an Ottoman coin equals 1/120 of the piaster and it was the basic unit of currency in the Ottoman Empire. It was equivalent to 0.25 grams of silver; "Al-Barah" which replaced "Al-Akjah" and It was equivalent to 0.5 grams of silver; "Al-Maidin" which was equivalent to one "Barah" or 1.5 Asper (Steensgaard).

And there was "Al-Shahi"-other than the Persian shahi-which was equivalent to five Barahs or five Maidins (Foster, 1911). It was "Al-Shahi" that was meant by Niels Steensgaard when he said "the economic problems and difficulties of the Ottoman Empire reflected in the violent fluctuations and speculations in the proportions of metal coins." (Steensgaard).

It is evident that there were no metal coins with big value that had been coined in the Ottoman Empire during this period, and the demand for coins with big value was met through the import of European gold and silver coins."

U. T. Berengo (Berengo & Andrea, 1553-1556, pp. 77-95) said that the Ottoman coins with small value were also used as units of account: every 60 new Asper or Maidin until the year 1584 were equivalent to one Ducat (a European gold coin).

The low silver content in metal coins with small value in the last decades of the sixteenth century caused a significant instability, as the "black market" price of foreign metal currency as it comes to the new Asper or the Maidin, was higher than the official rate of exchange. At the same time, the use of ducat and venusiano coins created account units that are linked to the Asper coin which had a low value; and formed real money which makes it difficult to fix the real rate of exchange (Steensgaard).

Another currency that was commonly used in the Arabian Gulf and the ports of India in general and specifically in Basra markets, which was largely, traded, namely, Al-Mahmoudi. This currency attributed to the Ottoman Sultan Mehmet the Conqueror, and it's not the Persian Mahmoudi which will be referred to later, nor is it Al-Mahmoudi Al-kajrani which carries the same name. The weight of Al-Mahmoudi was approximately 4.7 grams, and every five coins of this currency are equivalent to two Rupees (Foster).

The Persian system of money account was characterized by simplicity. Apart from changes in exchange rates or decline in value, the relationship between the Persian monetary units remained fixed. As it was fixed during the seventeenth century as follows (Steensgaard) (see Table 2):

Table 2. The Persian monetary units in the seventieth century

Tuman	=	10000	Dirhams
Azar	=	1000	Dirhams
Abbasi	=	200	Dirhams
Mahmoudi	=	100	Dirhams
Shahi	=	50	Dirhams
Bisteg	=	20	Dirhams
Kasbek	=	5	Dirhams

The information about the value of the Persian currencies during the sixteenth century is rare. However, one of the available statistics indicates that all known Persian silver coins-regardless of the small currency-weighed

approximately either 2.30 or 4.30 grams, during the period 1538-1594. In the sixties of the sixteenth century, the Persian Shahi was equivalent to the traded monetary metal currencies that weighed 2.30 grams; in 1566, the Shahi was equivalent to six English pence; and in 1568, one piaster was equal to 10 Shahis (Steensgaard).

Fernand Braudel explains that a Persian reduction in the value of the currency took place in 1584 before the Turkish reduction. That was not supported by Neils Steensgaard, who sees that there has been a reduction in the value of the currency since the year 1594 and perhaps before that, because since that year there was a series of Persian coins that weighed 2.30 and 4.60 grams which was equal to other series of coins that weighed 3.84, 7.68 and 1.92 grams (Ibid).

It seems that the presence of the two series together at the same time caused a lot of problems. That's why the British made a contract in 1620 with the House of Coin Minting in Shiraz to mint Persian coin with a value of 13.3 Shahi per Piaster. But the head of the English Agency, Lalabeg, objected to this contract, and declared that "this will cost a person his life, because the Shah Abbas had ordered that no one should pay more than 13.1 Shahi per Piaster (Ibid). It was unknown whether there were fateful consequences that faced the head of the House of Coin Minting. But, probably the contract had caused a problem for him; as until the year 1622, he did not settle his account with the company (Ibid).

Whatever the case, the exchange rate in the contract wasn't only higher than the official exchange rate, but also higher than the exchange rate in the "black market" which became-with minor fluctuations-13.1 Shahi per Piaster (Ibid). If the silver content is the same in the Persian Shahi as it is in the Piaster* or the Peso, this rate of exchange corresponds with a total amounting to 2.09 grams for one Shahi (Ibid). And after the introduction of graphics on gold and silver coins, the European companies began dealing in Persia with the lightest currencies of the two strings referred to; the series which was based on a unit of account of 5/6 Mithqal (Ibid). There isn't any reference to the heavier currencies in the annals of European companies, but there is an implicit reference indicates that this series had been traded in Khurasan (Ibid).

