

Original Paper

Discussion on the Basic Problems of the Development of Macroeconomic Statistical Analysis

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Abstract

This paper mainly discusses the basic problems of the development of macroeconomic statistical analysis. First of all, this paper expounds the importance of macroeconomic statistical analysis in economic development. Secondly, it analyzes the basic problems of macroeconomic statistical analysis, including.

Data quality problem, statistical method and technology problem, talent team construction problem, etc. Thirdly, countermeasures are put forward to solve these problems, in order to provide certain reference value for macroeconomic statistical analysis.

Keywords

macro economy, Statistical analysis, Development, Basic questions, counterplan

1. Preface

Macroeconomic statistical analysis is the process of quantitative analysis and interpretation of macroeconomic operation by using statistical data and methods. Through the monitoring and analysis of a series of economic indicators, it reveals the changing trend and internal law of economic activities, and provides a basis for policy making. The significance of macroeconomic statistical analysis lies in its important role in understanding economic operation. First, it provides a comprehensive and objective data base that enables policy makers to get a comprehensive picture of the state of the economy and avoid one-sidedness and blindness in decision-making. Secondly, through statistical analysis, economic trends can be predicted to provide reference for policy adjustment. In addition, macroeconomic statistical analysis can also evaluate the effect of policies and provide a basis for policy optimization. Therefore, it is necessary to discuss the basic problems of the development of macroeconomic statistical analysis.

2. The Importance of Macroeconomic Statistical Analysis in Economic Development

First, macroeconomic statistical analysis provides policy makers with key decision-making basis. By analyzing economic data, policymakers can understand the health of the economy, predict future trends, and formulate more effective policies. For example, by analyzing indicators such as unemployment rate, inflation rate and economic growth rate, the effectiveness of monetary policy can be assessed and the direction of fiscal policy can be adjusted to achieve stable economic growth. Secondly, macroeconomic statistical analysis provides enterprises with market insights. Enterprises can predict market trends, adjust production plans and optimize resource allocation according to the data of macroeconomic statistical analysis. In addition, macroeconomic statistical analysis can also help enterprises identify potential business opportunities and formulate more effective market strategies. Finally, macroeconomic statistical analysis is also important for investors. Through macroeconomic statistical analysis, investors can understand market trends, predict investment risks, and make more informed investment decisions. In addition, macroeconomic statistical analysis can also help investors understand the impact of policy changes on the market in order to adjust investment strategies.

3. Basic Issues of Macroeconomic Statistical Analysis

3.1 Data Quality Problems

3.1.1 Data Is Inaccurate

The so-called data inaccuracy refers to a judgment or evaluation of an economic phenomenon on the basis of existing data, but the conclusion is incorrect due to defects in some aspects of the data. According to the statistical definition, inaccurate data generally refers to two situations: one is that the statistical method itself is defective; The other is a mistake in the collection, processing and application of statistical data. The first of these cases is due to the shortcomings of the statistical method itself. For example, if you arrange a phenomenon in chronological order, you will find that some of the data are inverted, which is caused by the statistical method itself; For example, if we classify an economic phenomenon to some degree, there may be multiple data with different meanings in each category. There may be inconsistencies or even contradictions between these data. If we combine these inconsistent and even contradictory data, we will come to the wrong conclusion. If our comprehensive analysis of an economic phenomenon is correct, then the conclusion must also be correct. Therefore, in order to obtain accurate and reliable economic statistical analysis results, we must first avoid data inaccuracy as much as possible.

3.1.2 Poor Data Timeliness

In traditional macroeconomic statistical analysis, statistical data are mostly calculated on an annual or quarterly basis, while in modern society, all kinds of information are quickly reflected to economic life in a short period of time, if the statistical department can not timely provide new data to all sectors of society, it will produce a huge waste of information resources. In order to solve this problem, all countries have established data disclosure systems. Since the 1980s, more than 20 international or

regional economic data publishing organizations have been established in the world to provide macroeconomic statistics of countries and regions to the international community. Each of these institutions and organizations publishes its own published statistics for macroeconomic comparisons and forecasts on a global scale. At the same time, many countries have established national macroeconomic statistical survey systems.

Each country determines its own investigation items according to its own situation and needs, and formulates corresponding investigation systems and investigation methods. Conduct statistical investigations in accordance with international standards and unified statistical systems and methods. On the basis of published data, these institutions and organizations prepare various national accounts and other materials to provide various types of macroeconomic information to society. For example, according to the World Development Report compiled by the World Bank, at present, 18 provinces, autonomous regions and municipalities directly under the Central government have published statistics on fixed asset investment.

