



focus

#136

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trade

TODAY AND TOMORROW





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ISO focus

September-October 2019



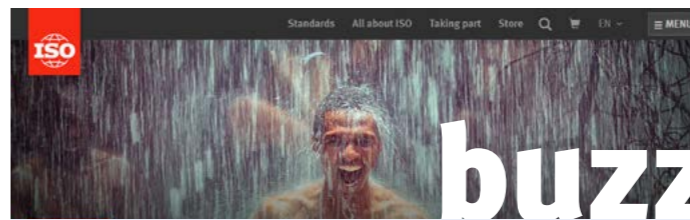
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Why international standards are so badly needed

International standards help to achieve a more level playing field.



Sergio Mujica, ISO Secretary-General.

For millennia, human beings have been exchanging commodities and other goods. In those bygone eras, traders and camels plied an east-west network of trade routes, carrying spices and precious metals, porcelain, perfumes, ivory and silk, among other things. The Silk Road, as it became known, is the best-known ancient network of trade routes.

The benefits to the peoples that lived close to the Silk Road were numerous. Civilizations and societies flourished and, along with the exchange of goods and commodities, there was also a rich exchange of culture, ideas, art, medicine and science. The Silk Road enriched all our lives.

Fast forward to today's rapidly moving, complex and interconnected world. We live in a time of uncertainty. New technologies of the so-called Fourth Industrial Revolution are reshaping our lives and major issues such as climate change and strained resources need to be tackled urgently. Yet the flow of goods and services between countries is still one of the most important drivers of job creation and prosperity.

The benefits for those enjoying free trade are obvious. It brings greater access to higher-quality, lower-priced goods, it drives competitiveness, it fuels economic growth and job creation, and it raises the standard of living for many people around the world. A growing body of evidence shows that countries more open to trade grow faster over the long run and have higher incomes per person than those that remain closed.

However, there are winners as well as losers. Many and significant trade barriers still prevent countries, particularly the poorest, from reaping the full gains of trade. And according to Oxfam, a charitable organization focused on the alleviation of poverty, the poorest half of the world became 11% poorer in 2018, while billionaires became USD 2.5 billion richer every day.

It is clear that there has never been a greater or more pressing need for international standards. Transparency, accountability, harmonization and trust are just some of the benefits — for society and business alike.

Take supply chains, which extend around the world and have become increasingly complex. The car industry in the United States, for example, depends on thousands of parts that are manufactured globally. And this complexity is being further impacted by technology, with the increasing production of electric cars causing all parts of the automotive supply chain to evolve.

Transparency and accountability, for producers and consumers alike, have become significant issues. They are particularly important when industries are undergoing substantial transformations. Provenance, quality, and health & safety are also coming under the spotlight like never before. International standards are critical to ensure that processes, products and services are fit for purpose, interchangeable and compatible, and create better communication across borders.

This enhancement of value chains has special significance when it comes to gender equality, one of the United Nations' Sustainability Development Goals. As consumers, producers, traders or employees, women are key stakeholders. In agriculture, for example, the majority of workers are women. International standards should be more accessible to enterprises, especially the small and medium-sized enterprises that account for the vast majority of jobs in developing and developed countries alike. Many of these smaller-scale trading firms are run by women who often face more severe obstacles to trade than their male counterparts. Raising awareness in women-owned firms and helping them to implement international standards would allow them to play a part in global value chains.

When it comes to trade, speed and predictability are of the essence, especially for developing countries

integrating with global markets. When goods and inputs are time-sensitive, international standards on moving goods from country to country can help to eliminate costly delays.

The lack of harmonization of technical regulations is another brake on growth — an area where international standards can play a significant role. International standards facilitate the adoption of good regulatory practices by governments and ISO standards are consistent with the commitments of countries under the World Trade Organization (WTO) to reduce technical barriers to trade.

Every country develops at its own pace; international standards help to achieve a more level playing field, giving developing countries a better chance of participating in, and benefitting from, global trade. There is a direct link between international standards and enabling developing-country participation in international trade. They help the compatibility of products and services and open doors to new markets. In fact, standards enhance competitive advantages. Enterprise-level surveys conducted by the World Bank Group in developing economies found that certification to ISO 9000 achieved average productivity gains between 3% and 18% for three Central American economies and 5% in China.

According to the WTO, the outlook remains uncertain. World trade will continue to face "strong headwinds" this year and next, after growing more slowly than expected in 2018. The WTO stresses the need to focus on charting a positive path forward for global trade. In response to the current challenges, ISO passed a resolution at its General Assembly last year encouraging its members to spread the message that a strong multilateral trading system is indispensable for economic and social development and that international standards are key to support these goals. They are the solid foundations on which the pathway to a more inclusive and sustainable world for everyone can be built. ■

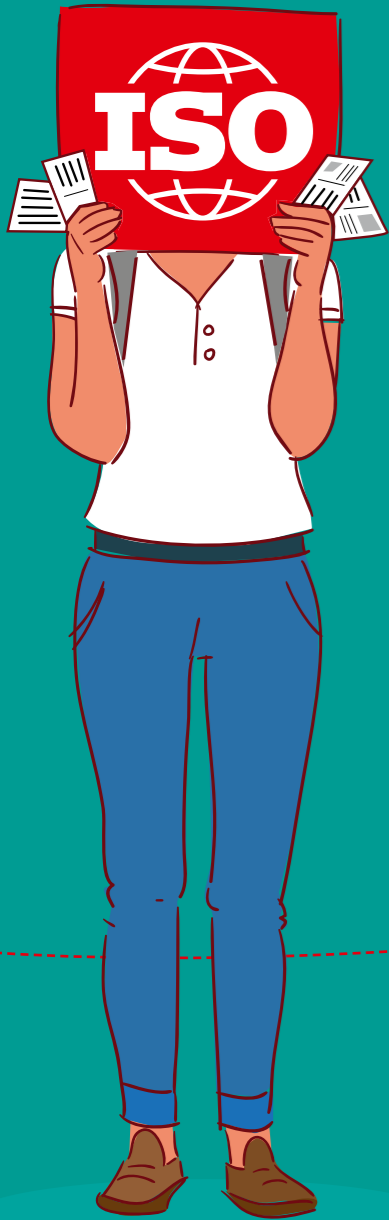
You've got mail!

The #TravelStandards campaign was a lot of fun, and a little bit different. Organized during the busy holiday period, we wanted to create content that people could enjoy in their free time. We targeted today's savvy travellers, who care about sustainability, safety and accessibility.

Our very own Cath launched the campaign by announcing a virtual trip around the world, promising a host of postcards. These were sent via Twitter by a number of participating members. The postcards showcased Cath's adventures in each country and a tourism standard. The campaign concluded with a video featuring the diversity and beauty of some of our members' home countries, as they shared with us why standards matter to their national tourism industries.



See our #TravelStandards videos on Twitter.



Hello world,
I'm Cath!

COLOMBIA
I met a fellow traveller who was here for medical treatment! Thanks to medical tourism standards she had nothing to worry about.

PERU
What a thrill to hike around Peru's stunning mountains! With standards for information to participants in adventure tourism, I felt prepared every step of the way.

BOLIVIA
Picking up a few words of Spanish, but with ISO graphical symbols I've been smoothly finding my way around amazing Bolivia. Chau!

BRAZIL
Nearly came unhooked while ziplining at Iguazú Falls – just kidding! Thanks to safety standards it was a blast!

FRANCE
Held my breath admiring the glacier. Glad sustainable adventure tourism standards will preserve this for generations.

IRELAND
Sure is windy up here at the top of the cliffs! With accessibility standards, everyone can enjoy the view!

LITHUANIA
These charming villages can only benefit from sustainability management standards as tourism continues to grow in this stunning park!

ROMANIA
Wooosh, summer toboggans are my favourite, thanks to standards that keep them safe and fun.

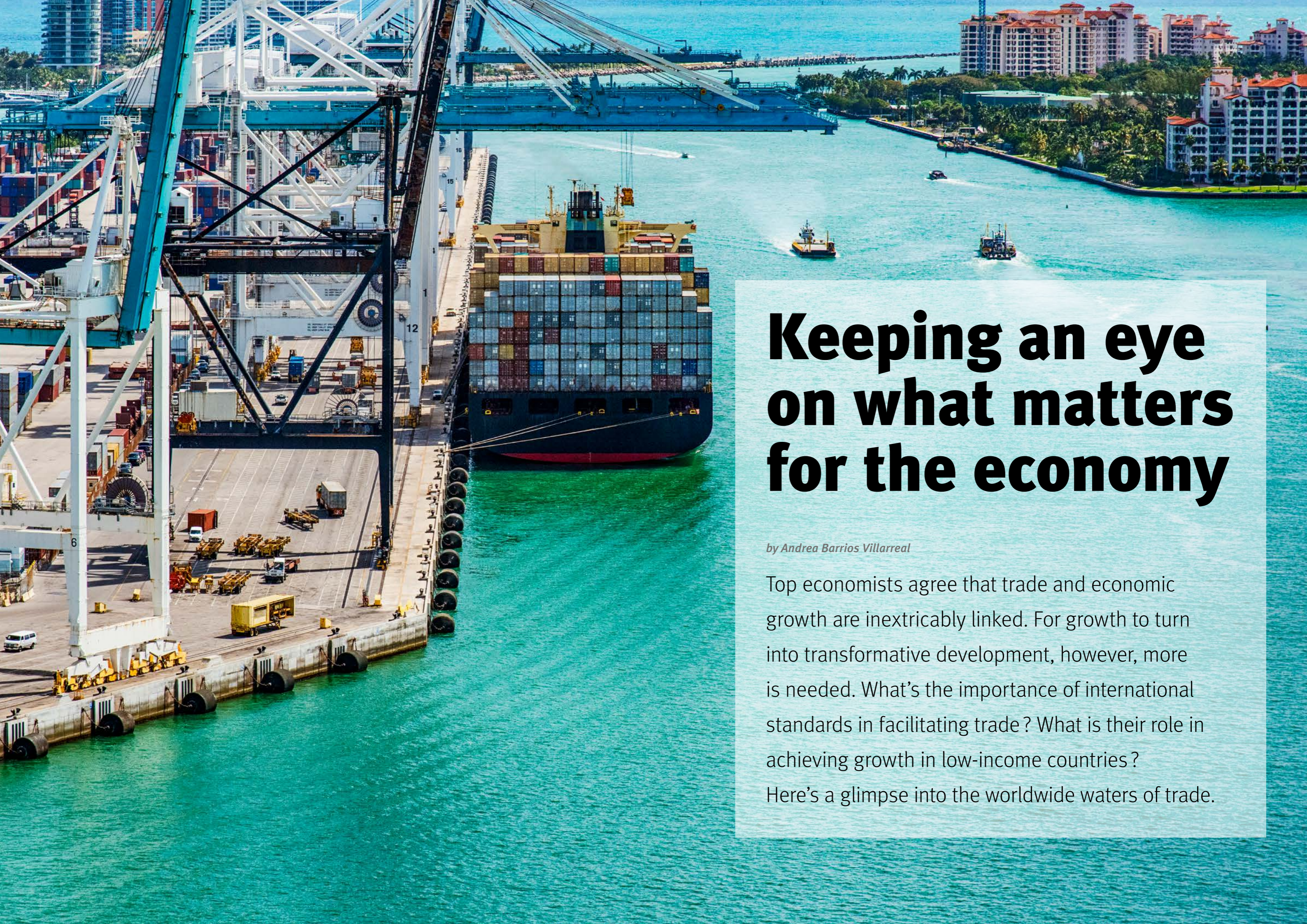
REPUBLIC OF MOLDOVA
Today, I explored the amazing wine road in Moldova's cellars! Industrial tourism standards made the tour nothing short of a grape success!

