Retraction

Retraction: Research on the Evaluation of China’s Monetary Quantity Theory Based on Computer Information Technology (J. Phys.: Conf. Ser. 1915 032067)

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The authors of the article have been given opportunity to present evidence that they were the original and genuine creators of the work, however at the time of publication of this notice, IOP Publishing has not received any response. IOP Publishing has analysed the article and agrees there are enough indicators to cause serious doubts over the legitimacy of the work and agree this article should be retracted. The authors are encouraged to contact IOP Publishing Limited if they have any comments on this retraction.

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Research on the Evaluation of China's Monetary Quantity Theory Based on Computer Information Technology

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Abstract. The influence of western economics on China is very far-reaching. Some Chinese economists are also advocating the priority of western economic culture. From the scope of monetary theory, as the leading western monetary economics thought, the introduction of monetary quantity theory has laid a good foundation for China's monetary economy. From the classical monetary theory to the present monetary quantity theory, great changes have taken place in the monetary theory during this period. However, there is no doubt that the theory of monetary quantity has always been the most influential one in economics. This paper briefly summarizes the relevant theory of money quantity theory. By using computer information technology, this paper evaluates the viewpoint of Chinese currency quantity theory.

Keywords: Computer, Currency, Quantity Theory, Evaluation

1. Introduction

The importance of money quantity theory is not only reflected in that it is a complete and independent monetary theory individual. More importantly, people can analyze the money supply and the level of the national economy according to this theory. At present, many scholars are exploring the main relationship between money supply and social economy[1]. In fact, the reason for the study of money quantity theory is the same. From the perspective of monetary theory alone, monetary quantity theory can be divided into two theoretical forms. The first theory is from the beginning of the emergence of monetary quantity theory in ancient Roman times. The second is the innovative change of the earliest monetary theory put forward by the foreign scholar rydman in modern history. The form of monetary theory to be studied in this paper is also based on these two basic forms as reference objectives (see Figure 1).

In the field of economics, the view of money quantity theory is that the comprehensive price of products in society and the value of currency in circulation in the market are determined by the quantity of money issued. From a macro point of view, the use of money quantity theory in the history of economic circulation in western countries is intrinsic. Its influence on the construction of the whole western economic system is still very far-reaching. In order to improve our country's overall monetary economic system, we are also trying to find our own monetary quantity theory. In today's computer technology boom, scholars for this point of view of the heat is still increasing. In this paper, we use
computer information technology to make a comprehensive evaluation of money quantity theory in the form of theory, hoping to help scholars who like to study monetary theory.

2. The rudiment of monetary quantity theory put forward by the ancient Roman people

2.1. Basic views on the rudiment of monetary theory
Different from the modern money market, the economic system of ancient Rome was not perfect. Their society only has the simple commodity transaction, but lacks the market economy control means. The rudimentary hypothesis of money quantity theory is that the price of money and the price of social goods are determined by the amount of money in circulation. In general, the price of goods and the quantity of money present a positive proportional function. The relationship between the price of money and the quantity of money presents an inverse proportional function.

![Figure 1. Money is the direct embodiment of the form of wealth](image)

2.2. The appearance of simple Fisher function
After the appearance of the rudiment of monetary theory, some scientists have made a complete exposition of it. Even some mathematicians apply the idea of mathematical function to monetary theory. In this trend, the economic and trade function appears[2]. Scholars believe that the product of the average price of a product and the total transaction volume of the society should be equal to the product of the amount of money in circulation and the speed of circulation. Of course, later, some scholars defined the speed of currency issuance as turnover rate.

2.3. The traditional Cambridge function
Different from Fisher function, Cambridge function is based on the concept of money demand. It holds that the demand for money should be equal to the product of the proportion of money wealth in the total income and the total income of the society and the average sales price level of social goods. In this function, a new theoretical point of view from the theory of money quantity is money demand. Compared with the previous embryonic function, the emergence of Cambridge function also laid the mathematical foundation of traditional monetary theory.

2.4. The significance of the emergence of traditional monetary theory
Although the economic system of ancient Rome was underdeveloped, they still raised their social economy to the level of Empire. There is no doubt that this is the result of the application of the traditional monetary quantity theory. Moreover, with the help of Fisher function and Cambridge function, the ancient Roman monetary theory laid a very solid foundation for the emergence of modern monetary theory. At the same time, it also shows the great wisdom of the ancient Roman people.
3. The emergence of modern monetary quantity theory based on rydman theory

3.1. The meaning of money demand traced back to Cambridge function
Compared with the rudiment of traditional monetary theory, the concept of money demand shows the
humanization of economics. The demand for money is defined according to the buyer and seller. Its
specific meaning is that consumers need to store their own money in order to be able to buy the goods
they dream of. In rydman's point of view, we can also find that the basis of his modern monetary
theory is the theory of money demand (see Table 1).

3.2. The presentation of money demand function
Everyone thinks differently about economic capital. They also differ greatly in their own monetary
management. People will inevitably choose the optimal money demand to decide what they want to
buy. Unlike Roman times, money can only be regarded as an entity expression of wealth. Money and
bonds can also be stored in the form of virtual money. On this basis, Riedman proposed a complex
money demand function.

3.3. Analysis of economic stability of demand function
As a form of materialized wealth, money is a factor that can truly reflect people's specific income
level. Because of its authenticity, its stability can be improved. In addition, the money demand
function can also be completed in the face of some currency storage forms such as bonds and stocks.
Generally speaking, the economic stability of money demand function is suitable for the modern
computer age.

