

Application of Statistical Knowledge in Real Life and Work

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Abstract

Statistics, refers to a series of processes in which people collect, summarize, classify, count and synthesize the relevant situations of a certain type or even a number of events in a reasonable way. Statistics has a pivotal significance in mathematics, and as an important basis for the collection of logical information that people have, it also plays an important role in the production and activities of people. In contemporary society, with the further development of the economy and information technology, the understanding and use of statistics in this large information environment will become increasingly widespread. In order for us to better understand the impact of statistics on our lives we will conduct a research study.

Keywords

Statistics; Statistical Applications; Statistical Methods; Economic Statistics.

1. Background of the Study

Statistics, by name, seems to be an emerging discipline, but it is not. It began in the time of Aristotle in Athens, ancient Greece, and has a history of more than 2,000 years. Statistics is the use of statistical information collection, aggregation, classification, description, etc., in order to achieve the scientific purpose of measuring the nature of the object measured, but also to predict the future nature of the object of a comprehensive science and technology. It uses most of the basic knowledge of mathematics and other professions, and its application includes basically all fields of social sciences and natural sciences.

The main means of statistics is to collect, integrate, classify, and describe statistical resources, and its main purpose is to test the essence of the object through prediction and inference, which is a comprehensive scientific course with strong ability. In terms of its breadth of application, it basically covers all aspects of social and natural scientific research. But the strength of statistics is also considerable. The most basic tool that statistics relies on is data. In traditional statistics, the data collection methods mainly include experimental statistics, research data and second statistics collected from different sources.

2. Research Content

2.1. Application of Statistics in Social Life

People's original understanding of statistics is mainly to investigate the overall situation of our country, such as: the total population, national economic development, economic development of rural and industrial society, etc. The focus is to make an overall statistical research on the social situation and national economic development of the country. After several years of formation and development, as statistics became a professional study gradually accepted and recognized by the public, its application in practical life has become more and more specialized

and systematic, and also produced a variety of schools and classifications, and now the real sense of statistics is formed after people's summary and streamlining of statistical knowledge in the social sciences, and recognized by the public as a professional study. The real sense of statistics is a professional discipline recognized by the general public. The national population census, economic and social life data and policy information summary that we have introduced in this paper are all applications of statistics in the field of economic and social development[1]. The evolution of the use of statistics in human social life includes: firstly, statistics was first used in the 17th century in the field of human social life. With the further development of human society, by the middle of the 18th century, statistics had been fully integrated with probability theory, which made the application of statistics in the field of social life more and more common and collegiate, and further prompted human society to pay more attention to the practical application of statistics, so that it has received more in-depth scientific research and application attention of human society. In the modern economic society, the use of statistics is becoming more and more common and in-depth, from the administration and business operation to the small business accounts processing and filling out forms.

The use of statistics in the socio-economic life and economic and social life has been very common, and the application research in the economic and social production activities and economic and social life has formed a special discipline of statistical science research, which actually involves many important fields such as insurance actuarial, financial industry database establishment and risk management, macroeconomic control and forecasting[2]. Among them, the analysis of financial risks by means of statistics and the construction of the corresponding risk monitoring system fully reflect the important role of statistics in the international financial community, which provides a scientific basis for the management of macroeconomic control in the market, and also has a great role in guiding the business operations of individuals and organizations and the risk management of enterprises.

The correct and effective use of statistics also enables a sound analysis of the financial problems of different products and companies, deviations in consumer behavior, trends in demand for goods and the general market conditions. The way it is used includes: when the overall financial data of the company is studied, the technique of quantitative statistical analysis can be used, and more precise quantitative ratios and evaluation criteria can be given, and the company's own profitability, solvency and ability to fight against crises can be studied and analyzed in a more comprehensive and effective way.

In the study of consumer behavior, we use market research, data mining techniques and database marketing capabilities to develop marketing and service techniques to create products and services that meet consumer needs. At present, statistical research has also penetrated into the monitoring and early warning system of China's corporate security and financial crisis, and the risk management research of enterprises also relies on statistical research. Statistics has also played a significant role in the quantitative study of China's consumption patterns. By examining the correlation between consumption and per capita income in China, we examine the factors that govern consumption in China, construct consumption patterns in China through statistical data, calculate the actual consumption of Chinese urban residents, and study the key variables that govern consumption in China.

The extensive use of statistical analysis techniques in life sciences and biopharmaceutical scientific research. Statistical methods in the life sciences, biopharmaceutical research is very common, including the use of molecular biology research in the statistical methods, biopharmaceutical research in the statistical methods, in the study of epidemiological patterns in the exploration of statistical methods, human chromosome engineering technology research in the statistical methods, etc., the field of statistical techniques are constantly flourishing. In order to use statistical analysis techniques to prevent criminal offenses, the main research tools used are statistical regression analysis. The use of voters in predicting the role of statistical

analysis techniques in elections: it is possible to conduct polls by selecting polling instruments and methods of application, and to estimate the results of the polls. The use of statistical methods also makes it possible to conduct research on the financial behavior of enterprises, consumer behavior, trends in market prices and macroeconomic conditions. In the process of conducting scientific research on financial management of companies, econometric research techniques should be used in order to provide objective and accurate indicators and measurement methods, so as to facilitate objective evaluation of the company's level of solvency, profitability and risk resistance, and to find out the shortcomings. However, at present, as statistical research techniques still penetrate into the monitoring and early warning system of business security and risk, the risk management research of enterprises relies more on the research by statistical analysts.