INDONESIA
Life below the surface is stunning! Recreational diving standards protect the wildlife AND me, so we can all swim happily!

AUSTRALIA
Splashing away and working on my tan without a care in the world thanks to beach operation ISO standards!

ZIMBABWE
Just tried the staple dish here in Zimbabwe – Sadza! Food safety standards gave me the highest-quality ingredients.

SWITZERLAND (ISO)
Couldn't resist jumping into the lake of beautiful Mavrovo. Thanks to standards for tourist services in national parks, conservation and visitor satisfaction go hand in hand!



Keeping an eye on what matters for the economy

by Andrea Barrios Villarreal

Top economists agree that trade and economic growth are inextricably linked. For growth to turn into transformative development, however, more is needed. What's the importance of international standards in facilitating trade? What is their role in achieving growth in low-income countries? Here's a glimpse into the worldwide waters of trade.

Trade has become
a major component
of GDP for most
countries.



International trade is the exchange of capital, products and services among two or more countries. It is international because goods cross borders. And it is certainly not new. Trade has existed through history, we can think about the exchange between the Roman Empire and Egypt, or the Silk Road. However, the international trading system as we know it started to develop after the Second World War when it was used as a tool to promote a lasting peace. For the first time, international rules were put in place. According to Nobel prize-winning economist Paul Krugman, “the postwar trading system grew out of the vision of Cordell Hull, US Secretary of State during Roosevelt’s presidency. He saw commercial links between countries as a way to promote peace. That system, with its multilateral agreements and rules to limit unilateral action, was, from the beginning, a crucial piece of the *Pax Americana*.”

As a consequence, in 1947 a total of 23 countries adopted the General Agreement on Tariffs and Trade (GATT), which later evolved to become the World Trade Organization (WTO). As of today, the WTO counts 164 members with an additional 22 countries that have requested to join.

Global trade growth

Trade has become a major component of GDP for most countries. According to the World Bank, trade represented 24 % of the world’s total GDP in 1962. This number more than doubled, to 57 %, by 2017. For small countries that do not have large internal markets, trade is particularly important, but even for the world’s largest economy, the United States, trade represents 27 % of GDP.

Nevertheless, in recent years the international trading system, as well as globalization more generally, has been increasingly challenged. This is because the undeniable positive effects that trade has on economic growth have not necessarily been accompanied by income redistribution and increased equality in both developed and developing countries. Particularly for developing countries, the increasing participation in international trade, including regional trade, has not clearly translated into transformative development.

For example, in 2018 Vietnam had a record-breaking GDP growth of 7.08 %, yet nine million Vietnamese are still living in extreme poverty, according to a World Bank report. It is important that the integration into global markets be accompanied by comprehensive national policies in areas such as infrastructure, gender



The TBT Agreement

The WTO TBT Agreement establishes rules for the preparation, adoption and application of international standards, technical regulations, national standards and conformity assessment procedures. It aims to ensure that technical regulations, standards and conformity assessment procedures are non-discriminatory and **do not create unnecessary obstacles to trade**.

Importantly, the Agreement leaves WTO members room to achieve legitimate policy objectives, such as the protection of the environment and consumer safety. However, unnecessary barriers to trade should not be created in the pursuit of such objectives, for example, by overregulating or requiring unnecessary certifications. The Agreement also aims to ease these obstacles to trade by requiring harmonization with international standards and encouraging WTO members to recognize each other’s standards and technical regulations through mutual recognition agreements.

equality, support to small and medium-sized enterprises and social programmes such as education and healthcare. Trade cannot solve all the issues alone.

Standards to the rescue

Since the 1970s, technical barriers to trade (TBT), which include technical regulations and standards, have become more prominent. Their effect on global trade patterns is undisputed. The increased reliance on TBT measures becomes clear when one considers the number of notifications of such measures to the WTO.

In 1995, the year the TBT Agreement came into force, 364 new measures were notified. In 2018, the number of new measures soared to 2085. This enormous rise can be explained by a number of factors: the decrease in the use of tariffs, progressively globalized business structures, the increased participation of emerging markets in global trade regimes, and the growing

importance of consumer concerns on issues such as sustainability.

The United Nations Conference on Trade and Development (UNCTAD) report, *The Unseen Impact of Non-Tariff Measures: Insights from a new database*, finds that TBT measures are the most used measures in trade. They are imposed on average on 40 % of product lines, covering approximately 65 % of world imports.

Standards can facilitate trade by reducing transaction costs relating to TBT measures, notably by providing information on product requirements. However, they can also have negative effects on trade when they are carelessly developed or implemented. One way the TBT Agreement aims to diminish these negative effects is through harmonization. The Agreement requires that the technical regulations and standards of WTO members be based on relevant international standards, including those developed by ISO. Moreover, WTO members are required to participate in international standardizing bodies, such as ISO.

STATS AND FIGURES ON TRADE

The international trading system as we know it started to develop after the Second World War when it was used as a tool to promote a lasting peace. Now, trade has become a major component of GDP for most countries.

According to the World Bank, in 2017, trade represented

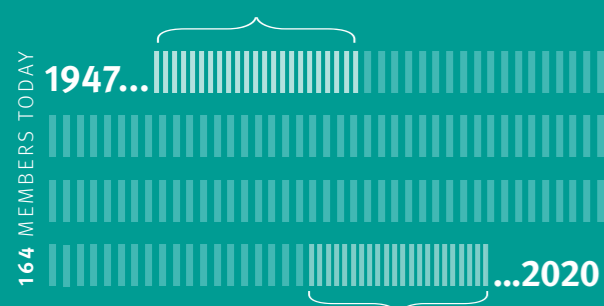
57%*

OF THE WORLD'S TOTAL GROSS DOMESTIC PRODUCT (GDP)

* In 1962, trade represented only 24% of the world's total GDP.

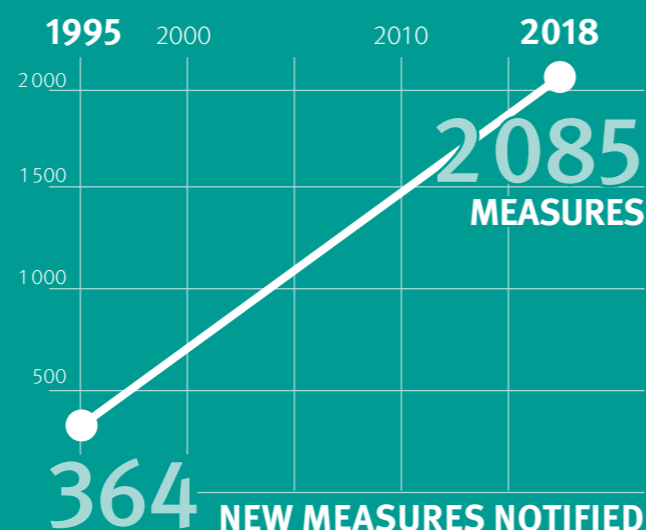
HISTORY OF WTO

23 countries adopted the General Agreement on Tariffs and Trade in 1947



22 countries have requested to join

INCREASE IN NUMBER OF MEASURES



As a consequence of the rules of the TBT Agreement, international standards, which are developed as voluntary documents, can effectively become binding rules. International standards can directly impose rules on countries because the TBT Agreement stipulates their use as the basis for development of national regulations and standards. Indirectly, international standards affect trade and markets, as they determine which products can be traded and how, and the variety, quality and safety of products and services.