3.4. Relationship between money quantity and price level
In fact, from our subjective consciousness, we will feel that the amount of money should be able to
determine people's income gap and determine the level of social prices[3]. However, this is only the
error of the traditional monetary theory. After reidman's practical research, he believes that the short-
term increase in the amount of money will not almost affect the rise of price level. Even in times of
economic depression, the price level will still drop. Only in the long-term increase in the amount of
money in the process, the price level can continue to rise.

4. Evaluation of the traditional monetary quantity theory by computer information technology

4.1. Research on basic arguments by using mathematical software
We can use the computer simulation software to establish the mathematical model of the rudiment of
currency theory. We can set the price of social goods and the amount of money issued as a positive
proportional function. The value of money and the issue of money are inverse proportional functions.
We can use the software which can do simple function operation for mathematical simulation. After
the establishment of the mathematical model, we can use a simple value of currency issuance to test.

| Table 1. Evaluation of the characteristics of ancient and modern monetary quantity theory |
|---------------------------------------------|----------------------------------|
| Ancient quantity theory | Modern quantity theory |
| The application is not flexible | Flexible application |
| Rigid mathematical thinking | Advanced mathematical thinking |
| Restrictions on the form of money | It is not restricted by the form of money |
| The price forecast is inaccurate | The price forecast is more accurate |

4.2. Research on Fisher function and Cambridge function by simulation software
For these two kinds of mathematical formulas, we can use MATLAB software to input formulas and
establish mathematical models. In this process, we need to note that the Cambridge function needs to
use the relevant meaning of money demand. Moreover, when we study Fisher function, the setting of
turnover rate must be able to change continuously in the whole process. The number of money and the
velocity of money circulation are put into the model to carry out experiments.

4.3. Enlightenment from simulation results
In the process of mathematical simulation, we will find that the rudimentary argument of traditional monetary theory is inflexible[7]. It has only two functional relations: positive proportion and inverse proportion. Although we can do computer simulation, the results are mostly surface phenomena. Moreover, from the perspective of mathematical model, it thinks that the functional relationship between the rise of commodity price and the supply of money quantity also has great error. It ignores the impact of economic fluctuations in the market.

4.4. Evaluation of the rudiment of monetary theory
We have to admit that ancient Rome was very powerful in managing the economic system. In ancient times, the rudiments of monetary theory could be applied to any market economy[4]. However, in the modern society, the influence on the market economy is very wide. This old theory can not be applied to the present social economy. We can only think that the old monetary theory is the cornerstone of modern monetary quantity theory.

5. Evaluation of modern monetary quantity theory by computer information technology

5.1. Mathematical definition of money demand
In economics, money demand mainly refers to people's consciousness of saving money. We know that there are many ways to describe money demand. It mainly includes narrow money quantity and broad money quantity. According to Keynes' mathematical expression, we know that money demand should be equal to the sum of narrow money and broad money. Before computer simulation, we need to input this mathematical definition into the computer database in advance (see Table 1).

5.2. Research on money demand function with simulation software
The scope of monetary demand function is very broad. Its concrete expression is very complicated. It is unrealistic to input all the expressions into the computer. Therefore, we can use currency, bond and stock as independent variables to establish computer mathematical model. In the case of not considering other forms of money storage, mathematical simulation is carried out using the determined marginal rate of return.

5.3. Enlightenment from simulation results
Although the result of our calculation is the demand for money rather than the quantity of money, the benefit we can get from the result is the relationship between the quantity of money and the details of price level. Compared with the traditional mathematical formula of money theory, although the money demand function of modern monetary theory is complex, it can accommodate a lot of money forms. It can also be said that it is more flexible and convenient for the calculation of money demand.

5.4. Evaluation of modern monetary theory
There is no doubt that the foundation of modern monetary quantity theory is the rudiment of monetary theory, it was developed from the rudiment of Roman monetary theory. Compared with the former, its use is flexible. In the face of the economic situation in today's computer age, a variety of money storage means emerge in endlessly, and the use of modern monetary theory has been widely respected[8]. However, in the face of the future economic situation, the innovation of modern monetary theory will also become a major change in economic theory.

6. The practical significance of the evaluation of China's monetary quantity theory under the computer information technology

6.1. Affirmation of the experience of the development history of western economic system
According to the above description, the theory of monetary quantity has a profound impact on the economic development of western countries[5]. With its help, the development of the western economic system has gone through the embryonic period and the development period, and even reached the present economic prosperity period. According to the experience of the development history of western economic system, we can be sure that this theory is worth learning.

6.2. China's monetary economic system tends to be more complicated
In recent years, the emergence of various forms of currency operation, such as e-commerce, credit loans, debts and stocks, has caused a huge impact on the control trend of China's market economy. How to use the theory of money supply to reasonably control the market economy has become the most important problem in China's current economic system[9]. Faced with these complicated forms of currency operation, the application of modern monetary quantity theory can help us stabilize the situation.

6.3. We need to have our own innovative theory of money quantity theory
From an economic point of view, the economic situation in Asia is quite different from that in Europe. From a historical point of view, the process of economic development in Europe and the United States and China is not the same. As for the monetary quantity theory first proposed by foreign countries, we cannot impose it on the modern economic system. Through the study of it, we should formulate a unique monetary data theory belonging to China.

7. Conclusion
Through the theoretical analysis of the rudiment of monetary theory and modern monetary theory, we understand their differences[6]. Through the reasonable evaluation of computer information technology, the advantages and disadvantages of money quantity theory are shown in our vision[10]. What our country needs to do is to digest these theories as soon as possible and put forward a new monetary quantity theory which is in line with our own economic situation.

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