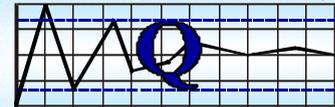




Implications of international standards and industrial metrology in Trade

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Accelerating flows of trade, foreign direct investment and global production sharing offer the developing countries a powerful set of challenges and opportunities. Foremost among these is the need to demonstrate compliance with a growing range of international standards and regional technical regulations. Increasingly, large buyers, industrial partners, and potential investors demand evidence of compliance with international standards. Those countries, which have invested over the years in strong standardization and metrology bodies, can meet these standards, and will correspondingly be able to trade and attract investment. Unfortunately, this capacity does not exist in many developing countries.

Standards and technical regulations are essential to trade, commerce and the diffusion of technology, but they can also serve as important non-tariff barriers to trade. Yet more than standards themselves, it is the duplicative testing procedures arising from different systems of conformity assessment in different countries, which have become serious barriers to trade.

Standards - Technical barriers to trade in the area of standards result from heterogeneity across national markets in the type of product and process standards, technical regulations or conformity assessment procedures. Exporting firms may find that complying with a foreign standard is too costly if the standard is stringent or varies significantly from a domestic or international standard.

Developing countries often feel that industrialized countries dominate development of international standards. In their view, inputs from developing countries, such as proposals for establishing certain standards of their interests, or comments for draft international standards, are not properly taken into account. As a result, it always happens that published international standards are ineffective or inappropriate for adoption by developing countries.

Eco-labels and environmental standards - An area where technical regulations in the form of process standards are increasingly used is in eco-labeling and environmental standards. Producers in developing countries face increased demands by international markets to apply higher environmental standards to locally produced goods and their production processes. These requirements are mostly based on foreign criteria, which usually do not reflect national environmental priorities or local realities. Hence, producers in developing countries find them hard to adopt.

Sanitary and Phyto-sanitary (SPS) measures - Another area where standards are becoming increasingly mandatory is in the area of sanitary (human and animal health) and phyto-sanitary (plant health) measures. All countries maintain measures to ensure that food is safe for consumers, and to prevent the spread of pests or diseases among animals and plants. These sanitary and phyto-sanitary measures can take many forms, such as requiring products to come from a disease-free area, inspection of products, specific treatment of processing of products, setting of allowable maximum levels of pesticide residues or permitted use of only certain additives in food.

The Hazard Analysis and Critical Control Point (HACCP) system is a food safety management system, which concentrates prevention strategies on known hazards, and the risks of them occurring at specific points in the food chain. The HACCP approach easily integrates into Total Quality Management or ISO 9000. In the U.S.A. about 38 states are using HACCP as part of their regulatory process. The E.U. has also introduced HACCP as a mandatory standard, i.e. technical regulation.

Conformity assessment - Conformity assessment is the key to having goods accepted across borders. Authorities in the importing country need to be certain that imported goods will not impose a risk to their citizens. They need to have full confidence that the test data or inspection from the exporting country is reliable and that any decision on safety made in another country can be trusted. Without this confidence countries enforce duplicative conformity assessment procedures on imported products. Confidence is achieved by proving that all aspects of the conformity assessment process in another country are professional and sound. A method used to achieve confidence is by accrediting laboratories and inspection bodies and undertaking peer evaluations of accreditation bodies, which ensures that another country has a similar technical infrastructure applying equivalent procedures. Once confidence has been established a Mutual Recognition Agreement (MRA) is signed. An MRA is one of the major tools for achieving trade facilitation in this area.

Non-tariff barriers in the area of conformity assessment can easily arise through (1) increased product costs created by the often redundant repetition of testing and certification for different national markets; (2) increased transportation costs if the product is deemed not to comply with the importers' regulatory requirements; (3) time and administrative delays caused by costly and time-consuming inspection visits by the importing country's authorities.

Metrology - Exporters trading in the world market all need to give assurance of conformity of their products or services to international standards and/or those of the receiving market. This conformity assurance requires a recognized metrology system with a capable national measurement laboratory with documented calibration chains to the point of use, accredited testing laboratories, recognized accreditors, and certified quality management systems.