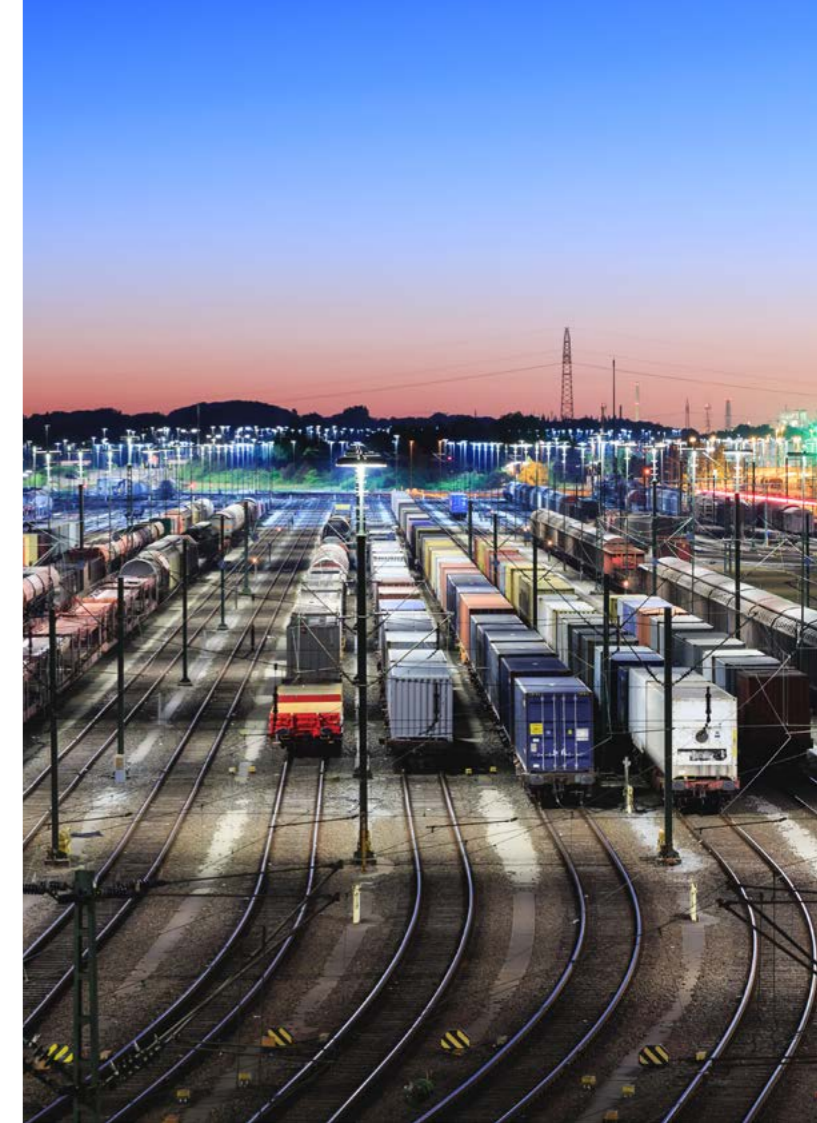
The verdict of economists

Economists have studied the effects of country-specific and harmonized standards on trade. They found that national standards in the manufacturing sector, even if they are not harmonized with international standards, can promote trade. This is because although they impose adaptation costs on importers, they also provide them with valuable information that, in the absence of a national standard, would be costly and time-consuming to gather¹⁾. However, the effect is different for primary sectors like agriculture, where adaptation costs exceed the benefits of access to information.

National standards affect developed and developing countries differently. In general, TBT measures are more frequent in products that are typically exported by developing countries such as agricultural produce and textiles. Compliance costs, which are related to technical know-how, infrastructure and even local regulations, are generally more burdensome for developing countries.

Despite this, there is widespread agreement among scholars that having a national standard is better than not having any standard at all. There is also robust evidence that harmonization with international standards promotes international trade flows and that harmonization among developed countries gives developing countries access to more markets.

1) "Information Versus Product Adaptation: The Role of Standards in Trade" by Johannes Moenius (February 2004)



Having a national standard is better than not having any standard at all.



A study on textile and clothing exports from 47 sub-Saharan countries directed towards the European Union, which back then consisted of 15 members, found that EU standards that are not harmonized with ISO standards reduce African exports, while those that are harmonized have a positive effect on African exports²⁾. A similar study from the World Bank, *Product Standards, Harmonization and Trade: Evidence from the Extensive Margin*, focusing on the textile, clothing and footwear sectors of two hundred countries exporting to the EU, found that a 10% increase in EU standards harmonized with ISO standards represented an increase of 0.2% in the variety of imports. This effect is 50% stronger for low-income countries.

The bottom line

The link between international trade and its integration into global markets, resulting in economic growth, has been clear for a long time. However, trade alone is not enough. As Kofi Annan, former United Nations Secretary-General, once said: “Trade liberalization must be carefully managed as part of comprehensive development strategies that encompass health, education, the empowerment of women, the rule of law and much else besides.” International standards serve economic growth in two ways. First, they promote trade, specifically exports from developing countries. Therefore, they support economic development. Second, and even more important, they are a tool to achieve sustainable development as they support countries in achieving national policies, such as healthcare, gender equality and the protection of the environment. These national policies are ultimately what transforms economic growth into strong sustainable development – making the 2030 Global Agenda a reality. ■

2) “Help or Hindrance? The Impact of Harmonised Standards on African Exports” by Witold Czubala, Ben Shepherd and John S. Wilson, *Journal of African Economies*, Volume 18, Issue 5, November 2009, Pages 711-744 (15 March 2009)

When standards mean *business*

Bestel, a Mexico-based telecommunications company, uses standards to ensure quality across its services. The Director of its Security Operations Centre, Victor Manuel Mejía, provides insights into how the company uses them and explains the concrete advantages that standards such as ISO/IEC 20000, *Information technology – Service management*, deliver for Bestel.

Global trade and economic growth are often looked at through a bird’s-eye view. The World Trade Organization Agreement on reducing technical barriers to trade does its part by establishing rules between countries. However, in the end, trade and growth are created by thousands of successful businesses that operate within countries and across borders, selling goods and services to clients all over the world.

One such business is Bestel. The Mexico-based company provides integrated telecommunications and data services to customers across Mexico and the United States. In addition to physical infrastructure, Bestel also offers a range of services, including security services to ensure that their clients’ data is safe. *ISOfocus* sat down with Victor Manuel Mejía, Director of Bestel’s Security Operations Centre, to discuss the immediate impacts standards have on real companies, the ultimate drivers of trade and economic growth.

ISOfocus: Bestel operates in Mexico and works with global partners through its US offices. How did it go about developing a successful business with international users?

Victor Manuel Mejía: Working with international clients and partners is a basic requirement due to the nature of our business. We provide telecommunications and information technology services, together with cybersecurity operation services, through our Security Operations Centre. As a result, we base our operations on international standards and norms that reassure our clients about the quality of the services we provide. And standards have definitely been a key factor in Bestel’s success. Not only do they make our processes



Victor Manuel Mejía, Director of Bestel’s Security Operations Centre.

transparent, but they also provide our clients with a guarantee that our implementation will be world-class.

What are the advantages of ISO/IEC 20000 for a company like Bestel?

Standards bring us a whole range of benefits. Published jointly by ISO and the International Electrotechnical Commission (IEC), ISO/IEC 20000, which is the first international standard on IT service management, provides some key advantages to firms like Bestel. For example, the standard provides us with confidence in dealing with our clients. It enables consistency of implementation across services and helps to reduce risk. Moreover, ISO/IEC 20000 allows for better planning and prevention when implementing projects. And, last but not least, it provides an important guarantee of quality to all our clients.

What impacts do standards have in helping a company to achieve positive results?

As the repository of international best practice, standards incorporate a strategy for managing the life cycle of products and services. This, combined with a series of standard processes, brings our clients great peace of mind. The most important impact then lies in the client’s perception of us as a company, especially in the case of global clients who operate according to guidelines issued by their parent companies, which can be based anywhere in the world. By building its delivery of products and services around standards, Bestel can equate client expectations to a proven model that works successfully and with the same efficiency in numerous countries.



The elusive (but essential) quest for quality

by Ambassador Alan Wolff, Deputy Director-General of the World Trade Organization (WTO)

“Quality infrastructure” – or QI – is an essential vehicle for trust in trade. However, it is poorly understood and underfunded. There is a need to find ways to help fix this.



Ambassador Alan Wolff, Deputy Director-General of the World Trade Organization (WTO).

Consumers expect “safety” and want more “quality”

We are becoming ever more quality-conscious. I use the term “quality” here in a broad sense – meaning product attributes that are not only about *safety*. Safety, as opposed to quality, can have dire consequences for the individual consumer: it is, for example, about holding a hairdryer that does not electrocute, about eating food free of toxins, or about driving a car that will not come apart in a curve. While quality may also be tangible, it is often more elusive. It is about characteristics that we cannot see: a claim that the furniture is more durable, better designed, comfortable, or the wood materials originate from a sustainably produced forest, that the tuna is fresh and has never been frozen or has not been fished in a way that harms dolphins, or that certain bananas are sweeter, have been produced organically or traded “fairly”.



I can find a toxin or a disease-causing agent in food. But how to define and measure quality? How can I be sure that products entering the market meet a growing range of concerns, from design and performance requirements, sustainability to animal welfare?

The challenge in trade is to be able to measure quality, to ascertain with enough confidence that a certain level of quality has been reached – in other words, to make it less elusive.

Trust is the real currency of trade

In a smaller world, when trade was between neighbouring villages, word of mouth may have been enough to establish trust. Today's trade patterns present a different challenge altogether. Globalization has driven specialization in ways that make a wide and evolving variety of products available at falling prices. Manufactured goods tend to be built from different parts, pieced together in stages and moved across borders before they reach the final consumer – and these transactions are repeated, often between anonymous actors. And yet the product (almost) always works!

Underpinning all this is a fabric that delivers trust. This is a fabric of institutions, public and private, that consists of metrology, conformity assessment procedures (inspecting, testing and certification), and standards and accreditation bodies. This is, for example, about ensuring that weights and measurements are accurate and traceable, that testing is impartial, or that laboratory personnel are competent. We refer to this as “quality infrastructure” – QI for short.

Because it boosts trust, it strongly fosters the productivity and competitiveness of businesses. When deficient, if the seller cannot demonstrate that a product meets the standard – whether voluntary or mandatory, public or private – trade may suffer even if a product meets all requirements. Quality is potentially a much more formidable barrier than a tariff. A tariff is an additional cost that a producer



In a smaller world, when
trade was between
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establish trust.

can factor in; lack of confidence, however, will inhibit trade even in the absence of tariffs and other taxes.

At the WTO, we consider this type of trade barrier as particularly malign, and we see it first-hand because countries tend to bring their trade problems here, to the WTO Committee on Technical Barriers to Trade (the “TBT Committee”). Here Members regularly report on standards and regulatory measures affecting their trade. The number of problematic measures is on the rise. The most pernicious are about “conformity assessment procedures”, which aim at bridging the confidence gap between anonymous buyers and sellers. Where there is uncertainty that a product (or a component of it) complies with the underlying requirements, the consequences on trade can be stark, significant – and sometimes disproportionate. For small companies (SMEs) and least-developed countries (LDCs), a lack of trust can dramatically impede integration into world markets. Work at UNCTAD, the United Nations Conference on Trade and Development, shows that technical barriers to trade are the most common and costly form of non-tariff measures¹⁾.

