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ARTISANS USED FROM THE HISTORY OF UNITS OF WEIGHT MEASUREMENT

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ABSTRACT

This article covers the history of the local units of weight used by the artisans of the Fergana Valley. The main attention is aimed at showing the characteristics of the actual weight of these measurement units, the factors of their occurrence, and the nature of changes in these measurement criteria over time. Conclusions are given comparing the local weight measurement system with the metrology of neighboring countries. Fines imposed on artisans who do not comply with these criteria are also discussed.

Keywords: Central Asia, units of measurement. tourists, officials, misqal, nakhud, paisa, kadak, chaksa, shek, Russian pudi, chorik, batman, elder of artisans, judge-chairman, pamphlet, fine, community of artisans.

In the study of the history of Central Asia, including Uzbekistan, intangible cultural resources play an important role. In particular, it is important to study the history of the handicraft network and various units of measurement widely used in it.

Over a long historical period, measurement units have gained great importance in the socio-economic life of mankind and are considered one of the main criteria in economic life. Studying the history of these units of measurement is a research issue that requires significant scientific research.

Information about the local units of measurement of the people of Central Asia can be found in the works of some Russian tourists and officials of the middle of the 19th century [1:208;264-265;211]. But since they are mainly taken from various reports or not collected systematically, it requires a critical approach in using them as a scientific source. At the end of the 19th century, interest in measuring units of the country's economy, including handicrafts, increased, and several works on this topic appeared [2:44; 228; 123].

It was in these works that the first scientific approach to local units of measurement began. Research in this field continued in the next decades of the 20th century, especially in the 50-60s, the creation of large-scale scientific works raised the study of this field to a new level [3:301;304;305;315].

The analysis of these historical sources shows that the unique measurement system of our country was of great interest to the authors. Because as a result of having accurate information about the local measurement units of Central Asia, it was possible to have valuable information about the country's economy, trade potential, monetary system, and the development of handicraft production.

It shows that some of the measurement units are close to the measurement systems of countries neighboring our country: Afghanistan, Iran and Turkey. The reason for this was that the economies of these countries are in close economic relations with each other. Therefore, the economy of the country, which was becoming dependent on tsarist Russia, had to stop its foreign

relations and coordinate it with the interests of the metropolis as soon as possible. In this case, it was important to determine the differences in terms of units of measurement and to bring the system of units closer to each other. But nevertheless, regardless of what interests these works were created, they contain valuable information about the history of our people, in particular, about the units of measurement. Importantly, these sources have not lost their importance even today. Using them, it is important to carry out scientific research on this issue even today.

Because its scientifically correct solution allows to clarify the information about the stages of formation of the local measurement system in our country, the methods of creating quantitative levels, its territorial specific aspects, which population categories used it more and the punishment measures in case of violation of the rules of the measurement system.

Ethnological approach to the issue is also important. Because during the past period, like many values of our people, the system of local measurement units was almost forgotten. Only some of its manifestations have been preserved in remote districts and villages. The same important ethnological sources make it possible to scientifically illuminate the nature of the issue based on historical sources.

It is known that from the past among the population classes, artisans always felt the need to measure the length, weight or size of an item while making it. In this, they used different systems of measurement units. In particular, in the Fergana Valley, where handicrafts have been the leading economic sector since ancient times, a unique system of measuring units of craftsmen has been created.

In the system of measurement units, weight measurement units occupy an important place.

In the Ferghana Valley at the end of the 19th century, the smallest unit of weight from the local units of measurement was the miskhal. One misqal is equal to the current weight of 4.6 grams, and it was widely used in jewelry, medicine and medicine to determine the weight of precious metals and stones.

