

The Role of Advanced Measuring Instruments in Scientific Development and National Pride

State-of-the-art tools and equipment are needed to enable new fundamental discoveries and increase scientific productivity. In the nineteenth century, researchers turned to charities and private organizations to provide scientific measurement tools, and governments were not scientifically supported in universities, but in the twentieth century governments became somewhat familiar with science and started to support the universities for advancement of science and invested in the provision of scientific equipment.

Science is like invisible forces and not seen or understood by everyone, but science is the basic foundation of progress, health, safety and power for society and every country. Anyone who invests in the development of these invisible forces, called science, has come to realize after a time that the product is spectacular and understandable, with great benefits and added value. So, investing in science will generate high-tech technologies and industries, but the science will also control environmental waste and harmful technologies and polluting industries. For example, the current issue of the country and other countries about the new coronavirus (COVID-19) as an emerging disease requires more advanced knowledge, science, medical diagnostic methods in addition to perseverance, courage and self-sacrifice.

One of the key parameters in the advancement of science is having advanced measuring instruments. The leading countries in the science are leading in high throughput measuring instruments. Therefore, it is essential to invest in such tools. Investments in developing instrumentation in universities typically involve a variety of costs. These include:

- Investing for construction of accurate tools based on existing knowledge, then expand them gradually with collaboration with eminent researchers
- Direct cost for purchasing instrumentation and its parts and components that have advanced or unique capabilities
- Integrating devices or components to enhance precision measurements and make the instrument more efficient.
- Establish central or national or regional laboratories or integrate some laboratories
- Maintain and retrieve tools in research laboratories and rebuild and update new and more advanced parts.
- Creation of service and repair systems, production of spare parts and upgrading of measuring devices

Another important point to note is the power of each country's instruments to change its political equations. If in the region new advanced instruments are existed for high-throughput accurate scientific measurement, but not existed the same in Iran, the people of Iran are culturally damaged. One of the most important places of scientific discovery and great scientific achievement is national pride. The nation, philanthropists, and private and government organizations are therefore urged to invest in science advancement in universities and schools, especially in support of the construction of advanced scientific equipment with great effort. The offspring of this borderland have endowed divine talents that deserve to be supported by them for scientific flight.

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