1) UNCTAD and ITC presentations at the WTO TBT Thematic Session on Transparency, WTO, 18-19 June 2019 (available at webcast.wto.org)

Technical, under the radar, with impact unappreciated

QI poses three key challenges to trade policy.

- **It is technical...** Quality infrastructure is exceedingly complex and carries with it near-zero policy appeal at political levels of government or for that matter the public. The terminology does not help: metrology (the science of measurement) is often confused with meteorology (the study of weather); certification is a foggy concept at best, and there is very little knowledge whatsoever about accreditation, another fundamental and little understood pillar of QI. How all these bodies (and indeed services) are organized and work together is a step too far for many.
- **...its benefits are not explicit...** If I were arguing for the maintenance of roads, bridges and tunnels, the case for

infrastructure upgrades would be easier to make. But this is different. It typically operates below the radar screen, is often taken for granted and therefore not always seen as a priority. Why focus on quality when we can fund capacity for participation in concrete negotiations at the WTO, say on agriculture or fisheries? This is almost certainly easier to explain to donor organizations!

- **...and its trade relevance is not fully appreciated.** The relevance of QI to trade is not explicit. Essentially, it enables market access. When functioning well, it can be described as a well-oiled machinery that enables access to international markets. It cannot in and of itself create opportunities for trade – for that you need other assets, for instance creativity, knowledge – but it will empower the private sector.



The challenge in trade is to be able to measure quality, [...] in other words, to make it less elusive.

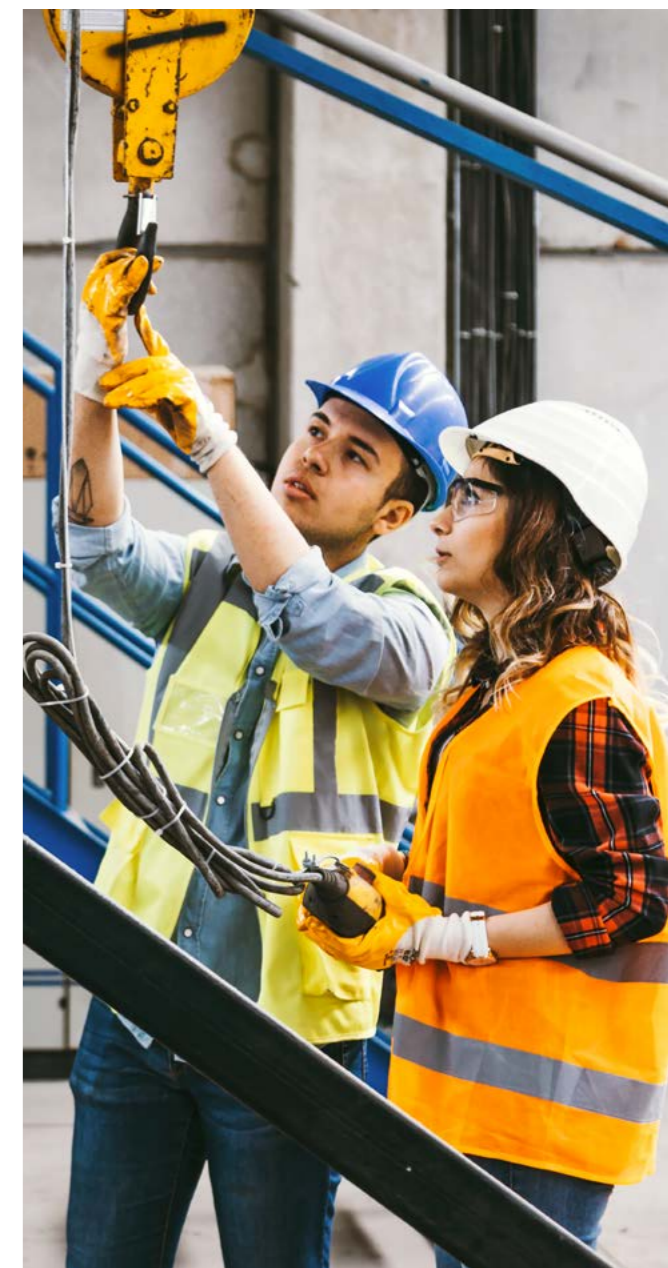
Enhancing trade-related QI capacity

The WTO has a good track record of developing partnerships in trade-related capacity building: the Standards Trade Development Facility (STDF) has delivered trade solutions in key sanitary and phytosanitary (SPS) areas through 85 projects since 2004, most of them in the world's poorest countries. Across Africa, Asia-Pacific and Latin America and the Caribbean, it has helped set up partnerships spanning the public and private sectors and connecting government agencies to small businesses. It has mobilized over USD 25 million to scale up projects and take innovative models further afield. Thanks to STDF support, projects have helped, for instance, female shrimp farmers in Bangladesh, ginger cooperatives in Nepal, cabbage producers in Senegal and flower-sector workers in Uganda to boost revenues and support their families. Other projects have helped farmers to use lower-risk pesticides on tropical crops across Africa, Latin America and South-East Asia and access new markets. Worldwide, STDF's partnership continues to transform people's trade and livelihood opportunities, sustaining the development impact at the heart of the United Nations' 2030 Agenda for Sustainable Development²⁾.

A TBT “complement”

While the STDF focuses on helping Members better implement the WTO SPS Agreement in the areas of food safety, animal plant health and life – support for QI improvements, covering both agricultural and industrial products, typically falls outside the scope of the SPS Agreement. There is a demand and need for a separate TBT “complement”. For example, this may be about finding ways to raise confidence in the quality standards of coffee production through access to accreditation (the STDF would normally only address safety, for instance the presence of a toxin), or about sustainability certification in the textile industry (cotton) – by improving the capacity to test goods in adequately equipped laboratories. By putting more focus on the quality aspects of trade and by looking for practical, tangible outcomes such as a “QI Index” to benchmark Members' levels of QI development, we will contribute to boosting confidence not only in the safety of products but also in their quality and, in so doing, enhance the trade and development prospects of producers and consumers globally. ■

2) Based on *Driving safe trade solutions worldwide: Supporting farmers, processors and traders in developing countries to access global markets* (February 2018), STDF





Passport to trade

by Clare Naden

Whether it's going to far-flung lands or just the neighbouring country, we all need a passport to travel. But what about products? How do bananas from Costa Rica get through customs in France? Or watches from Switzerland get past border control in Australia? Their "papers" are often in the form of documents such as certificates that prove they have passed the various rules and requirements of their new country. International standards can help smooth the "immigration" process and are therefore a "passport to trade".

Take the tasty mango for example. Importing it into the EU is duty-free for all countries, but it needs to comply with a wide range of measures, known as non-tariff measures or NTMs, for which the exporter must provide adequate proof. Add to that any extra requirements by the buyer, such as evidence that the product is organic or fair trade, and the exporter has quite some work to do.

But with internationally recognized tests, inspections and certificates, backed up by a system of accreditation, businesses can not only reduce the costs of meeting these requirements but also increase trade opportunities.

Research done by Accredia, the Italian Accreditation Body, showed that businesses with accredited certification saw productivity gains of 30% to 60% through entering global value chains. It also stated that “the development of common standards, supported by mutual recognition of accredited test results, inspection reports and certificates provide simplification and reductions in the cost of commerce”.

But what is accreditation and how does the system work? The journey starts with conformity assessment.

Introducing conformity assessment

Conformity assessment is the collective term for the processes that show a product meets the requirements of something, such as a standard, that is needed in order to meet a regulation or customer expectations. It not only gives the product the necessary “papers” to get across the border, it gives consumers and regulators confidence that certain regulations are met. The organizations that carry out conformity assessment procedures are known as conformity assessment bodies (CABs).

Accreditation is the independent evaluation of CABs against recognized standards to ensure their results are credible and trusted. Accreditation is performed by accreditation bodies. Those accreditation bodies that have been evaluated by peers as competent can sign arrangements amongst themselves that then increase the acceptance of products and services that are traded internationally, saving exporters the trouble of different tests for different countries.

The International Accreditation Forum (IAF) manages these arrangements if they are in the field of management systems, products, services, personnel and related conformity assessment programmes. The International Laboratory Accreditation Cooperation (ILAC) is responsible when it comes to laboratory and inspection accreditation.

The World Trade Organization (WTO) is aware, however, that all this testing and assessing can incur costs for the



The CASCO Toolbox is developed with stakeholders from all over the world.

exporter, which can be a barrier to trade. To deal with these difficulties, all WTO members are signatories to the WTO Agreement on Technical Barriers to Trade (TBT Agreement). The Agreement strongly encourages members to use international standards as a means to facilitate trade because they harmonize the requirements across countries, reducing duplication and providing transparency.

The TBT Agreement states that “verified compliance, for instance through accreditation, with relevant guides or recommendations issued by international standardizing bodies shall be taken into account as an indication of [the CAB’s] adequate technical competence”.

Confidence counts

So what standards ensure a CAB is competent and trusted? ISO has a range of standards designed precisely for the accreditation of CABs, developed by ISO’s committee on conformity assessment (CASCO).

Many of them are published jointly by ISO and ISO’s standardization partner, the International Electrotechnical Commission (IEC). Together, these standards make up the “CASCO Toolbox”.

The toolbox is developed with stakeholders from all over the world and includes the contribution of the IAF and the ILAC, key ISO partners.

The most widely used example is ISO/IEC 17025, *General requirements for the competence of testing and calibration laboratories*, which is the international reference for testing and calibration laboratories wishing to demonstrate they deliver trusted results.

The range also includes ISO/IEC 17020, *Conformity assessment – Requirements for the operation of various types of bodies performing inspection*; the ISO/IEC 17021 series, *Conformity assessment – Requirements for bodies providing audit and certification of management systems*; and ISO/IEC 17065, *Conformity assessment – Requirements for bodies certifying products, processes and services*.





Building trust and trade

An example of how this works in practice is Energy Star, which is one of the world's best-recognized labels of energy efficiency. Launched as a voluntary labelling scheme by the US Environmental Protection Agency (EPA) in 1992, it expanded rapidly to become a common benchmark for nearly every household in the US. However, an audit conducted by the US Government Accountability Office reported that while no fraud was discovered, it was largely a self-certification programme and thus open to abuse.