According to what mentioned earlier, it is evident that the Persian currency was stable in most of the seventeenth century; Tavernier still exchanges 13 Shahi for one Piaster. But in the last decades of the century, there is an indication that a reduction in the purchasing power of the currency had occurred. And, on this basis, the Armenian merchant Hovhannes Kachikian rated thr Tuman in 1686 by 306.4 grams of silver equals 1.53 grams of silver per Shahi (Ibid).

By extrapolating the values of the Persian currency exchange during the seventeenth century, it is possible to distinguish between two periods. During the first period, the Shahi was one Mithqal; and during the second, it was 5/6 Mithqal. If we assume that the purity is fixed and invariable. This means that one Piaster was equal to 11 Shahi in the first period and almost 13 Shahi in the second period (Ibid).

3. Weights

Despite the diversity of weight units used during the period of European presence represented by the commercial companies. And despite that this diversity can cause a dilemma for the researcher and make difficulties greater and greater as in the case of currencies; we can talk more confidently about the system of weights, as its varied units show greater stability, so that it can be always identified more surely (Steensgaard).

A variety of weight units was used during the period of existence of the European commercial companies in the Gulf region. Its extreme diversity on one hand, and the misreferring to it by the researchers on the other hand, had caused the confusion which is noted on many of the studies that addressed weight units.

The pound (arratel) was one of the weight units that were commonly used in the Arabian Gulf; a weight unit used by the British to the weigh all of the goods except medicine, precious metals and gems (Ibid). There is also the Dutch pound-the pound of Amsterdam-which weighs 0.494 kilogram and practically equals 1.09 English pounds (Ibid). There is no difficulty in identifying the equivalents of the English pound avoirdupois, the Dutch pound and the small pounds of Venice and Marseille (Ibid).

It should be noted that silk was sold in England in great pounds of 24 ounces (Ibid), which is in fact the mann. When al-Maqdisi, for example, says that the big Shiraz pound is equal to 1040 dirhams, he refers to the great Persian man (Ibid).

In Hormuz, under the Portuguese rule in the sixteenth century and up to the year 1732, the pound (arratel) was the Portuguese pound which weighed 458.967 g (Hinz).

In Portugal and India, a number of weight units were commonly used, the most important of which was the Peso Pequeno of Casa da India, a hundredweight (Quintal) which is equal to 112 English pounds and 100 French

kilograms (Ibid). It was also mentioned in the weights of Hormuz during the rule of the Portuguese in the sixteenth century and up to the year 1722, the Portuguese Quintal which weighed 58.749 kg.

The most important weight unit in Persia was the man-i, which until the modern era was the most important goods weight unit and is still used to this day. It wasn't replaced entirely by the kilogram (Ibid). There were multiple types of it, as the Persian man-i (or shahi) was equal to 2 man-i Tabrizi. It was also equal to 12.5 English pound or 11.5 Dutch pound, i.e. 5.66 and 5.68 kg. Respectively (Steensgaard).

During the reign of the Safavids (1501-1722), the small man-i which weighed 833 grams was no longer in use in Persia, with the exception of Hormuz, where they were using it in the sixteenth century as a measure unit for silk that weighed 216 Hormuz mithqal. Each sixty Hormuz mithqal equaled one Portuguese Marco which weighed 229.48. Therefore, a Hormuz man-i weighs 826 g, but it was only used for weighing raw silk (Hinz).

The great man-i which weighed approximately 3 kg., took the name man-i Tabriz since the sixteenth century. Walther Hinz confirms the difficulty in determining the exact weight of the great man-i, which prevailed in Iran until the beginning of the twentieth century. The current official conversion of the man-i Tabrizi (3 kg) is meant for being parallel with the European system of weights, which originated in the nineteenth century (Hinz).

The man-i was also commonly used in Iraq during the medieval period. It was equal to 816.5 g. In the sixteenth century, Baghdad, just like Persia, inherited a new great man-i of which every 100 were equal to 722 pounds, that is 3,275 kg. In 1675, J. Fryer evaluated the Basra man-i by 24 English pounds, i.e. 10,886 kg (Fryer, 1912). The Basra man-i differs from Surati man-i; the former is equal to about three-quarters of small Surati man-i (the English Factories in India 1651-1654, p 130). Knowing that the man-i weighs 24 ounces (Ibid).

