HARMONIZATION BETWEEN NATIONAL CERTIFICATION SYSTEMS AND INTERNATIONAL REQUIREMENTS

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Abstract. The globalization of trade and the rapid development of international markets require the harmonization of national certification systems with international standards. This study examines the theoretical and practical aspects of aligning national certification frameworks with global requirements such as ISO, IEC, and WTO agreements. The research highlights the importance of conformity assessment, accreditation, and mutual recognition agreements (MRAs) in ensuring product quality and facilitating international trade. The findings reveal that harmonization enhances competitiveness, reduces technical barriers to trade, and promotes economic integration. The paper proposes methodological approaches for improving national certification systems based on international best practices.

Keywords: certification system, harmonization, international standards, ISO, conformity assessment, accreditation, WTO

In modern economic conditions, ensuring product quality and safety has become a key priority for countries participating in global trade. National certification systems play a crucial role in verifying compliance with established standards [1]. However, differences between national and international requirements often create technical barriers to trade.

The harmonization of certification systems aims to align national regulations with international standards, thereby ensuring compatibility and mutual recognition [2]. Organizations such as ISO (International Organization for

Standardization), IEC (International Electrotechnical Commission), and WTO (World Trade Organization) play a significant role in this process.

The issue of harmonization between national and international certification systems has been widely studied by scholars such as Deming, Juran, Crosby, and Feigenbaum.

Deming (1986) emphasized quality management systems as a foundation for certification. Juran (1999) focused on quality planning and control. Crosby (1979) introduced the concept of "zero defects". Feigenbaum (1991) developed Total Quality Management (TQM). Recent studies highlight the importance of ISO 9001, ISO/IEC 17000 series, and international accreditation systems [3].

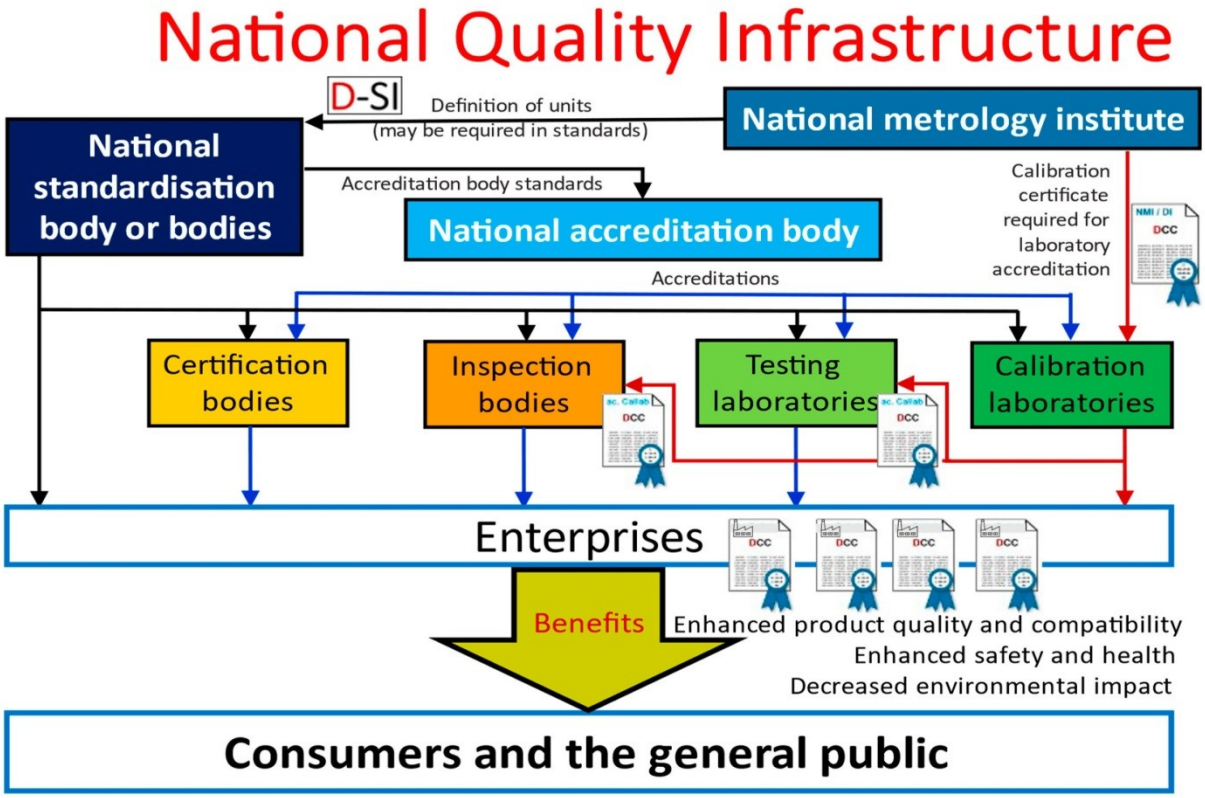

Figure 1. Structure of Certification Systems

The research employs:

- Comparative analysis of national and international certification systems
- Systematic review of ISO and WTO frameworks
- Analytical modeling of harmonization processes
- Case study approach

A national certification system consists of: Regulatory bodies, Certification bodies, Testing laboratories, Accreditation institutions, Its primary goal is to ensure compliance with national standards [4].

International requirements are based on: ISO standards, IEC standards, WTO Technical Barriers to Trade (TBT) Agreement.

Table 1

Comparison of National and International Certification Systems

Standards	Local standards	ISO, IEC
Recognition	Limited	Global
Accreditation	National bodies	International networks
Trade impact	Restricted	Facilitates trade

Benefits of Harmonization. Elimination of technical barriers, Increased export potential, Improved product quality, Global market access.

Figure 2. Benefits of Harmonization

Challenges in Harmonization. Differences in regulatory frameworks, Lack of infrastructure, Limited expertise, Financial constraints.

The harmonization of national certification systems with international requirements is essential for integrating into the global economy [5]. It ensures

product quality, enhances competitiveness, and reduces trade barriers. Countries must adopt international standards, strengthen accreditation systems, and promote international cooperation [6].

REFERENCES

1. Hamidov JA, Murodova AY (2023) Technology for development of professional and technical component of future engineers through virtual educational technology Atamuratov RK The educational advantages of virtual reality technologies. The Competing Science and Technology International Journal, 4 May 2023, pp. 87-90.

2. Hamidov JA, Khimmataliyev DO, Kadirov ID, Ravshanov JF, Khikmatullayeva D. Electronic textbook on the subject "World Education System". Certificate of the State Patent Office. – T., 2022 No. DGU 18218.

3. Hamidov J.A., Turaqulov OH Advanced pedagogical from technologies lesson in the process. Style recommendation letter. – Jizzakh, 2009. – 149 b.

4. Uktamov D.O. Regulatory and legal framework for the use of digital technologies in the educational process. Collection of materials of the "International Scientific and Technical" conference on computer science and engineering technologies No. 2 October 13, 2023, 339-342.

5. Uktamov D.O. The role and importance of digital technologies in preparing future engineers for professional activity . Scientific Methodological Journal 2024 No. 2/2 131-136.5.

6. Murodova AY (2023) Virtualization in the training of engineers as a factor of increasing scientific efficiency. Academic Research Journal 2023. Pages 184-189 .