To remove this potential vulnerability, the EPA implemented a conformity assessment regime in 2011, meaning that in order to carry the Energy Star label, products must be tested in an EPA laboratory and be reviewed by an EPA-recognized certification body. To become EPA-recognized, laboratories need to be accredited to ISO/IEC 17025, the international reference for testing laboratories. Certification bodies need to be accredited to ISO/IEC 17065.

A further condition was that those bodies providing accreditation to ISO/IEC 17025 and ISO/IEC 17065 needed to be a signatory to the relevant ILAC Mutual Recognition Agreement or the IAF's Multilateral Recognition Arrangement. And to do that, the accrediting body needed to be peer-evaluated to ISO/IEC 17011, *Conformity assessment – Requirements for accreditation bodies accrediting conformity assessment bodies*.

Thanks to the international acceptance of these standards, the EPA was able to establish its own partnership arrangements with countries such as Canada, Japan, the EU, Switzerland, Australia and New Zealand, resulting in greater acceptance of Energy Star-labelled products globally and thus greater sales.

Brahim Houla, IAF Communication and Marketing Committee Chair, said that with regulators, industries and consumers adopting an increasingly global outlook, the need for compatibility of conformity assessment regimes between international economies is a crucial aspect of trade.

“Without this, the unnecessary duplication of already satisfactorily completed testing could result in unnecessary delays at the point of entry – a potential deal breaker for time-critical services and perishable goods,” he said.

Jon Murthy, the ILAC Marketing and Communications Committee Chair, added that internationally recognized agreements provide assurance that CABs in different economies are operating to the same internationally accepted standards.

“The system of mutual recognition of conformity assessment through the IAF and ILAC agreements promotes the system of ‘once tested to an international standard, the results are accepted everywhere’.”

When regulations rule industry

Food and agricultural producers are another area where conformity assessment plays a crucial role in facilitating international trade. Being a highly regulated industry, having credible certification that their products meet national or international regulations is not only mandatory but also a significant business cost.

79% of companies view food safety certification as a great advantage and a “passport to trade” in business.



According to a recent survey by the Global Food Safety Initiative (GFSI), 79% of companies view food safety certification as a great advantage and a “passport to trade” in business. Improved ability to comply with regulations (86%) is the highest-rated benefit of certification, with improved food safety and food quality coming in second.

The GFSI is an internationally operating non-profit organization that aims to advance food safety worldwide to build consumer trust and increase efficiency across the industry. It has a system of recognizing certification programmes against its benchmarking requirements. A certification programme owner wishing to be recognized must work with certification bodies accredited to ISO/IEC 17065 or ISO/IEC 17021.

Including the big and the small

While getting certified or accredited by recognized programmes and bodies might be feasible for large organizations, the reality is that many internationally traded products, such as fruit and vegetables, are produced by smallholder

farms in developing countries. Meeting what are often rigorous requirements on the international market is no easy task.

Thankfully, a number of schemes are in place to help them make the jump. One such scheme is the Standards and Trade Development Facility (STDF), a WTO-led global partnership that helps developing countries access international markets by tackling sanitary and phytosanitary gaps. One of those ways is through helping them implement relevant international standards.

The results speak for themselves. Working with small-scale fruit and vegetable producers, processors and traders in Thailand and Vietnam, they helped a Vietnamese exporter gain certification to ISO 22000 for food safety management systems.

“Being part of the STDF project was a game changer for my company,” said the exporter. “It was the springboard to get HACCP [an international food safety standard] and ISO 22000 certification. This enabled us to export fruit and vegetables to the EU, Japan and the US.”



The benefits of conformity assessment in international trade is clear.

Cutting costs, growing GDP

Referencing international standards in non-tariff measures, then, can lower costs for producers by removing the need to duplicate testing and certification procedures to meet the different requirements of the domestic and foreign markets.

What’s more, accreditation and conformity assessment has been proven to improve economies through facilitating trade and instilling confidence in products and services. This has certainly been the case for New Zealand, for example, where research has been conducted by NZIER, a specialist consulting firm, which shows that accreditation facilitates over 56% of total goods exports, with a value of 27.6 billion New Zealand dollars.

From enjoying tasty mangoes in Iceland to boosting national economies, the benefits of conformity assessment in international trade are clear. Testing of goods is done correctly, and everyone trusts the results. And everyone gets to enjoy mangoes. Every day. ■



How standards can lead to *better lives*



by Ann Brady

International standards can bring about a harmonization that promotes strength for countries in all areas of their development. It enables them to act cohesively instead of separately, gain a firmer foothold in the global marketplace and open doors to new opportunities. Experts explain why a level playing field will benefit everyone.

Goal 1 of the United Nations (UN) Sustainable Development Goals (SDGs) is to end poverty in all its forms everywhere. There has been some progress – global poverty rates have been cut by more than half since 2000 and most regions have seen a decline in poverty. However, according to the UN, 783 million people still live below USD 1.90 a day and there are millions more who don't make much more than this. Despite global growth forecasts, the goal of ending extreme poverty by 2030 looks unattainable. Progress has also been uneven and is sputtering in smaller developing countries. And many of these countries are more vulnerable to threats from climate change as well as from inequality, not to mention the impact of the Fourth Industrial Revolution. Countries and companies that are not ready to embrace or do not have the skills to leverage the new technologies of the digital age will get left behind.

Obstacles to progress

According to the World Bank Group and the World Trade Organization (WTO), trade can help reduce poverty in developing countries and indeed has been a significant contributor. A recent report by the two organizations,

Trade and Poverty Reduction: New Evidence of Impacts in Developing Countries, presents case studies that demonstrate how trade has helped to reduce poverty and highlights the obstacles to progress, such as working in the informal sector and gender inequality, among others. Khemraj Ramful, a senior adviser on export quality management at the International Trade Centre (ITC), acknowledges that while several developing countries have over the past few decades successfully tapped into global markets and used trade to drive rapid growth, increased value addition and poverty reduction, many other countries have not. “These countries remain relatively marginal actors in international trade, supplying raw materials, if anything, to international markets. Faster growth and poverty reduction in these countries will be essential to eliminating extreme poverty and achieving the SDGs.”

There is no doubt that all countries engaged in trade stand to gain, although – in an era of geopolitical uncertainty, trade imbalances and complex supply chains – these gains are not distributed evenly. Take the small island developing states of the Caribbean, which have a long history of trying to overcome a number of institutionalized obstacles and challenges when it comes to trade.



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Combating constraints

Deryck Omar is Chief Executive Officer at CROSO, the regional organization in the Caribbean for standards and quality. He points out that the region is facing an uphill battle in tackling some of the technical barriers to trade head-on. These difficulties are caused by constraints such as “high energy prices, lessened fiscal space and increasing transport costs among many of the islands, vulnerability to natural disasters, and a quality infrastructure that understandably develops at a slower pace to most of the developed world”.

Of course, every country develops at its own pace and this is where international standards can play a vital role. In each of the 15 CARICOM (Caribbean Community) member states there is at least one national body or authority that oversees the development of national quality procedures and systems designed to assist and enhance the country’s ability to trade.

Most of the region’s exports in goods are to the United States, the European Union and other CARICOM countries. In recent years, Omar says there has been a move to strengthen these relationships by ensuring goods and services can adhere to the relevant standards and regulations required for trade. “Increasingly, the economic operators of trade within the Caribbean and extra-regionally are demanding that imported goods be certified to international or national standards before entry is allowed, as a means of adhering to WTO rules, as well as safeguarding the health and safety of the region’s consumers,” he says.

Forming networks

The regionalization of international standards to better fit the context of developing countries is not new to CARICOM countries. CROSO has been forming networks with international organizations such as ISO, the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE), the International Code Council (ICC) and others.

This trend is continuing elsewhere. In Africa, for instance, the anniversary of the signing of the AfCFTA (African Continental Free Trade Agreement), the biggest regional trade agreement, was celebrated in March this year. Barely a month later, on 29 April, the AfCFTA secured the threshold number of 22 ratifications allowing for its entry into force by end of May. Eve Gadzikwa, Director-General of the Standards Association of Zimbabwe (SAZ) and President of the African Organisation for Standardisation (ARSO), says that coupled with the ratification by, currently, 24 of

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the potential 55 countries, this signifies a new era for Africa. “Celebrating this milestone marks the realization of a number of trends and challenges which present enormous trade opportunities for the continent. International standards will form the basis on which trade will be facilitated under the CFTA,” she says. These challenges range from a deeper understanding of quality and safety standards under AfCFTA, to national trade policies as they relate to global trends and quality infrastructure gaps to support conformity assessment of traded goods. Gadzikwa says emerging trends to meet these challenges and improve trade include the digitalization of cross-border trade, promoting intra-African trade to meet the needs of Africa’s 1.6 billion population, and enhancing partnerships between national standardization bodies, business membership organizations and regional economic communities.

Export opportunities

Africa is endowed with many resources, which represent many export opportunities to the global market. As in other regions of the world, Gadzikwa points out that within the continent, all 55 countries are at different stages of development. She emphasizes that “standards are the means by which a level playing field can be achieved and maintained under a single market to promote intra-African and global trade”. She further observes that, “small to medium-sized organizations also stand to gain from a more inclusive approach to standardization to ensure that they contribute to economic growth on the continent”.





According to Khemraj Ramful, of ITC, the lack of harmonization of technical regulations across African countries could impede businesses' ability to tap the maximum benefits of the continental free trade agreement. He says: "This is where ARSO and national standards bodies can play a more prominent role, by promoting the use of harmonized standards as the basis for technical regulations."

For Gadzikwa, many benefits from adopting international standards would include removing unnecessary duplication of efforts, joint harmonization on sector-based priorities, and harmonized standards under the AfCFTA. The mutual recognition of standards, licensing and certification of service suppliers will make it easier for businesses and individuals to satisfy the regulatory requirements of operating in each other's markets. "Promotion of sustainability standards under the EcoMark Certification Scheme of the African Organisation for Standardisation is gaining traction as a means of eco-labelling and branding agricultural, tourism, fisheries and forestry products destined for the international market," Gadzikwa says.

Regional value chains

She adds that the easing of trade between African countries is a priority. Intra-African trade will facilitate the establishment of regional value chains in which inputs are sourced from different countries to add value. These products can then be exported externally or circulated in the African market. The benefits of digitalization are also becoming more obvious and "trade in Africa under AfCFTA is waking to the realization of the increased trend towards digitalization".