3.2 Statistical Methods and Technical Problems

3.2.1 Limitations of Traditional Statistical Methods

Traditional statistical methods mainly use a series of statistical indicators to reflect the quantitative characteristics of things, such as production, circulation, distribution and consumption, etc. By analyzing the quantitative characteristics of these indicators, we can understand the overall situation of social and economic operation, such as the growth rate of national economy, investment demand, price level, unemployment situation, resident income and consumption level. With the development of modern information technology, statistical methods are constantly improving. From an economic point of view, traditional statistical methods have two limitations. First of all, the lack of micro data is an important factor restricting the development of macroeconomic statistical analysis. In modern economic activities, information is an important factor affecting decision making. Because of the incompleteness of information itself and the diversity of people's ways of obtaining information, it is difficult for economic subjects to accurately grasp the changes of the market. In addition, due to the different knowledge levels and information processing capabilities of economic subjects, different economic subjects also make different responses to the same economic phenomenon, which makes macroeconomic statistical analysis restricted by factors such as insufficient micro-data and limited information processing capabilities.

3.2.2 Lack of Innovative Statistical Techniques

Macroeconomic statistical analysis plays an increasingly important role in modern society, its goal is to provide comprehensive, accurate and timely economic information for all sectors of society, so as to facilitate the formulation of reasonable economic policies. At present, macroeconomic statistical analysis of our country does not solve this problem very well. At present, there are four main methods of macroeconomic statistical analysis in China, which are: ratio method, balance method, trend analysis method and proportion method. The first three methods are statistical analysis from a static perspective,

which is characterized by the use of static methods to determine the main economic indicators of various sectors in different periods (years), and then use these indicators to establish a quantitative indicator system. This method is more intuitive, but the disadvantage is also obvious, that is, it cannot reflect the internal relationship and interaction between various departments. If a comparative analysis of a particular sector is to be carried out, the main indicators of that sector can only be replaced by the main indicators within that sector. The index system obtained by using static method has many shortcomings, which makes this statistical analysis method not practical. Proportional method is to compare the main economic indicators of various departments according to the proportional relationship. Because of the dynamic method, this method can comprehensively reflect the economic development status and speed change trend of various departments. However, this method also has some problems, that is, to establish a scale index system first, and then determine the proportional relationship between various departments. Because of the difficulty of this method, it is rarely used in our country. However, this method can overcome the shortcomings of ratio method and balance method, so that its practicability is greatly enhanced.

3.3 Problems of Talent Team Construction

3.3.1 The Professional Quality of Macroeconomic Statisticians Varies Greatly

In order to improve the quality of macroeconomic statistical analysis, it is necessary to strengthen the professional quality education of statisticians. At present, there are some problems in the team of macro-economic statisticians at all levels in our country, such as low cultural level, low professional quality and low professional moral quality, which have a certain gap with the requirements for the quality of statisticians in the current social environment. With the continuous and rapid development of our national economy, the requirement for the quality of statistical personnel is also higher and higher. At present, government statistics departments at all levels are actively improving the professional quality of macroeconomic statisticians, such as the use of continuing education and other forms to improve their professional level and professional ethics. However, there are some problems in the implementation process, such as short training time, too simple content and so on. The direct result of the low professional quality of the statisticians is that the master of statistical analysis methods is not enough, and the lack of deep understanding of statistical indicators. Therefore, in order to improve the quality of macroeconomic statistical analysis, it is necessary to strengthen the training and improvement of the professional quality of macroeconomic statistical personnel to meet the higher requirements of modern society.

3.3.2 Lack of Specialized Training Mechanism

In our country, the development of macroeconomic statistical analysis has always been very important, but from the actual situation, compared with western developed countries, our country's macroeconomic statistical analysis work still lags behind. This is caused by many reasons: on the one hand, the scope of macroeconomic statistical analysis is very wide, its theoretical system is relatively complex, and China's current lack of unified and standardized statistical analysis training mechanism,

so that statisticians in the daily work will inevitably produce some misunderstanding. On the other hand, the talent training mechanism within the statistical department is not sound enough. At present, in the statistical system of our country, there are generally problems that emphasize data analysis and ignore theoretical research. In some units, this phenomenon is particularly prominent. The government should also pay enough attention to this and take practical measures to improve it. The establishment of a macroeconomic statistical analysis training mechanism suitable for national conditions in China can not only improve the theoretical level and professional ability of statisticians, but also ensure that they have enough time and energy to study social and economic issues and enrich their theoretical knowledge.

4. Countermeasures for the Development of Macroeconomic Statistical Analysis

4.1 Strengthen Data Quality Supervision

4.1.1 Establish data quality evaluation system

At present, China's statistical departments pay more attention to the work of macroeconomic statistical analysis, and have not established a scientific data quality evaluation system, which leads to some quality problems in the process of statistical analysis. First of all, in the current macroeconomic statistical analysis of our country, the data source is more complicated, due to the lack of unified standards, there are some errors in the collection of data. Secondly, due to the lack of communication and coordination between statistical departments and relevant departments, there are certain difficulties in the process of statistical analysis. In addition, due to the uneven quality level of statistical staff, the quality of data can not be effectively guaranteed. Therefore, it is necessary to establish a data quality evaluation system. First of all, relevant departments should formulate macroeconomic statistical analysis work standards, and standardize the data collection process by clarifying the data quality evaluation index system and standards. Secondly, the relevant departments should establish the responsibility system and supervision system of macroeconomic statistical analysis. At the same time, data quality reward and punishment mechanism, responsibility investigation system and related incentive mechanism should be established to strengthen data quality supervision and management. Third, relevant departments should make full use of modern information technology to innovate and improve the macroeconomic statistical analysis work, so as to enhance the efficiency and level of macroeconomic statistical analysis work.

