The Frontiers of Society, Science and Technology
ISSN 2616-7433 Vol. 2, Issue 15: 180-185, DOI: 10.25236/FSST.2020.021522

Analysis on Application Issues of Economic Statistics in the Era of Big Data

Zhang Bichun

Zhejiang Agricultural and Forestry, University, 311300

ABSTRACT. *Presently, we are in an information age, and the economic statistics service also faces a new development situation in the era of big data. Certain studies will be conducted on the application of economic statistics in this paper in the era of big data.*

KEYWORDS: *Era of big data; Economic statistics; Issue*

1. Introduction

The statistics is a vital subject in the development process of human beings, and it is possible to illustrate economic phenomena in a better way through the application of economic statistics, thereby providing an important basis for resolving relevant economic issues. In the context of the era of big data, the economic statistics service is not highly and unanimously recognized, and therefore there are certain problems in actual services. In this regard, it is required to be able to fully grasp the existing issues and solve such issues with the application of scientific measures.

2. Major Economic Statistics Techniques in the Era of Big Data

In the context of the era of big data, existing statistical techniques are mainly shown as follows: The first one is the neural network technique, which supports simulating the way in that the human brain analyzes information for processing and analyzing on that basis. In the application of such technique, it is allowed to acquire appropriate analysis results immediately after surveying and analyzing the information when the information is imported, and better performance is realized in terms of the accuracy, work efficiency and reliability in practical applications. The data is also featured with comprehensiveness and completeness, and it is capable of providing clear feedback on the existing relationships between the data. If any issue with the data is found in actual operation, it is supported to be comprehensively analyzed and processed in an effective manner; second, Decision Tree Technique. There are multiple ways for economic statistics, and it is required to solve the issues through the establishment of relevant models for special situations. Regarding the decision tree technique, it may be described as an important way to analyze and

ISSN 2616-7433 Vol. 2, Issue 15: 180-185, DOI: 10.25236/FSST.2020.021522

predict. In practical applications, statistical theories are used as supports in the decision tree technique, and non-parametric identification techniques are applied to find out valuable information on the basis of analyzing huge data so as to provide the reference for the user. In practical applications, the technique is featured with characteristics including simple operation and rapid classification, and it is suitable for application in large and complex projects; third, Genetic Calculation. The genetic mechanism and bio-natural selective search algorithm are incorporated in the technique, and the information data acquired from specific group is featured with implicit characteristics. Remaining models are supported to be effective combined in the process of implementation of economic statistics to conduct sorting and induction of implicit data. The economic issue itself is featured with varied characteristics, and it is also internally and significantly correlated, effective improvements may be realized on the basis of mining internally implicit information with respect to the expansion and extension of issues with genetic algorithm.

3. Existing Issues

In the era of big data, the issues existing in the economic statistics service are shown as follows: Firstly, the statistical concept is backward. For the theories relating to economic statistics, they have not been fully understood, and this service is believed to be based on national economic accounting, no economic statistical analysis is required any more in the process of continuous improvement of service currently. Recently, the economic situation became increasingly more complicated, and the correlations between social development and application of economic statistics became increasingly closer. It is possible to express the issue and guide the economic development in a better manner in case of search implementation through rational application of socio-economic phenomena of economic statistics. Essentially, economic statistics technique is capable of analyzing economic phenomena in details, and it is possible to effectively mine the data behind different complex economic phenomena through the application of big data technology, delivering better application value. Whereas, correct understandings on the service lack in the current situation that the statistical concept is backward, the statistics service is not correlated to the data mining service, and the application of big data technology is ignored, thereby impairing the application of economic statistics. Secondly, statistical equipment lacks. The differences in relevant economic data may be analyzed on the basis of simply calling the computer equipment and setting up the computing model. In current era with mass big data, massive amounts of data information will be generated daily, and higher requirements are raised in terms of the storage, collection and computation with respect to specific data statistics. Regarding the data acquisition, the data information will be applied to wireless communication devices, sensors and other modern information devices. The data information is required to be applied to relational database and distributed file system for data storage. In the aspect of data computation, it is required to apply PC device with data mining function. Viewed from overall situation currently, due to the lack of perfect equipment in the development of economic statistics, the current application requirements of social data fails to be adapted, economic data fails to be

ISSN 2616-7433 Vol. 2, Issue 15: 180-185, DOI: 10.25236/FSST.2020.021522

efficiently collected in the aspect of equipment application, and the data analysis and sorting fail to be processed within a short period, thereby generating greater limitations in the development of the service and failing to play the role of modern economic statistics. Thirdly, the statistical method is laggard. The economic statistics method is required to be classified into deductively logical category, and it is required to be acquired from the results of actual economic statistics by applying the science analysis and computation on the probability theory. In the application of specific method, it is required to find way for method innovation and to solve the problem of data analysis in case of acceleration of data processing. Significant processing difficulty exists in face of mass data in the era of big data. In this regard, it is required to apply advanced methods in economic statistics. Presently, laggard situation exists in actual economic statistics method, and a large number of repeated calculations are required in the statistics service, thereby limiting the effects. The technologies for data computation (e. g cloud computing, graphic processing, and data mining) have not been introduced, no virtualization technology, augmented reality or other technologies have been introduced for economic statistics acquired, generating impacts on the development of economic statistics when the effects of economic statistics are impaired. Fourthly, there are insufficient statistics talents. In the era of big data, it is required to designate relevant operators to operate equipment and skillfully apply economic statistics methods to introduce the big data technology in economic statistics. Viewed from current situation, the shortage of statistical talents is the main problem existing, and the workers engaging in the economic statistics service are old and can only complete the tasks assigned by competent department. The slackness exists in the service of economic statistics, and no recognition on the importance of the economic statistics service is formed. Affected by these factors, relevant workers mainly conducted statistics in a manual manner, economic statistics method failed to be actively innovated, and the accuracy of statistical results failed to be guaranteed, thereby affecting the work efficiency of statistics.