The private sector is also important and Gadzikwa says that entrepreneurs, such as the owners of MSMEs (micro, small and medium-sized enterprises) and founders of big companies, as well as providers of services that will be trading across borders must adapt quickly to the new digital conditions or face extinction.

As in Africa, there has been an increasing focus in the Caribbean region on intra-regional trading relationships. This is particularly the case with regional bodies like the Forum of the Caribbean Group of African, Caribbean and Pacific States (CARIFORUM), which includes all

the CARICOM member states and the Dominican Republic. Omar says: "These relationships with CARIFORUM are seeing more opportunities for training, trading and information exchanges across countries, as well as efforts at equivalence for standards and conformity assessment systems in mutual areas of interest which could benefit the countries involved."

Quality infrastructure

According to both Omar and Latoya Burnham, CROSQ's Technical Officer for Communication and Information, recognizing also that trade and investment opportunities are arising to expand into non-traditional service areas, businesses are increasingly looking for certification and accreditation of services and their processes.

International standards are critical, Burnham says, to ensure that processes, products and services are fit for purpose, interchangeable, compatible, allow for better utilization of resources and create better communication across borders and in numerous settings.

Changing mindsets can be key to successful take-up. Burnham adds: "Standards, while good for trade, often prove challenging to implement to allow locally produced products access to markets beyond their own. In this vein, education about and access to quality services becomes critical, even while it is acknowledged that this same access can at times be difficult." The region is now concentrating on good regulatory practices through a funded TradeCom II programme targeting members of the African, Caribbean and Pacific Group of States (ACP) "to educate and train regulatory officials as well as the private sector in the importance of this approach to smoothing the way for how businesses operate with the overall aim of accessing greater markets".

The just-released CROSQ Regional Quality Policy, commonly called the RQP, is a perfect example, Omar says, of how these concepts can be married with quality to produce the kind of multi-sectoral approach needed with an orientation towards increasing trade for developing countries of the Caribbean.

Harmonized approach

The harmonized approach, he says, that has been perfected in the development of international standards is a process from which the developing countries of the region can learn "as we attempt to harmonize many of our procedures and processes, while still attempting to adhere to the guidelines that govern trade". He goes on to say that harmonization and equivalency are key steps as countries recognize that their small size dictates that there is power in operating cohesively rather than separately.

Every country develops
at its own pace
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can play a vital role.





The World Poverty Clock is ticking, but international standards can help to ensure that time does not run out for many.

Ramful agrees that compliance with international standards is a factor in the ability of businesses to tap into international markets. “Business surveys conducted by the ITC in developing countries reveal that more than 50%, and in some countries as much as 70%, of the difficulties enterprises face while exporting are due to the technical requirements of the destination market,” he says. These requirements include the need to comply with health and safety standards as well as the associated conformity assessment procedures. In this context, many of ITC’s projects in developing countries include both a component for institutional support in the field of standardization as well as assistance to enterprises for compliance with market-relevant standards.

Joseph Wozniak, who manages the ITC’s Trade for Sustainable Development Programme, says standards also present an opportunity. “Compliance and certification can open the door to new markets and to valuable price premiums under the right conditions. ITC has developed free online tools such as the Sustainability Map (www.sustainabilitymap.org) that allows enterprises worldwide to compare and contrast 250 voluntary or private standards demanded by private-sector buyers, and to complete self-assessments against these standards.”

Ramful cites three ways for developing countries to tap the full benefits of international standards in promoting trade:

- Developing countries should play a more active role in the development of international standards. These standards should take into consideration the views of the stakeholders in developing countries.
- International standards should be more accessible to enterprises, especially the MSMEs that account for the vast majority of jobs in developing countries as in developed ones.
- Well-designed standards will not by themselves create a level playing field. National members of the international standards bodies must accompany work on standards development with efforts to promote standards to domestic stakeholders while minimizing compliance burdens.

He concludes by saying: “At ITC, we have seen that enterprises supported for compliance with standards have improved their access to foreign markets. Not only has this led to higher revenues for these firms, it has motivated other companies to follow suit.” The knock-on effect for society is obvious. The World Poverty Clock¹⁾ is ticking, but international standards can help to ensure that time does not run out for many. ■

1) Created by the World Data Lab, an NGO headquartered in Vienna, Austria, the World Poverty Clock provides real-time poverty estimates until 2030 of almost every country in the world.





International standards can enable exporters from developing countries to unlock access to global value chains and alleviate poverty. For the world's poorest countries – where trade plays an essential role in their economic development – so-called sustainability standards can be a powerful tool to drive growth and ensure inclusive development. Here, a UN trade expert explains more.

UN trade expert on standards, sustainability and how to boost exports

Standards are an important component of international trade.

A key question for the G20 this year: What can be done to boost inclusiveness in the global economy? It's not the first time that ministers and officials have been looking into policies they could adopt to maximize the development prospects of lower-income countries. Could there be a key role for standards?

Indeed there is. The United Nations Conference on Trade and Development (UNCTAD) helps governments from developing and least-developed countries to leverage the benefits of standards, while minimizing potential inconveniences. UNCTAD supports developing countries in recognizing the value of sustainability standards as vehicles for inclusive development that widen market access and lower barriers. Its efforts include, among others, hosting the secretariat of the United Nations Forum on Sustainability Standards (UNFSS), an initiative of five UN agencies that provides technical help to navigate an increasingly complex landscape.

Santiago Fernández de Córdoba is well acquainted with the complexities of trade. He has been a trade policy expert for over 20 years, advising governments on economic development, trade negotiations and trade promotion. *ISOfocus* sat down with Fernández de Córdoba, Senior Economist at UNCTAD and Coordinator of the UNFSS, to discuss standards, Sustainable Development Goals (SDGs) and how developing countries can access global value chains in pursuit of a higher standard of living.



Photo: UNCTAD

Santiago Fernández de Córdoba, Senior Economist at UNCTAD and Coordinator of the United Nations Forum on Sustainability Standards (UNFSS).

UNCTAD supports developing countries in utilizing standards to enhance market access for their exports and overcoming challenges.

ISOfocus: How do standards fit in UNCTAD’s overall agenda?

Santiago Fernández de Córdoba: International trade is usually recognized as a powerful instrument to stimulate economic progress and alleviate poverty. Standards are an important component of international trade. Within global value chains, standards provide assurances to consumers that traded products are safe as well as socially and environmentally sustainable.

In this context, UNCTAD supports developing countries to capitalize on the benefits of international trade in a more effective and efficient manner, particularly by helping lift more people from poverty and achieving the SDGs. UNCTAD helps developing countries integrate into global markets by leveraging sustainable value chains. Essentially, sustainable value chains benefit producers by increasing productivity through practices that are sustainable and, thus, increase producers’ incomes without causing environmental damage. From a political economy perspective, these gains benefit developing countries by achieving economies of scale and competitive advantages.

International standards, through their catalyst role in global value chains, can have a positive impact on

sustainability, compatibility and consumer protection. However, they can also constitute a serious challenge for many exporters from developing countries as compliance can imply significant, or even prohibitive, costs. More importantly, UNCTAD supports developing countries in utilizing standards to enhance market access for their exports and overcoming challenges. This is typically achieved by increasing understanding and transparency as well as by evenly sharing the benefits and costs among the various standardization partners.

What does your research say about the role and importance of international standards?

Our research shows that international standards that uphold not just the quality but also the sustainability of methods of production can be the key for developing countries to unlock new markets. The recently published 3rd Flagship Report of the United Nations Forum on Sustainability Standards (UNFSS), titled *Voluntary Sustainability Standards, Trade and Sustainable Development*, explicitly makes this point. When sectors such as agriculture commit to proven standards regimes that build confidence in the sustainability of products, “producers can [...] meet consumers’ demands tied to sustainability”.

The findings from our research also suggest that the quality of products has the tendency to improve, given the stringent obligations imposed by international standards. Furthermore, sustainability standards can bring financial and market share gains, improve workers’ and producers’ quality of life, balance gender participation and promote economic growth. However, there are concerning issues that our research has raised, indicating that compliance with a multiplicity of international standards risks marginalizing small-scale producers in developing countries as they do not have the financial capacity to comply.

With UNCTAD’s wealth of information, what do you think is the best way in which standards can promote trade?

Standards are usually used to reduce the negative externalities of transnational production while promoting sustainable development through fostering green growth and trade. Furthermore, they are increasingly popular as a tool for sustainable supply chain management, reputational risk mitigation and the promotion of competitiveness. More and more, leading firms in global value chains adopt sustainability standards.

Evidence shows that standards can act as trade catalysts. This opposes both theoretical and empirical support for the contrary perspective of standards acting as trade barriers. However, what we know is that the impact of standards on trade is conditional – it depends on relevant parameters in the economy. From a trade perspective, the empirical question here concerns the net effect of standards on trade costs. The policy implications that arise are like those pertaining to trade facilitation: identifying measures that can lower the costs associated with the operation of sustainability standards without undermining the realization of the sustainability objectives that motivate their utilization. UNCTAD supports developing countries by recognizing standards as a vehicle for inclusive development to widen their market access opportunities while limiting trade costs or barriers within policy instruments.

What kind of policy support does UNCTAD provide to its members? Why is there a surge in voluntary sustainability standards?

UNCTAD facilitates policy support through two channels: first, by systematically collecting data and information on all regulatory measures (non-tariff measures) at the country level; and second, by helping developing countries build their capacity to leverage sustainability standards to achieve the SDGs.



There has been a rapid proliferation of sustainability certification schemes, or what are now commonly known as voluntary sustainability standards (VSS). The United Nations Forum on Sustainability Standards defines VSS as “standards specifying requirements that producers, traders, manufacturers, retailers or service providers may be asked to meet, relating to a wide range of sustainability metrics, including respect for basic human rights, worker health and safety, environmental impacts, community relations, land-use planning and others”.

The public at large recognizes VSS by the labels and certificates attached to products. The Sustainability Map of the International Trade Centre (ITC), an inventory of VSS, now counts over 240 programmes that are active in a wide range of countries and product fields.