Creating a quantitative level of misqal is also simple, but unique. According to Sharia, one misqal is accepted as a unit of weight equal to the weight of 100 grains of barley [4:44]. Or it was equal to the weight of 24 peas. In particular, there is information about the misqal in the Fergana Valley: "In Fergana, 90 misqals correspond to 1 pound in Fergana (the comment in Russia is Z.E.'s)" [5:211]. Of this, 1 pound (409 grams) : 90 = 4.55 grams. The amount generated confirms the above weight amount. First of all, this weight measurement unit is the basis for creating the quantitative level of all subsequent weight measurement units, so it requires serious research. Because it is correct and accurate, it allows to fully illuminate the past of the entire system.

It is known that trade relations are such a powerful force that it does not obey any boundaries or ideology and it is always in motion. In particular, if misqal is practiced in countries where the religion of Islam exists, it does not allow us to say that its introduction to these countries was accompanied by the spread of Islam. For example, there are facts that some measurement units in our country were introduced long before the political relations with the countries where these units are in practice [6:892-900].

What is noteworthy is that the misqal is precisely regulated and the amount of weight is regulated according to the Shari'ah. This leads to the idea that the small units that already

existed in the east were given the same value in the countries where the religion of Islam spread, and that these local units gradually gave way to the misqal. In particular, the aspect of making it weight is of great importance here. Because it is made from barley grain. It is known that Central Asia has been an agricultural land since ancient times, and grain crops were widespread. Of course, there was a relationship of exchange of cultivated crops among the population, and it is clear that it was considered equivalent to the exchange of grain in kind. It is not surprising that a small amount of grain, i.e. 100 grains, is chosen as the smallest unit of weight.

The reason for reaching such a conclusion is that in Khorezm in this period the misqol was simply called "barley grain" and in some sense confirms our above opinion [7:79]. Khorezm millet is equal to 4.53 grams, and each barley grain weighs 0.045 grams.

Among the units of weight measurement, there is also the "nahud" weight measurement used by jewelers [8:1]. It is equal to 1 or 1/24 of a misqal or one or 0.2 grams. Nazhud misqal was used to determine the amount of weight, and it was also used to count coins [9: 301, 304, 305, 315]. It is also known as Nakhud, which indicates that it was formed among the settled population.

Another common unit of weight in the Ferghana Valley is the paisa. V. In 1886, Nalivkin reports that a paisa in Namangan is equal to 6 Russian zlotys[10:115-116]. If the zolotnik is 4.26 grams, then the amount of 4.26 x 6 = 25.6 grams is obtained. However, in the valley, there are also known species weighing 23 or 20.5 grams. But more 20.5 gram paisa was used. Because according to Sharia, paisa is made of 5 misqals and it is used a lot in this way.

A common unit of measurement used by blacksmiths was the pack, which was equal to 20 paise (400 grams). The pack was mainly used to measure the weight of the hoe. For example, the customer came to the blacksmith and ordered the weight of the hoe to be 15 packs (6 kg) or 7-10 packs (2.8-4 kg). [11:1]In particular, the words of A.F. Middendorf, who traveled to the Ferghana Valley at the end of the 19th century, said: "The farmers of this country use their hoes that weigh 7-8 pounds (packaged or 2.8-3 kg) with agility." confirms our thoughts about [12:232].

Among the weight units used in national handicrafts, the chaksa measure is also an example. In Kosonsoy, 1 chaksa was equal to 1/6 quarter [13:123]. However, 2 types of chaksa were used in the Kokan and Syrdarya rivers: 4,603 kg of 4.5 pood chorik and 5,119 kg of chaksa were produced from 5 pood chorik. It is noteworthy that in the valley there are certain differences between the inhabitants of the plains and the inhabitants of the mountains in the system of units of weight. This can be attributed to the specificity of the economic network, the slow evolution of units of measurement in the mountain population, and the slowness of economic relations. Also, a unit of measurement other than the amount of weight of 4 chaksa was created. A shek is a measure of weight equal to 18.43 kg, often replaced by the Russian pood.

Another unit of weight in the local unit system was the quarter weight measure, equal to 4 shekels (70 kg). Chorik also had several quantitative values. For example, the quarter of 1830 was equal to 2 pounds (32.7 kg), 4 pounds (65.5 kg) in 1841, and 4.5 pounds (73.7 kg) in the second half of the 19th century [14:208].