Testing, calibration and certification facilities have strategic importance to a country not only in cutting extremely high costs involved in testing products abroad, pre-shipment services, certifications, etc. but also in providing companies with objective results which are necessary for technological improvements. In developing countries, lack of testing and calibration facilities are serious handicaps for trade.



UNIDO Solutions - In fulfilling its mandate during the past 30 years, UNIDO has been providing technical assistance in the field of Quality, Standardization, Metrology and Conformity Assessment to developing countries. The demand for UNIDO's services has continuously increased over the last years in response to the above-mentioned global context and countries' requirements for quality-related technical assistance. In more than 50 countries UNIDO has provided a wide range of services in the field of quality infrastructure totaling over USD 55 million. The main UNIDO solutions provided to developing countries in this context are:

- **Harmonization of Legal and Regulatory Framework:** Review and evaluation of existing and proposed laws and regulations as well as streamlining and integration of existing laws and regulations to improve the supportive national institutional infrastructure.
- **Standardization:** Setting up and upgrading of national and regional standardization bodies, networking of standardization bodies at regional and international level.
- **Metrology:** Establishing and upgrading of national and regional facilities for industrial and legal metrology, product quality and testing, sectoral calibration and testing frameworks.
- **Certification and accreditation:** Establishing and improving of certification and accreditation bodies at regional and national levels, including assistance in achieving international recognition of accreditation and certification certificates up to pre-peer evaluations as well as drafting and negotiation of Mutual Recognition Agreements.
- **Capacity-building programmes for improved quality and industrial management:** UNIDO's quality approach is based on the application of methodologies for continuous improvement of product and process quality, Total Quality Management at the enterprise level and modern business management. It entails also the use of UNIDO software packages (BEST, FIT, PHAROS and MCCT) aimed at guiding entrepreneurs in their decision making process leading to business excellence.

Project examples - The project *Application of Quality Principles to the Food Processing Sector in selected Sub-Saharan Countries* addresses competitiveness and performance of food industries in Kenya, Tanzania, Uganda, Zambia and Zimbabwe as well as the need to reduce microbiological, chemical and physical hazards from the food processing activities and the dissemination of food safety awareness. In 1999 the project had gained a more crucial importance since the EU had banned the import of fish products if producers were not implementing required quality control systems. Therefore, the project has focused on the food quality and safety issues in view of the tremendous negative impact on exports for the covered countries and the ban has already been lifted in Uganda and the progress in being assessed in the other countries.

A programme designed for the West African Economic and Monetary Union (WAEMU) intends to reinforce the **competitiveness of the private sector in WAEMU countries** to face globalization. Specifically, the programme foresees the establishment of a regional system for the promotion of accreditation, standardization and quality. Expected results will include the establishment of a regional system for certification and accreditation; establishment of a regional system for standardization and the strengthening of its national capacities; as well as the enhancement of national public and private quality promotion schemes. The programme aims to reduce the use of pesticide residuals in order to meet EU regulations.

UNIDO, the International Accreditation Forum (IAF) and the International Organization for Standardization (ISO) agreed to provide accreditation bodies in developing countries and countries in transition with an opportunity to participate in international and regional mutual recognition agreements (MRAs). A programme called the **Pre-Peer Evaluation Programme** was designed and has been implemented in so far four countries. The objective of the Pre-Peer Evaluation (PPE) is to establish international confidence in the abilities of an accreditation body from a developing country to assess the performance of certification bodies. Once this confidence is established an enterprise's quality management system such as ISO 9000 certified by an accredited body is recognized world-wide.

Some of the urgency in understanding global standards comes from the fact that, while often voluntary, they can act as effective ~~non-tariff~~ or technical, barriers to trade. This is particularly so for high-value developed country markets. Sectors, where buyers require high quality components and where health and safety concerns are paramount, are especially prone to regulation through global standards. This has been a concern which has been discussed at the Technical Barriers to Trade Committee of the WTO. As a consequence, UNIDO has undertaken a series of **surveys on the implications of international standards on trade**.