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HE Dr. Hassan Al-Derham

**The Use of Data and Statistics to Support Institutional Decision-Making**

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The use of data and statistics to support institutional decision-making processes is a key element for the success of any institution or organization. These tools enable leaders and managers to understand the current situation, predict future trends, and make the right strategic decisions. Data and statistics are a vital basis for sustainable and effective decision-making in all aspects of economic and social life. They fundamentally contribute to the development of public policies and the efforts towards sustainable development. Data and statistics can be a key pillar for effective institutional decision-making through:

1. The provision of a comprehensive view: Data and statistics provide a comprehensive view of the institution's performance at various levels. Leaders can view data related to productivity, sales, human resources, costs and many other factors and variables that affect performance. This would in turn enable them to analyze current performance and identify areas of improvement.
2. Strategy development: Data and statistics enable the institution to develop its strategy based on facts and evidence. Leaders can use these tools to identify opportunities and challenges and adjust their strategy accordingly. For example, if the data indicates an increase in demand for a particular product, the supply strategy can be adapted to meet that increased demand. Another example: a leader can know the behavior of the masses or their attitudes towards a specific issue and accordingly adopt a certain policy.
3. The provision of support for day-to-day decision-making: In addition to strategic decisions, data and statistics help make day-to-day decisions at the institution level. Managers and employees can rely on statistics to make decisions about directing resources and managing priorities. This would certainly contribute to achieving higher efficiency and improving the overall performance of the institution, as the decision maker can link a specific factor/variable with increasing the productive efficiency of a concerned department.
4. Forecasting future trends: Data enables forecasting future trends based on statistical analysis and processing. institutions can use data to understand market trends, estimate future demand for their products, and plan for potential challenges, enabling them to prepare for a more sustainable and successful future.
5. Achieving continuous improvement: Data and statistics contribute to achieving continuous improvement of institutional performance. By monitoring and comparing performance to goals and standards, an institution can identify areas that need to be developed and improved. This would help to innovate, improve efficiency and increase the achievement of goals.

On the other hand, over the decades, statistics and data science has witnessed a tremendous development. The technology advancement has also opened new doors of understanding and making better decisions. Technological advances in data and statistics have revolutionized the way we understand the world around us, which in turn has opened up new avenues for innovation and development. Scientific progress in this area has led to:

1. Collect data more easily: Previously, data collection was a complex and expensive process. But as technology advances, we can now collect data faster and easier through hand-held devices, smart systems and remote sensing. This means that today we have huge amounts of data based on real facts.
2. Massive and intelligent analysis: As data volumes increase, massive and intelligent data analysis techniques have become essential. Through AI and machine learning, we can now extract complex patterns and trends from data that cannot be easily processed by humans.
3. Developing strategies and making smart decisions: With a better understanding of data, organizations and governments can make decisions based on strong evidence. Leaders can rely on statistics and data to better develop their strategies and guide them towards the right priorities.
4. Improving services and products: The use of data in product development and service improvement has become crucial. Companies can analyze customer preferences and needs based on data, leading to better products and services that meet those needs.

In this regard, Qatar University has established the Social and Economic Survey Research Institute (SESRI), which focuses on enhancing the role of survey research in addressing contemporary challenges, according to the latest research methods that contribute to achieving outputs that contribute to the advancement of knowledge and innovation. The Institute provides studies and proposes policies to decision-makers based on these surveys following a solid scientific approach that helps to develop policies and strategies based on information and systematic study.

**Conclusion:**

The astonishing scientific advances in information science, the use of AI to handle big data and it transmit it through blockchain technology, and the facilitation of the use of analysis and synthesis tools to derive and extract results and to support institutional decision-making have led to these tools and methodologies becoming not just an option, but an imperative in a complex and rapidly changing world. Data plays a critical role in guiding decisions and achieving sustainable success for organizations, by investing time and effort in collecting and analyzing data effectively.