The secretariat of the United Nations Forum on Sustainability Standards (UNFSS) is based at UNCTAD in Geneva. UNFSS is an initiative of five UN agencies : UNCTAD, ITC, the United Nations Industrial Development Organization (UNIDO), the Food and

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Agriculture Organization (FAO), and the United Nations Environment Programme (UNEP). It was created in response to the challenges posed by sustainability standards. It supports decision makers in developing countries to find the right information on sustainability standards as well as share their experiences and receive technical help. UNFSS addresses the sustainable development value of voluntary sustainability standards by pooling resources and synchronizing efforts. Moreover, the Forum assures policy coherence, coordination and collaboration among the five agencies that comprise it. UNFSS helps producers, traders, consumers, standards setters, certification bodies, trade diplomats, non-governmental organizations and researchers to talk to each other, find out more about sustainability standards and influence decision makers at the intergovernmental level.

Through both UNCTAD’s programme on non-tariff measures and UNFSS, the underlying objective is to provide impartial information, analysis and discussions on sustainability standards.

UNCTAD has liaison relationships with several ISO technical committees and subcommittees. What are the other possible areas of collaboration between our two organizations?

UNCTAD and ISO are partners in promoting equitable trade opportunities for sustainable development. Presently, UNCTAD has liaison relationships with eight ISO technical committees on topics such as telecommunications, freight containers, trade facilitation, environmental management and labelling. Complementarily, ISO participates in many of UNCTAD’s expert meetings and conferences, such as UNCTAD’s World Investment week, e-commerce week and during the UNFSS dialogues in China and India. Furthermore, both institutions, together with the World Trade

Organization (WTO), are based in Geneva, thus representing some of the core international trade institutions. Having headquarters just a couple of kilometres apart provides great synergies and opportunities to work together in advancing the trade and sustainable standardization agenda. By working together, we will be able to provide transparency on standards and trade rules, given our parallel values to support developing and least-developed countries striving for economic growth to achieve the SDGs.

Digital disruption looks set to completely reshape trade, and the world as we know it, according to a recent UNCTAD report. What does this mean for developing countries? How can international standards help support this reshaping?

Evidence shows that the digital economy is growing about 32 % faster than the wider economy and creating jobs three times more quickly. At the same time, almost half the world’s population remains unconnected to the Internet. Digitalization is already influencing developing countries’ ability to achieve the SDGs. The challenge is to reduce the gap between under-connected countries and those that already benefit from digitalization by offering innovative and affordable solutions.

Interesting developments on international standards, such as blockchain applications and innovative distributive technologies, have the ability to provide low-cost, reliable options for small and medium-sized enterprises in developing countries to connect to sustainable value chains. Blockchain’s potential uses can bring benefits for global value chains that cross multiple borders and connect developing economies to the global markets on a wide array of sectors, typically agriculture and pharmaceuticals. ■





As smooth as *silk*

by Barnaby Lewis

China's plan to revive and rebrand some of the world's most travelled trade routes as the Belt and Road Initiative has resulted in the largest infrastructure project ever attempted. It's clear that successful construction, management and operation of this 21st-century trade superhighway will depend on hundreds of international standards, but they also have a less obvious role in weaving the intricate tapestry of global trade relationships.

Trade is our best way of creating and sharing value.

In April of this year, the government of China hosted the Second Belt and Road Forum for International Cooperation in Beijing. China's President Xi Jinping, a driving force for the Belt and Road Initiative (BRI) since it was initiated in 2013, welcomed leaders from the many countries that are interconnected by the BRI. Key international organizations, including ISO, were also in attendance.

An overarching theme of the Forum identified the need to enhance the rules, procedures and international standards that provide the foundations of the entire initiative. While the use of international standards is widely understood in terms of product conformity, it was noted that they also serve as a tool for regulators tasked with developing trade policies. Addressing the delegates, ISO President John Walter joined the dots between international standards, global cooperation and smooth trade on the new Silk Road.

“One of the objectives of the BRI is to enable the movement of people and products. People are required to have correct documentation to move freely across jurisdictions. So products must also meet standards imposed on them by both competent authorities as well as demanding consumers.



Keeping the loom of
world trade running
smoothly, and profitably,
is a priority for ISO.

“Whether it’s the way we interact with the physical world, through the extraction and transformation of resources, or the way we interact with each other through trade and communications, ISO standards provide a shared way of advancing together,” he said.

Together or not at all

Like most human interactions, economic value is created at the moment that an exchange takes place. Random thoughts crystallize into ideas when we express them to others; words become conversations; the best ways of doing things become standards; and exchange grows into trade, which is the driver of the post-globalization economy.

One person who can shine some light on the entanglements between standardizers, regulators and business is David Henig, Director of the UK Trade Policy Project at the European Centre for International Political Economy (ECIPE). A leading expert on the development of UK trade policy who is heavily involved in the discussion of standards, conformity assessment and regulatory alignment in trade agreements, he co-founded the UK Trade Forum, which brings together UK trade policy experts to debate, analyse and develop solutions.

What does Henig regard as the role of standards in supporting trade? “We see greater trade where countries agree to use the same standards or regulations,” Henig begins. Pointing to both the complexity of the interactions and the need for further research, he adds that while “this hasn’t been comprehensively studied as yet, the impact seems clear”.

Businesses adopt a similarly practical attitude to standards, though an empirically based case for the multiplying effects of standards on trade will be a welcome output from ISO’s research and innovation department. The unit was recently established to examine the impacts of international standardization on trade and other economic, social and environmental factors. The department hopes to complement anecdotal understandings of standardization impacts with a strong evidence base. Even when it comes to assessing the impact of the BRI on trade so far, reliable figures are hard to come by but it’s clear that the initiative is leading to growth in both imports and exports. For example, in 2017, the import and export volume between China and countries along the BRI reached USD 1440 billion, up 13.4% from 2016 and accounting for 36.2% of China’s total import and export trade.

Like a game of tennis, a structured debate, or even a high-five, such trade cannot happen if we don’t agree to do it



together. (Try it: You’ll end up doing a lot of running and attract perplexed glances.) In all these cases, limits have been set, the rules of the game that allow us to interact effectively. Yes, it can be frustrating to hit a great shot that is just on the wrong side of an “arbitrary” white line, but ignore it, and play breaks down. “Driving effective cooperation is just one of the reasons that China sees standardization as having an essential, strategic position in the Belt and Road Initiative,” Henig points out, a fact explicitly highlighted in the BRI Leading Group’s publication *Action Plan on Belt and Road Standard Connectivity (2018-2020)*.

In addition to bringing further alignment of Chinese standards with international standards and facilitating communication along the entire Belt and Road system, the Plan identifies standardization as the most effective way to promote the interconnection of policies, facilities, trade, funds and public perception.

Barriers and positive associations

Let me address the ultimate question – Do standards present *barriers* to trade? To engineer and build a product that conforms to an accepted level of performance and safety requires more effort, and money, than one that is inconsistent and shoddy. Personally, I’m as comfortable with products that aren’t made using standards as I would be standing on the deck of a pitching ship with no railings.

But perceptions are important. For example, the term “barrier” carries negative connotations in a society that equates freedom with the notion of doing whatever, wherever and whenever we feel like doing it. But when I try and pull a psychiatrist’s trick on myself and list the first things that come to my mind when I say “barriers”, there are only positive associations.

International standards
enable companies to
innovate and compete,
nurturing economies.



Whether it's the Armco crash barrier that reduces head-on motorway collisions, the thigh-crushing bar that stops people falling from roller coasters, or the giant coral reefs so loved by fish and scuba divers, barriers are not all bad. Having established that barriers are desirable in the right places, questions remain: When it comes to something as entangled as trade, who can say where those places are? Importantly, where are the wrong places? Which barriers are cumbersome, unnecessary obstacles, and which help us set the ground rules for a game that, played right, benefits everyone?

Challenging conventions

Henig's work at ECIPE is rooted in the classical tradition of free trade and an open world economic order. He was heavily engaged in the Transatlantic Trade and Investment Partnership (TTIP) throughout the three-and-a-half years of, now stalled, negotiations, working with both sets of negotiators to develop ways forward particularly on regulatory coherence, technical barriers to trade (TBT) and sustainable development.

This provides an opportunity for me to ask him how TTIP and similar deals, such as the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP), relate to infrastructural and investment projects such as the BRI. Do they also rely on standards, for example, or are standards perceived as having a limited role? Are these deals just two sides of the same coin?

"TTIP and TPP [now rebranded as CPTPP] have significant technical differences but exist to achieve similar goals. In both cases, the challenge is to remove barriers to trade, which, in many cases, are forms of protectionism that circumvent low or non-existent tariffs covered by the agreement," Henig says. "While they represent different geopolitical perspectives, they share similar objectives." It stands to reason. After all, they are founded on the common principle that unnecessary barriers to trade should be removed.

The tariff side of things is dealt with in the agreement, and so the focus is on those technical aspects that serve, intentionally or otherwise, as a brake on trade. Henig says: "Mutual recognition of conformity assessments, or use of international standards, or discussions on alignment of regulations, are becoming an increasing part of trade discussions such as TPP and TTIP. As it is with the BRI. While not yet mature as a discipline, it is an encouraging step forward."

He points out that while TTIP and CPTPP relate to Europe and the Pacific Rim respectively, the US is one of the focal points of trade. In both cases, protectionist barriers are to be avoided. It's standards that serve to keep differing national trade priorities from descending into acrimony or outright trade war, a point

that was amply underlined by Ambassador Alan Wolff, one of the Deputy Directors-General of the World Trade Organization, when he spoke at the ISO General Assembly last year.

The BRI is redefining trade relationships. It blurs regional and cultural boundaries in pursuit of a unifying aim, that of putting the infrastructure in place to simply let trade happen. As part of a long-term plan to raise the standard of living in China, the economic perspectives and social objectives are quite different from formalized global agreements, with about 60 partner countries carrying their own expectations to the Initiative. Yet the founding principle, that trade is our best way of creating and sharing value, is universally agreed.

The common thread

One of the discoveries that led to the development of the original silk roads was that the cocoons of the *Bombyx* moth are tightly wound from one of the finest fibres imaginable. Like many of the ancient discoveries, the origins of silk have been embroidered with myth and storytelling. Sitting beneath a mulberry tree and sipping tea, a cocoon falls into Empress Si-Ling Chi's cup, where it begins to unravel in the hot liquid. Instructing one of her attendants to take the end of the thread and to walk until it is entirely straightened, she found herself in open countryside almost a kilometre away before she stopped.

