

Discussion on the Application of Statistical Analysis Methods in Grassroots Statistical Work

Li Meng

Xujiahu Town Financial Service Center, Linyi 276402, China.

Abstract: This article introduces statistical analysis methods, analyzes their application value in grassroots statistical work, and explores the corresponding application points around determining topic selection, data collection, data organization, statistical analysis, and report preparation. It is hoped to provide valuable reference and assistance for grassroots statistical analysts.

Keywords: Grassroots Statistical Work; Statistical Analysis Methods; Data Organization

Introduction

Doing a good job in grassroots statistical work is the key to supporting the efficient operation of statistical work and strengthening the execution of statistical systems. From a macro perspective, grassroots statistics are the basis for the Party and government to conduct macro management and regulation; From a micro perspective, the quality of grassroots statistical work directly affects the authenticity and accuracy of data and results. To improve the level of grassroots statistical work, the reasonable application of statistical analysis methods is undoubtedly the key.

1. Statistical analysis methods and their application value in grassroots statistical work

Statistical analysis is the key to statistical research and application, which involves the collection, organization, induction, analysis, and research of data to mine effective information contained in the data and provide a basis for related work. By doing a good job in statistical analysis, comprehensive, accurate, scientific, and predictive statistical results can be obtained. This not only provides a basis for the current work, but also provides guidance for the future development of the work. At present, there are many statistical analysis methods, including indicator comparison analysis, grouping analysis, time series and dynamic analysis, index analysis, balance analysis, comprehensive evaluation analysis, prosperity analysis, prediction analysis, etc. Different statistical analysis methods have different characteristics, advantages, and applicability, and they need to be flexibly and reasonably selected according to actual needs to ensure the good development of statistical analysis work. In grassroots statistical work, appropriate statistical analysis methods can be reasonably selected based on actual needs, which can be analyzed and researched based on statistical investigation, design, and organization. This can intuitively and clearly reflect the progress of grassroots work through statistical methods, provide a basis for the optimization and improvement of related work, and provide predictive guidance for the development of subsequent work. It can also provide a basis for corresponding performance evaluation, rewards and punishments incentives.

2. Application Strategies of Statistical Analysis Methods in Grassroots Statistical Work

2.1 Determine topic selection

To carry out statistical work, it is necessary to first determine the topic, and only when the topic is clearly defined can subsequent data collection, data organization, statistical analysis, and other work be carried out in a targeted manner. Otherwise, it will inevitably face problems such as difficulty in effectively selecting data and lack of appropriate goals for

statistical analysis. The development of grassroots statistical work needs to be based on the selection of topics, and statistical analysis methods play an indispensable role in this process. Firstly, identify the problem. Based on the accumulation of previous grassroots statistical data, comparative analysis is conducted to identify the problems and deficiencies in grassroots work through the data, and the direction of topic selection is determined for the improvement and resolution of the problems, providing important basis for the determination of topic selection. Secondly, focus on key and difficult points. The development of grassroots statistical work needs to provide support and services for the organization and implementation of other grassroots work, especially focusing on the key and difficult parts of other work. Based on the application of appropriate statistical analysis methods, comprehensive analysis of relevant data accumulated in the past or other data with reference value can effectively identify the key and difficult points of grassroots work, and then determine the corresponding topic direction around the key and difficult points. Finally, consider dynamic factors. The selection of grassroots statistical topics not only requires static consideration of past history and experience, but also dynamic analysis of changes in relevant factors, in order to determine more practical topics based on the dynamic development of grassroots work, in order to avoid the situation where the topics lag behind the development of work. Overall, the selection stage of grassroots statistical work requires the rational selection of statistical analysis methods based on existing data, actual situations, and basic objectives, in order to ensure the scientific, reasonable, and reliable selection of topics.

2.2 Data collection

In the data collection stage, it is necessary to comprehensively collect relevant data based on the established topic selection, and it is necessary to ensure that the collected data is comprehensive, truthful, and reliable enough, otherwise it will inevitably affect the quality of statistical work due to the quality issues of the data itself. In order to ensure that the quality of the collected data meets the requirements, reasonable measures need to be taken from multiple dimensions for processing. Firstly, priority should be given to collecting statistical report data. The implementation of grassroots work has a long-term and continuous nature, and corresponding statistical reports will be left in the previous work process. The statistical report itself has the characteristics of comprehensiveness, continuity, and completeness, making it undoubtedly an excellent source of statistical data. Applying it to statistical work can easily and effectively obtain high-quality information and data. Secondly, collect relevant business department information. Grassroots statistical work often involves multiple units, departments, etc. If all data and information are collected, it will consume a lot of energy and even collect a large amount of worthless information. To address this issue, data from relevant business departments can be collected from the perspective of statistical topic selection. It is not necessary to integrate all departmental data in a general manner to avoid unnecessary work and truly focus limited time and energy on core work. Then, make full use of the organized thematic materials. During the process of grassroots work, various thematic materials will be organized, which have comprehensive and complete characteristics and can be used as an important source of statistical analysis data. Finally, use the internet to collect information. In the context of informatization, the development of grassroots statistical work can be based on the Internet and information channels to collect data, and use the advantages of the Internet itself to collect valuable data.