3. Application of Statistics in Economic Life

Statistics has an instrumental role in financial economics. The use of statistical methods to organize and classify statistical information in daily life requires, first of all, a basic knowledge of statistics and big data statistical analysis methods and other basic disciplines, and these knowledge and methods are needed for researchers to understand before carrying out statistical application activities. Therefore, econometric statistics in the field of finance and economics must be based on the main meaning and role of statistical techniques in finance and economics, combining financial knowledge with statistical knowledge, combining the order of money calculation and time, and then organizing and analyzing the collected statistical data of financial institutions. Finally, we determine the corresponding relationship between the calculation of funds and the time sequence.

Statistics in financial economics has a very critical instrumental significance, mainly divided into two aspects, respectively: in terms of ideas, statistics is the study of the results of statistical analysis of data, and finally determine a reasonable conclusion of the research object, in order to determine the correct reliability of the conclusions of the study, and statistics in the process of finishing data analysis must be with a strict scientific research attitude, and this strict scientific research attitude to the economics of the relevant This is the process of mathematical analysis of financial quantification, if researchers want to determine the correct reliability of the conclusions of financial mathematical analysis, they need to ensure that the pre-processing process of financial quantification data analysis is reasonable[3]; secondly, the use of statistics is the best choice for scientific experimental research in economics. The complexity of experimental research activities in economics and its complex relationship with the research object make the experimental research activities in economics subject to many influences, and the use of statistics for experimental research activities in economics can make the object of experimental research in economics more concise and clear, thus reducing the cost of experimental research[4].

From the use of statistics in economics, we can find that the application of statistics in economics is mainly to use the thinking of economic inevitability in statistics, so that the statistical conclusions in economics does not have a complex cost of thought.

The application of statistical tools is indispensable for solving economics problems. The analysis and treatment of economic problems must be accurate, objective and scientific, and the most important feature of statistical methods is the strict precision of their analytical steps and the clarity of their conclusions. The application of mathematical methods to the market economy can be traced back to the use of algebra in the ancient Chinese market economy, but nowadays, the combination of statistics and economic theory has produced several specialized theories such as mathematical economics, national econometrics and intellectual property economics, and the statistical analysis in the market economy has been ubiquitous. The

application of statistical tools to practical economic problems usually follows the "economic-statistical-economic" model principle, i.e., starting from the actual economic problems to be dealt with, first using modern mathematical and theoretical models, using statistical tools to study the mathematical models and obtain modern mathematical and theoretical conclusions, and then judging the conclusions according to economic theory and the basic principles of economics. The conclusions are then judged according to the basic principles of economic theory and economics, so that scientific conclusions can be drawn and used to guide the actual economic activities.

Statistical methods are indispensable for making economic decisions in modern enterprises. In particular, after making investment decisions, modern companies expect to use statistical analysis to accurately analyze the significance of investment decisions for their operations. The application of statistical tools in modern business management is to enhance the credibility and scientific nature of enterprise policies, reduce the waste of enterprise financial and material resources, use statistical tools to forecast the results of the implementation of policies, so that the management of enterprises to achieve the premise that enterprises can manage. A simple statistical method can show the interaction between various factors in macroeconomic policies in a simple and clear way, and the interaction between different variables can be seen at a glance, so that the results of whether the implementation of macroeconomic policies is effective can be obtained.

Statistical method is one of the most important tools of economic theory analysis. Statistical methods are one of the most important tools of modern economic theoretical analysis, from the initial use of algebra, and then developed to the comprehensive use of various esoteric mathematical problems in the market economy, from the modern statistical economics, complex statistical methods in the derivation of indicators, and then the combination of modern statistical methods and modern economic theory, gradually formed a unique special use of statistical methods to explain economic phenomena. In recent years, people have also started to make a lot of attempts to apply statistical methods to the analysis of macroeconomic relations and quantitative correlations between economic phenomena, both for qualitative and quantitative confirmation. As we can see, the market economy can no longer survive independently of statistical methods, and without the use of statistical methods, the market economy problems can be dealt with without channels and ways[6].

Statistical methods improve the applicability of economic theories. Everything happens in a process from quantitative to qualitative change, and this is also true for the study of economic events. The study of economic events includes two levels of qualitative and quantitative analyses, and quantitative changes produce qualitative changes and qualitative changes cause quantitative changes. The statistical analysis method is able to illustrate the interaction between different economic factors by using econometric relationships, so as to raise research questions and guide macroeconomic behavior according to macroeconomic theories, which greatly enhances the applicability of macroeconomic theories[4]. In addition, the logical rigor and computational accuracy of the statistical analysis method improve the scientific and correctness of economic judgment, and provide an important basis for the quantitative relationship of macroeconomic variables, especially for the formulation of macroeconomic policies.

4. Conclusion

Statistical science is not a separate professional field, but a scientific and analytical method with strong inference, which is based on geometrical understanding and mathematical statistical analysis methods, and is generated by the intersection of mathematical statistical technology and its professional characteristics and experience. At the present stage, due to the rapid

development of science and technology, the application of statistical methods to all aspects of daily life has become a convenient way of mathematical statistics in order to improve people's ability to judge and integrate the current situation of natural economy and society.

The use of statistical methods for information management and data analysis of data subjects in research work can greatly improve the efficiency of research work in production life, make the research structure clearer, and thus reduce data management costs. When using statistical methods in real-life production, researchers must use multiple experimental results and random probability comparison to determine the probability of accidents, and through quantitative and qualitative mathematical and statistical data analysis work, in order to play the role of statistical methods to promote the actual production life.

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