4.1.2 Improve the Timeliness of Data Collection and Processing

An important purpose of macroeconomic statistical analysis is to grasp the economic and social development, and then provide effective reference for the formulation of policies and planning. This requires statistical analysts to have an in-depth understanding of economic and social development, and to have keen insight and a high sense of responsibility. Under the current economic situation, economic and social development is changing rapidly, and the generation, processing, transmission and utilization of various economic information have certain timeliness, which requires statisticians to collect and analyze the data in a timely manner, and report the results of statistical analysis to superior leaders in a

timely manner. This requires statisticians to have a high sense of responsibility and professionalism, and have good data processing ability. In order to do a good job in data collection and processing, statistical analysts must have excellent professional knowledge and skilled professional skills, and carefully review statistical data to ensure the accuracy of data information. The processing of data should also be timely and accurate. For example, in the analysis of the economic situation, some unexpected events often cause deviations in macroeconomic statistical analysis, which requires statisticians to have good forecasting ability and accurately judge the occurrence trend of events. In addition, it is necessary to collect relevant information in time and conduct comprehensive analysis to ensure that the statistical analysis results are more accurate.

4.2 Innovative Statistical Methods and Techniques

4.2.1 Introduce New Technologies such as Big Data and Artificial Intelligence

At present, with the rapid development of economy and society, information technology has developed rapidly, and new technologies such as big data and artificial intelligence have been applied more and more widely in statistical analysis work, which has a greater impact on the quality of statistical analysis. For example, the introduction of new technologies such as big data and artificial intelligence in macroeconomic statistical analysis can better improve the efficiency and quality of statistical analysis. Through big data technology, economic data of different countries, regions and industries can be integrated and processed, effectively avoiding the problem of missing data in macroeconomic statistical analysis. With the support of new technologies such as big data and artificial intelligence, the professional quality and business ability of statistical analysts can be improved, so as to further improve the level of macroeconomic statistical analysis. For example, in the process of collecting and sorting macroeconomic data, big data technology can realize the rapid collection and processing of macroeconomic data, thus improving the efficiency of statistical analysis to a great extent. On this basis, we can choose different methods to analyze and process macroeconomic data according to different needs, so as to provide an important basis for macroeconomic decision-making. In short, new technologies such as big data and artificial intelligence have brought new opportunities for statistical analysis and need to be further applied.

4.2.2 Strengthen Exchanges and Cooperation with International Advanced Statistical Methods

Statistical method is an important basis for statistical work, and it is also an important basis for statistical analysis. In the context of economic globalization, international exchanges and cooperation are becoming more and more close, which requires that China's statistical work must comply with the trend of The Times, constantly strengthen the exchange and cooperation with international advanced methods and experiences, and improve the level of our macroeconomic statistical analysis work. For example, we should continue to learn and learn from foreign advanced statistical theories and methods, such as national balance sheet method, national economic accounting system, cost control method and so on. At the same time, we should continue to absorb advanced statistical methods and experience from abroad, such as the United States using multiple regression analysis, probability distribution

analysis and so on. Our country should also strengthen the study of the application effect of foreign statistical methods, and constantly optimize our macroeconomic statistical analysis method system. At the same time, we should actively carry out international cooperative research to improve the level of macroeconomic statistical analysis in our country through international cooperative research, such as foreign experts can be hired to conduct academic lectures or exchange studies in our country, so as to improve the quality of macroeconomic statistical analysis in our country °.

4.3 Strengthen the Construction of Talent Team

4.3.1 Improve the Training System for Macroeconomic Statisticians

For macroeconomic statisticians, they should constantly improve their professional quality, strive to improve their professional level, and constantly strengthen their own learning in practical work, so that their business level can be effectively improved. At the same time, we should pay more attention to the training of macroeconomic statisticians, constantly improve the training system, and comprehensively improve the comprehensive quality of macroeconomic statisticians. In the actual training process, it is necessary to carry out targeted training for macroeconomic statisticians and improve their comprehensive ability through various training activities. For example, macroeconomic statisticians can be regularly organized to carry out business learning activities to help them continuously improve their professional abilities by learning advanced theoretical knowledge and excellent case analysis. In addition, we should also carry out investigation and research activities, and constantly improve the investigation and research ability of macroeconomic statisticians.

4.3.2 Improve the Professional Quality of Macroeconomic Statisticians

To improve the professional quality of macroeconomic statisticians, first of all, it is necessary to conduct systematic professional training for them to understand the significance of macroeconomic statistical analysis and master the basic skills and methods of statistical analysis. Secondly, the macroeconomic statisticians should be assessed regularly, and the quality of their work should be evaluated according to the assessment results. Finally, we should actively carry out research work and constantly improve the practical ability and innovation consciousness of macroeconomic statisticians. Only in this way can we ensure the smooth development and continuous promotion of macroeconomic statistical analysis, so as to provide references for the national policy and planning.

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