Many researchers suggest that the change in the value of such a quantity was caused by the loss of a large unit of weight, the batman (mann). Due to this, his weight was increasing and he

was getting closer to the bottom. In fact, the term quarter is a quarter, which means ¼ part of a batman.

One of the largest units of weight was the botman (mann), which was equal to 2 quarts of weight. But there are different opinions about its weight. N.I. Potanin 1830 botmon 8 pounds (131 kg) in Kok, P.I. Nebolsin states that it is equal to 10.5 pounds (172 kg) [15:278;264-265]. It was found that the small batmon was mainly used by craftsmen in trade, and the big batmon was used more by paper makers [16:228].

Researchers say that batmon began to give way to chorik and pud from the end of the 19th century [17:45].

This opinion is also confirmed by the information provided by M.S. Andreev, who was in Kosonsoy in 1928, that local residents do not use the bottom weight measure.

Larger units of measurement, batman, were used by more carpenters to indicate the carrying capacity of carts, ships, and boats. For example, N.N. Gabbin, who studied Turkestan handicrafts, shows that local carts can carry loads from 30 pounds (shek) to 50 pounds (shek), and the weight of one cart is 17 pounds [18:237]. It is also known that ships were made with a load capacity from 100 to 500, even from 500 to 2000 pounds[19:193].

But it should be noted that these weight measurements are typical only for the Ferghana Valley, and in other parts of Turkestan they have different values. In particular, 1 batman was equal to 10.5 poods in Tashkent, 8 poods in Samarkand, 7 poods in Bukhara, 9.5 poods in Khiva. The reason for the existence of such different units of measurement can be attributed to the fact that the economy of the khanates has a special development, its relative accuracy, and different levels of economic development.

Weight measurement units have an important place in the life of the population and have been constantly developing. As social life changes, the units of measurement also change. All this shows that weight units can be used as an important historical source in the study of the past. Economic relations in handicrafts play an important role in a more complete study of the past. At the same time, the school of punishing those who do not follow the rule in the use of units of measurement of weight in the study of the system of social relations of artisans provides valuable information.

Constant adherence to these measurement units is required by the need to prepare quality products, facilitate product exchange, and follow traditional production practices.

According to the Sharia, those who violated these criteria were considered to be those who did not follow the Craftsmen's Charter, caused the reputation of the craftsman community to spill in front of the public, and did not follow the craftsman's ethics. Because of these reasons, representatives of the same network could face serious problems in selling products or receiving orders. Therefore, in the measurement of products, the exact division of measurement units was strictly controlled by the elder of the craftsmen. Those who did not obey the prescribed measurements were punished according to their guilt. For example, if poor-quality zirak, hoe, cloth and cart are brought to the market, or if there is a dispute between the customer and the craftsman, the elder and the "judge-chairman" imposed a fine on the craftsman. If the craftsman committed a serious sin in this area, he was beaten with 3 to 30 lashes in the middle of the market or carried around the market. In this case, a low-quality item was often carried along with it, which proved the guilt of the guilty party. F. Nazarov writes about the sins of betraying

the buyer in units of measure: "In front of me, such a person was led half-naked through the streets, beaten with a whip, and forced to say his sin out loud" [20 :32]. But usually, due to the strong influence of social opinion in the community of artisans, as well as the loyalty of artisans to the ethics of their profession, they have always followed these rules. By the beginning of the 20th century, when various artels began to be formed in the crafts, the normative dimensions of traditional production were undermined. In particular, the activities of the "judge-chairman" and elders were limited to the level of their previous rights. As a result, the control of units of measurement was weakened and led to changes in their value.

In conclusion, it can be said that the study of local units of weight in national crafts is of significant scientific value. The past of this system would serve not only as a historical source, but also to revive its best traditions would be of great practical importance.

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