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The impact of innovation on statistical data quality challenges

Abstract:

This research study aims to analyze the impact of innovation on the challenges of the quality of statistical data production because data is the lifeblood of the decision-making process and is the raw material for developing plans to confront crises, as high-quality data, and statistics available at the right time help move at a faster pace in future decision-making processes. Policy formulation and focus on the type and quality of the statistical product are much more important than the quantity of statistical products. The challenges of the quality of statistical data are considered among the most important problems faced by statistical offices in the field of data collection and analysis. There are many challenges facing the quality of statistical data production, starting with collecting data from a variety of different sources and ensuring the accuracy and validity of the collected and recorded data, in addition to the continuity of data collection over a period. For a long period, especially in cases of continuous change in indicators or variables, analyzing and understanding the data, then keeping it securely and easily accessible, considering presenting statistics in an easy and effective way using technology while ensuring that the rights of individuals are not violated, and the confidentiality of the data is maintained.

Many changes and innovations have occurred in the process of collecting statistical data, such as the use of online communication technologies, reliance on automation programs, the use of new methods to increase the participation of respondents and ensure data accuracy, and the use of modern technology, open data, and artificial intelligence, which have contributed to improving the accuracy of error correction and providing new methods. To collect data, modern technology was used vigorously during the Corona period, and it was one of the biggest challenges at the level of all countries, as GPS geographical location was tracked, and China, South Korea, and Taiwan applied it. China developed the TenCent and Alibaba applications, South Korea developed Corona 100m, and Egypt implemented the Egypt Health application.

The descriptive approach was used in data analysis, and one of the most important results was realizing the importance of statistical data and information and making them in the form of electronic applications and investing in innovation, as necessity is the mother of invention and innovation contributes to improving the accuracy and completeness of the collected data, and the speed of its collection and analysis. The ability of technology to collect large amounts of data quickly and effectively increases the accuracy and quality of analyzes and recommendations that use this data. At the same time, creating new ways to collect data makes it easier for the user to add more details and links between different data sources. And improve its presentation to benefit from it.

The conclusion is that many challenges lead to more innovations, as innovation and new ideas play a pivotal role in overcoming challenges and the ability to exploit opportunities in an environment full of challenges depends on its ability to adapt to these challenges and maintain long-term strategic visions and new innovations in collecting and analyzing them. Statistical data

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