Whilst the story is fanciful, we do know that the discovery of silk led to a period of economic growth for China. Its luxurious products were valued throughout the world and this development stands as a testament to the power of curiosity and innovation. But the route was ultimately responsible for far more than silk. A driving force behind the expansion of the Han Empire, it also brought paper, writing, Buddhist thought and gun powder to new countries. If the main role for government in those days was fending off bandits, at the same time as using the road to achieve their own expansion and conquest, today's leaders see it as a unifying force. The BRI is an opportunity to develop strength in unity – threads that are fragile, taken individually, can be woven into a tissue of extraordinary strength.

Keeping the loom of world trade running smoothly, and profitably, is a priority for ISO. The global economy obeys its own dynamics and is notoriously defiant of pundits' predictions; that's why the ground rules are so important in managing risk. By enabling a degree of stability and setting common expectations, international standards enable companies to innovate and compete, nurturing economies. Henig concludes: "Businesses need the certainty that standards can bring within a complex regulatory framework. This is even more the case if the standards are truly international and can apply across borders." ■



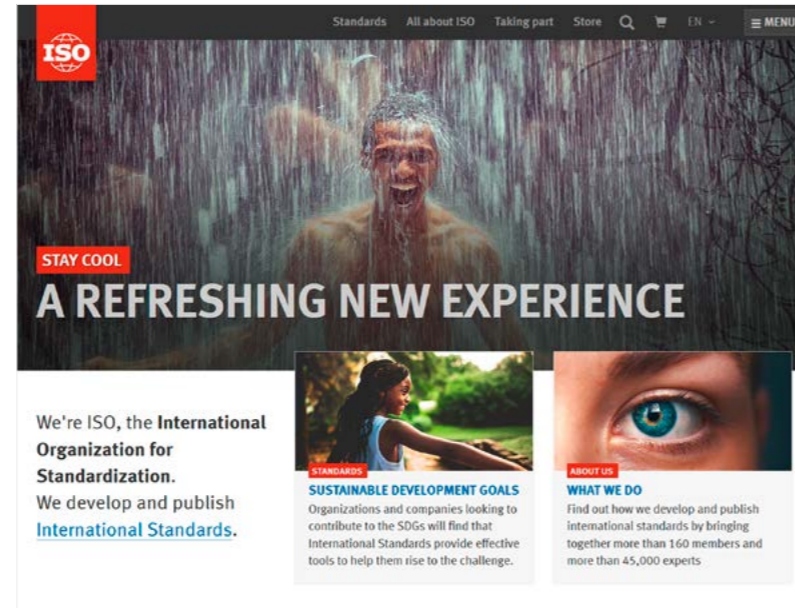
A FRESH NEW LOOK FOR OUR WEBSITE

Driven by changes in technology that influence browsing habits, including the rise of higher-definition screens and wider access to faster networks, we've updated our site, with a focus on improved accessibility and a more dynamic user experience.

Designed and built entirely in-house, ISO's Web team leader, Luigi Principi, says that the number-one priority was improving accessibility.

Lionel Egger, the lead Web designer at ISO, explains some of the changes to the new site: "We've tried to create a clean and uncluttered experience that not only gives our site a contemporary look but presents information in a more intuitive way. To help people with poor or partial sight, we've used colour schemes that make it easier to read."

A glance at the newly refreshed site confirms what Egger says. Multiple shades of grey have been replaced by red and white contrasts, while headings are clearer than before and offer users a way to navigate up to parent-level pages.



We hope you like what you'll find. Browse ISO.org and experience a refreshing new site that brings you the same up-to-the-minute developments in standardization, and easy access to standards that will help your organization work better.

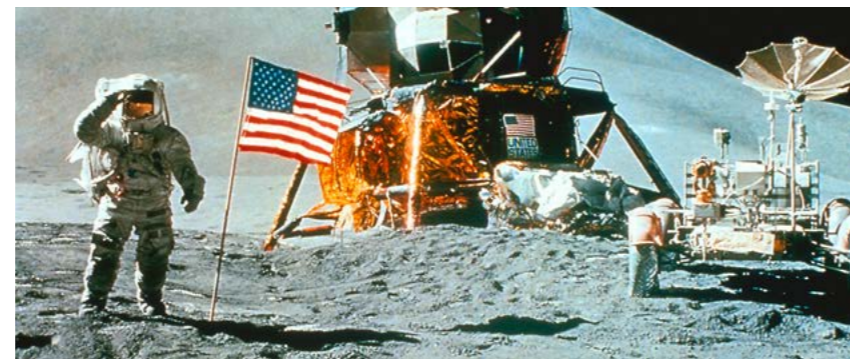
THE FIRST FOR BRAND EVALUATION

A brand can be a company's most valuable asset, yet how do you know what it's really worth? Measuring the value of a brand starts with knowing what, and how, to measure. The world's first international standard for brand evaluation will help, and it's just been published.

No one wants to pay "just for the name" yet branding power means we often do. One of those intangible but valuable things, branding influences the decisions of customers, financial institutions, potential buyers of the business and more.

However, not all measures are monetary and there are many different approaches and methods used around the world, which makes true comparisons and benchmarking somewhat tricky. ISO 20671, *Brand evaluation – Principles and fundamentals*, aims to standardize the technical requirements and evaluation methods involved in brand valuation. It complements ISO 10668, *Brand valuation – Requirements for monetary brand valuation*, which focuses primarily on the financial aspects.

Chair of the ISO technical committee that developed ISO 20671, Dr Bobby Calder, says: "ISO 20671 covers all the factors that influence the success of a brand, such as innovation, tangible resources, service and quality, as well as brand strength and performance. All of which can have an impact on the monetary value, and thus, by measuring them, businesses can more easily identify areas for improvement or investment."



CELEBRATING THE APOLLO 11 MOON MISSION

July 2019 marks the 50th anniversary of the Apollo 11 mission when astronauts Neil Armstrong and Buzz Aldrin became the first people to set foot on the Moon. Half a century later, NASA continues to explore our universe, and standards have played an important role in the safety and success of these efforts every step of the way.

The first human landing on the Moon will also be celebrated during World Space Week 2019, celebrated annually from 4 to 10 October. This year's theme for the Week is "The Moon: Gateway to the Stars" in recognition of the 50th anniversary of the Apollo 11 mission and the importance of the Moon in future space plans. The international event continues to grow in popularity with over 5000 events held in 86 countries last year.

Whatever the next 50 years bring for space exploration, ongoing standardization will contribute and improve spacecraft safety. Efforts are coordinated by ISO technical committee ISO/TC 20, *Aircraft and space vehicles*, which is managed by ANSI, ISO's member for the USA.

RAILWAY TRANSPORT EXPERTS GATHER IN KAZAKHSTAN



Participants of the standardization forum.

More than 30 countries came together in Nur-Sultan¹⁾, Kazakhstan, to discuss a wealth of issues on railway transport at the recently concluded standardization forum.

"The railway industry is responsible for the timely provision of internal and external transport and logistics links," said Arman Shakkaliyev, Chairman of the Committee of Technical Regulation and Metrology of the Ministry of Industry and Infrastructure Development of Kazakhstan (KAZMEMST), in his welcome speech. In this regard, he said, the development of standards at the international level is a key priority.

The forum was attended by experts from ISO technical committee ISO/TC 269, *Railway applications*, representatives of the International Union of Railways, the Organization for Cooperation of Railways (OSJD), the Russian Federal Agency on Technical Regulation and Metrology (ROSSTANDART), the Association of European Rail Industry (UNIFE); ITC 524, *Railway transport*, and the KAZMEMST.

The forum was preceded by the meetings of ISO technical committee ISO/TC 269 as well as the technical committee of the regional organization for standardization Interstate Council for Standardization, Metrology and Certification of the CIS (ITC 524, *Railway transport*) of Eurasian States.

1) Nur-Sultan, the capital of Kazakhstan, was previously referred to as Astana.

MATTERS OF MILK

In June, more than 130 delegates from 22 countries attended the 2019 IDF/ISO Analytical Week, an important event in the calendar for those working the field of dairy products analysis. Progress was made on a wide range of topics, including eight new, or revised, IDF/ISO standards to be published in the next 12 months. These include standards for the determination of sugars in dairy products, the validation process for the rapid detection of antibiotics in fresh milk, and a checklist that will assist end users in dairies and milk collection centres to ensure milk quality and safety.



Standardized methods of analysis facilitate the production and trade of safe, high-quality dairy products. They allow the sharing and comparison of results through the voluntary cooperation of all parts of the dairy chain: industry, authorities, researchers and manufacturers. In addition, standards are used to assess compliance to national or international regulations as well as being widely applied for routine examination and control purposes.

Through ISO/TC 34/SC 5, *Milk and milk products*, ISO and IDF's involvement in this meeting demonstrates a continued commitment to establishing standards for food safety, quality and composition of milk and dairy products. These are essential in facilitating trade, and fostering understanding and trust in the international dairy sector. Next year's IDF/ISO Analytical Week will be held in Beijing, China, on 6-9 April 2020.



Prof. Engineer Henryk Zobel (left) and PKN President Tomasz Schweitzer.

POLAND PUTS SPOTLIGHT ON INDUSTRY 4.0

The role of standards in the development of Industry 4.0 was the focus of a recent conference held by the Polish Committee for Standardization (PKN). The event was part of Polish Standardization Day celebrations that took place on 22 May at the Banker's Club in Warsaw.

"Standards are essential tools for innovation and disseminating knowledge," said PKN President Tomasz Schweitzer, stressing their importance in shaping Industry 4.0. They help build a global market of secure, energy-efficient, interoperable devices and enable the Internet of Things (IoT).

Speakers covered topics including system tools for business support, aspects related to the role of standards in the development of new technologies and their security, practical applications of Industry 4.0 solutions, as well as cybersecurity issues and IoT. The conference also recognized the winners of the Standardization Compass Award. This year, the award was presented to Prof. Engineer Henryk Zobel, and the National Association of Dairy Cooperatives – Revisory Association, who were recognized for their involvement in the promotion and development of the standardization system.