It is worth mentioning that there are different kinds of man-i, as the man-i of grain is different from that of silk. These kinds were constantly changing over time (Sarkees).

One of the local Ottoman weights which were popular in the 16th and 17th centuries was the "Kile". It officially equaled to 20 "Aqa", i.e. 25.656 kg. Then, in the 17th century, one kile of rice became equals to 12.828 kg. After that, as of 1841, the kile had a unified value in Turkey equaled 35.27 liters (Hinz).

It is worth mentioning that there were different kinds of weights that were used during the research, but they were constantly changing over time (Sarkees). However, we also find different and local weights mentioned, and the study focused on those which are commonly used. The following table illustrates some of the weights and measures used and the corresponding value in kilograms (Steensgaard).

Table 3. Weights and measures used and the corresponding value in kilograms

Weight unit	Kilograms
English pound	0.452
English great pound	0.680
Dutch pound	0.494
Persian man-i Tabriz	2.838
Persian man-i shah	5.675
Persian bale	102.150
Persian load	204.300
Venetian pound	0.301
Marseilles pound	0.388
Marseilles quintal	38.800
Casa de India pound	0.447
Casa de India quintal	50.000
Forfori quintal *	45.000

4. Measures

Exchanged Measures were affected during the period of commercial activity of the European companies in the Arabian Gulf region by the surrounding states and countries. Depending on the nature of the relationship with the surrounding countries, the daily living transactions of the population of the region are positively or negatively influenced.

The biggest influence of course was that of the Ottoman authorities, hence the region was affected by the coins adopted by those authorities. And whenever there was a change in those coins throughout the Ottoman history, it was followed by a change in the region. But, it is noted that the area was not affected in terms of weights and measures, but only in terms of Turkish coins.

The other influence came from Persia, where the Gulf residents in general used the Persian coins, but their usage of other Persian measures was limited.

The third influential party was India. The Indian influence had been supported by the control of the British over India. The Indian currencies became authorized and its influence was overwhelming, especially the rupee, as mentioned earlier in the section of Money. As far as measures are concerned, the British themselves brought some measures, which were used in the region.

The fact that the region had imported measures was likely due to the absence of its own, and its inability to keep pace with developments in this area. This may be due to the absence of the central State, and the collapse of the influence posed by these countries in the Gulf region and southern Iraq. Hence, the region remained captive of external influence being the center of confluence of the influence of the three forces (Persia, the Ottoman Empire, and the English India).

The "Geez", the Persian name for the arm, was the basic unit used to measure length in Persia, which was also known in Baghdad and Basra. Determining the Geez or the arm involves some difficulty (Hinz).

In the seventeenth century, the great Geez shah was equal to 95 cm. Until the nineteenth century, the Geez shah in Basra was equal to 94 cm. In addition to the "Geez Shah" there was also a "Shortened Geez", i.e. a shortened arm to measure carpets, silk and soft fabrics (Ibid). According to Sharden, (Ibid) the shortened Geez was equal to 63.12 cm; and according to Fryer (Fryer, 1912) it was equal to 68.58 cm. In Iran today, there is only one type of Geez, which is equal to 104 cm (Ebtehaj, 1936).

In world trade with India, the fine linen Aleppo arm was prominent. In Surat, in the seventh century, there were a small arm which was equal to 68 cm (Al-Halabia), and a great arm which was equal to 91 cm (Fryer, 1912).

In Turkey, the fine linen Istanbuli arm was commonly used, which became used in Egypt in the modern era to measure European fabrics. It was equal to about 67.3 cm. Bleibtreu says that its length in the nineteenth century was 68.57 cm. These days, in Turkey, an arm is equal to 65 cm (Hinz).

During the seventeenth century, the Dutch mile was one of the long-distance measures which was equal to one English league or three miles; knowing that the mile equals 1609 meters, and the league equals 4.5-5 km (Foster, 1911).

5. Conclusions

The researcher noticed various currency usages, which, indeed, reflected notable activity and boom in the trade activities in the Gulf region during the 17th and 18th AD centuries. It is worth mentioning herein that there is material difficulty to trace and figure out the actual value of various currencies, which were exchanged during the studied period even though the researcher could offer considerable thought on such currencies and the mutual relation thereof.

Through the studied period, various units of weights and measurements were used, in spite of its variety from one side and confusion in referring thereto from other side. But, in fact, these were of less difficulty and confusion, as it proved its stability and accuracy compared with coins and currencies.

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