2.3 Data organization

After collecting data, it is necessary to start organizing the data. This is because the original data itself is relatively scattered and complex, making it difficult to directly utilize. Data organization extensively includes data review, data coding, data aggregation, data display, etc., in order to present originally scattered and complex data in a concise, clear and regular manner. In the new era, grassroots departments should fully utilize the advantages of information technology, continuously promote the automation and intelligence of statistical data organization, simplify work procedures, and improve work quality and efficiency.

2.4 Statistical analysis

After collecting and organizing the data, it is necessary to conduct statistical analysis based on the questions and questions, in order to explore the value contained in the data and provide various support for grassroots work. In order to ensure the quality and effectiveness of statistical analysis, statistical analysts need to select appropriate methods from a

practical perspective to avoid situations where improper selection of methods may affect the final statistical results and analysis quality. The comparative analysis method of indicators usually includes two categories: horizontal comparison and vertical comparison, which can effectively reflect the differences and changes in the quantity of things; The core of group analysis method is to divide the studied object into multiple parts, and then analyze the internal connections and regularity of the object based on the correct selection of group markers and the division of group boundaries; Time series and dynamic analysis method refers to the analysis of the dynamic changes of the studied object based on time sequence, and provides a basis for predicting future development trends; The index analysis method is mainly used to study the relative number of changes in socio-economic phenomena. It comprehensively reflects the direction and degree of overall quantity changes in complex socio-economic phenomena, as well as the degree of influence by various factors. In practice, it is generally assumed that other factors remain unchanged to study the impact of specific factor changes on overall changes; The balance analysis method emphasizes arranging the constituent elements of unity of opposites and observing the corresponding balance relationships globally, thereby reflecting the balance situation through quantitative equivalence, revealing imbalanced factors, and using balance relationships to infer individual unknown indicators using known indicators; The comprehensive evaluation analysis method refers to the method of comprehensively analyzing objects from multiple dimensions using different indicators. It usually includes steps such as determining the evaluation indicator system, collecting data and processing the same measurement, determining the weights of different indicators, summarizing indicators, and conducting comprehensive evaluation; The prosperity analysis method refers to the method of analyzing and predicting factors that may affect economic fluctuations, and guiding macroeconomic regulation and enterprise management based on this; Predictive analysis method refers to the method of collecting and analyzing existing data for quantitative prediction, usually based on the changes in the time series of indicators and their dependence on time or the causal relationship between indicators.

2.5 Prepare report

After completing the statistical analysis work, it is necessary to prepare corresponding reports based on the work process and results, and accurately reflect the issues and related situations through the reports. The analysis report should be concise and persuasive enough to reflect existing problems and shortcomings, and propose corresponding solutions for existing drawbacks and weaknesses, thereby providing basis and guidance for the development of grassroots related work. In addition, it can also provide support for corresponding performance evaluations, rewards and punishments incentives, etc.

3. Conclusion

In summary, the rational application of statistical analysis methods is the foundation for supporting high-quality and high-level grassroots statistical work. Grassroots statisticians need to continuously learn and improve themselves, actively research and explore various statistical analysis methods, master corresponding application points, accumulate rich experience, and apply statistical analysis methods reasonably and normatively in daily work according to actual needs, in order to ensure the quality of work.

References

- [1] Wang RF. Applying Statistical Analysis Methods to Improve Grassroots Statistical Work in Villages and Towns [J]. China Airlines, 2021 (18): 29-30.
- [2] Liu J. Application of Statistical Analysis Methods in Grassroots Statistical Work [J]. Digital Communication World, 2021 (05): 190-191.
- [3] Jiang MT. Application of Statistical Analysis Methods in Grassroots Statistical Work [J]. Today's Wealth (China Intellectual Property), 2020 (03): 76-77.
- [4] Cheng Q. How to use statistical analysis methods to do a good job in grassroots statistical work [J]. Modern Economic Information, 2019 (01): 102.

About the author: Li Meng, Date of birth: May 1974, Gender: Female, Ethnic group: Han, Native place: Linyi City, Shandong Province, Title: Senior Statistician, Education: Bachelor's degree, Research direction: Economic Statistics