4. Solutions

4.1 Updating of Statistics Concept

As to the issues existing in the application of economic statistics, it is required to be capable of updating statistic concept, viewing the economic statistics service from a new perspective, and treating it as an important tool in the analysis of current socioeconomic phenomena. In specific practices, it is necessary to have a correct understanding of big data issues, properly apply the big data technology in economic statistics, develop an understanding of economic statistics, and secure scientific development of this service. For economic issues, its internal data are closely related, with complicated and cumbersome characteristics, and it is required to ensure that better performance is delivered in terms of perfection and sufficiency while conducting the data processing and analysis. Valuable information is to be summarized in better way and then applied in the analysis on economic issue,

ISSN 2616-7433 Vol. 2, Issue 15: 180-185, DOI: 10.25236/FSST.2020.021522

playing a positive role in promoting steady development of social economy. It is also required to be capable of conducting orderly analysis on increasingly substantial economic data, fully utilizing the value of data, treating this service as an indispensable factor, and optimizing economic statistics model under the application of integrated big data technology to acquire valid and accurate statistical results.

4.2 Improvement of Statistical Methods

In order to meet the requirements of statistics development service currently in a better manner, it is required to be capable of actively improving statistical methods, appropriately integrating economic statistics with big data technology, and actively applying new technologies. Presently, there are a great number of technologies available for choice in the field of economic statistics, and the technologies including decision tree and neural network technique are applied frequently. The economic issues faced are characterized by varied changes in the field of economic statistics, and they are also featured with complex connections. To this end, it is required to mine potential data information through scientific application of algorithms, actively expand the analysis results of economic statistics, and further improve the level of the economic statistics service. Practical economic issues are to be resolved in a better manner on the basis of the selection and application of existing economic statistics techniques and continuous innovation.

4.3 Trainings on Statistics Talents

High requirements are imposed on talents for economic statistics. In the establishment of statistical professional courses, it is required to add the knowledge relating to the big data, and actively urge the staff concerned to do a good job in the data technology and theory to meet the requirements of economic statistics in the new era. It is required to be able to introduce professional big data talents in the implementation of specific service so as to improve the level of economic statistics in case of appropriate implementation of relevant technical applications. It is required to be capable of properly conducting trainings and management on economic statistics operators in daily service so that they form profound understanding and comprehension on the big data and thereby effectively improve the implementation level of economic statistics. And, it is also required to be able to do well in issues relating to the statistics development in services so that staff can accept big data in specific practices in a better way and actively carry out related services through this technology. It is also required to determine the training fruits of trainees in daily assessments to enable them to actively learn new ways and methods of economic statistics through the application of incentive measures, and continuously enhance their information literacy and guarantee skilled operations on types of current equipment, thus continuously improving the efficiency of economic statistics.

ISSN 2616-7433 Vol. 2, Issue 15: 180-185, DOI: 10.25236/FSST.2020.021522

4.4 Increase of Equipment Investment

The key to carry out economic statistics in the era of big data is to improve the equipment, and smooth application of various advanced technologies is to be guaranteed in the case of equipment investment. It is required to be capable of actively investing in the equipment, introducing current equipment in combination with requirements of economic, and fully applying big data technology statistics to achieve this goal. To achieve this goal in a better way, it is required to be capable of intensifying the capital support and updating and upgrading hardware and software for equipment to further improve the efficiency of economic statistics. It is required to be able to cooperate with big data companies to guarantee that the economic statistics service is powerfully supported in terms of technology and to process and analyze economic data in more reasonable manner. And it is also required to fully integrate the characteristics of economic statistics to build adaptive systems and to actively consolidate the sensor, cloud platform and related software and hardware tools. With respect to the data acquisition, it is required to install client monitoring equipment and intelligent terminal equipment and to build a data warehouse in combination with system data storage requirements. It is possible to capable of effectively loading, transforming and extracting the multi-source data of the system through the application of ETL tool. Visual display and analysis of statistical results can also be realized through the application of GIS Map in the system. Meanwhile, as it is required to apply the cloud computing technology in practical applications of big data technology, or it is required to be able to build soft and hardware facilities in the services, robust technical supports are required to be provided for the mining, analysis, transmission and processing of mass data and information in case of fluent network environment creation so as to maximize the effectiveness of economic statistics.

5. Conclusions

We have conducted certain studies in the application of economic statistics in the era of big data hereinbefore. It is required to be capable of actively combining the characteristics of big data in the economic statistics service in the future, properly handling the selection and application of new technologies, actively changing the service concept, and strengthening the setup of basic equipment and personnel to meet the requirements for service implementation in a better way.

References

[1] SHANG-Chenchen(2019), Analysis on Application of Economic Statistics in the Era of Big Data . Tax Paying, (17).
[2] ZHANG-Weiyang(2018). Research on Status Quo and Trend of China’s Economic Statistics in the Era of Big Data, Modern Economic Information, (01).
[3] ZHU-Lingfeng(2018). Research on Innovation of Economic Enterprise Statistics, Economic & Trade, (06).

ISSN 2616-7433 Vol. 2, Issue 15: 180-185, DOI: 10.25236/FSST.2020.021522

[4] XIAN-Zude(2016), Appropriate Implementation of “New Industry, New Pattern, and New Business” and New Economic Statistics , China Statistics, (12)
[5] ZHU-Keli, NIU-Luqing(2017), Confusion of New Economic Statistics , China Finance. (06).
[6] ZHANG-Weiqin(2017). Reflections on New Economic Statistics of China, China Statistics (02).