



## Vladislav Pavlát

University of Finance and Administration  
Prague, Czech Republic  
Institute of Finance  
vladislav.pavlat@vsfs.cz

# THE PRESENT STATE AND POTENTIAL FUTURE OF INTERNATIONAL STANDARDISATION

**Summary:** The paper deals with the globalisation and internationalisation effect on international standardisation. The findings based on an analysis of academic literature and available government and standard-setters' documents prove firstly the growing importance of standardisation for international stability, and secondly the growing international standard-setters' co-operation on the field of standardisation. Due to their mutual trust, the standards' quality has been significantly upgraded. As a result of research, a preliminary long-term outlook of standardisation was elaborated.

**Keywords:** international standardisation, globalisation, impact of globalisation on standardisation.

**JEL Classification:** F6, F19, F69, L15, L29.

## Introduction and theoretical assumptions

The purpose of this paper is to analyse general trends of relations between globalisation and international standardisation after the last world economic and financial crisis. The primary objective of the research was the modification of standardisation under the influence of internationalisation and globalisation. The paper was designed as a research and argumentative study based on an analysis of academic literature and available government and standard-setters' documents. These documents reflect discussions, contradictions, barriers and limits to further international co-operation. My analysis is based on a hypothesis that in the long run, international standards development will be going on more slowly (due to the partial de-globalisation), but for the next 5-10 years, the implementation of big projects such as Transatlantic Trade and Investment Partnership

[TTIP, 2017] or some of the EU projects, etc.) will be probably difficult. The implementation of partial steps in the field of technical, organisational and financial standards will be most likely possible, but this is not sure because of current imminent dangers (Islamic state, Syrian war, North Korea militarism, etc.). The research objective does not include legislative aspects of standardisation, harmonisation of standardisation in the EU and does not deal with standardisation at national level; a feed-back impact of standardisation on economic globalisation is not explicitly dealt with. Paper was not designed as a comprehensive study. Findings cannot be applied to other disciplines without further research. The paper could be used as a base for further academic discussions on the changing role of standardisation under the conditions of the emerging digital economy.

### ***Survey of literature***

The survey starts with information on the history of standardisation described in a paper by A. Russell [2017]. As for standards definition, only the selected sources from numerous sources are recommended [e.g. The Cambridge Dictionary, 2017]. As for types of standards, it is important to distinguish technical standards from organisational standards (Analytic Quality Glossary, 2017), and service industry standards [ISO Strategy for Services, 2016, p. 2], which include services for financial markets' infrastructure – for example: accounting standards [Investopedia, 2018], reporting standards [IFRS, 2017], etc. An ISO definition of services highlights the relation of servicing industries to financial markets infrastructure [ISO/IEC Guide 76:2008], and explains the interconnectiveness of both categories. A new list of international standard-setters has been recently published by Financial Stability Board [FSB, 2017]. For unknown reasons, International Organisation for Standardization [www 1], was not included into the list of 14 leading international standard-setters. A comprehensive list of ISO-standards was published in 2015 [International Classification for Standards, 2015]. For one of the comprehensive approaches to the questions of standardisation and its classification see Jakobs [1999]. Mutual relations between globalisation and standardisation were analysed by Purcell and Kushnier [2016]. Economic and political theory of standards is dealt with by Swinnen et al. [2015].

### ***Methodology***

Description was used as a starting-point to highlight the role played by standardisation in the world economy. The selection of discussed specific questions was based on their relevance from the point of view of standard-setters' fu-

ture standardisation policy. A limited number of factors (up to 20) relevant for a comparative analysis of potential standardisation modifications have been selected and discussed. An outlook for standardisation development is based on an analysis to what extent the long-term upward trend of standardisation will be most probably modified through technical, economic, social and political globalisation and the nature of expected implications. My hypothesis (see above) expects a slower speed of international standardisation.

## **1. Findings**

### ***The approach to standards and standardisation***

Since the 1990s, when the basic theory of standardisation was already elaborated, a new approach to the international standardisation and standards has been emerging. There are the following characteristic features of the new approach: (1) the preference for a dynamic concept of the international standardisation; (2) a general recognition of the ‘universal’ significance of standardisation (understood as a dynamic process) as a powerful method bringing benefits to entrepreneurs; (3) a broad scope of standardisation application in a growing number of industrial branches (industry 3.0); (4) an application of standards in the services; (5) the birth of new standards’ types and attempts of new standards’ classification.

### ***Number of standards***

Theoretically, the growth of the number of internationally traded products is supposed to be accompanied by a higher number of international standards than it would correspond to the number of technological standards because the export of every specific product is accompanied with the necessity to develop many non-technological standards as well. On an international standards’ level, no credible comprehensive statistics are available. A mechanical addition of different standards types is, of course, excluded. In case individual international standards-setters’ lists of existing standards were available, making a rough estimate would be possible; however, reliable branch-wise reliable statistics practically do not exist.

### ***Standards quality and standard-setting complexity***

Generally speaking, it is possible to describe the mechanism of standards-setting as a logical chain of important ‘events’ which are causally interconnected.

Under conditions of market economy based on the principle of private ownership, competition of economic entities (intermediated by demand and supply market mechanism) and the principle of profit maximisation, at a certain stage of development it is possible to use the results of a relatively independent process of innovations. New products, services and technologies appear on the market. The ‘event’ number one, i.e. the competition of economic entities, leads to the ‘event’ number two, i.e. to the introduction of innovations. At this moment, conditions for the third ‘event’, i.e. the necessity to set up standards (technical standards) arises. In a dynamic economy, the described chain is closed, but it will be repeated again and again as an upward (spiral) movement, until some barrier or limit of growth appears.

The above-mentioned reasoning implies that the second ‘event’ is an integral part of the whole ‘circle’. However, at the same time, standard-setting – as a relatively independent activity – has its own stages, forms, principles and rules which were elaborated during the historical development of standardisation.

According to the relevant literature [www 2], the process of standardisation (standards development) basically consists of a number of stages (3-4 stages). The first stage is a preparative stage, during which material, technical and technological information, information on ownership of the object, service, activity, etc. which has to be standardised is collected, and a standard draft version is compiled by a group composed of professionals of different professions which were approved by the given standard-setter; in the second stage, a standard draft version presentation is presented to the interested potential users and/or beneficiaries (to members or stakeholders of the standard-setting organisation, to other international standard-setters, to governments or governments’ groups, sometimes to the interested public, etc.) who are asked for comments. During the third stage, comments are studied by an expert committee (nominated by the given standard-setter) and a final draft prepared for approval. Normally, all comments are published by the expert committee to guarantee a transparent course of this stage. The fourth stage, decisive for the given standards’ validity, timing, quality, etc., is the process of approving and final approval. The fourth stage is the process of standards’ official publication and dissemination. The description of the international standard-setting process (characterised in a simplified version) corresponds to the ‘best practice’ procedures actually recognised by majority of standard-setters.

However, the process of standards development is only one part of the role of international standard-setters: they are further responsible for explication, compliance, maintenance, re-issue, modification of approved international standards and development of new standards.

According to ISO experience – “From first proposal to final publication, developing a standard usually takes about 3 years” [www 2].

### ***Types of standards***

The standardisation literature offers many possible classifications of standards which have different purpose, are based on different criteria and are prepared by means of different methods. This is the main reason why it is not useful to invent any universal classifications.

### ***The number of international standard-setters***

There are many international organisations which develop and publish international standards and are recognised as standard-setters. The number of these organisations is permanently changing; no reliable data about their number is available. The leading group of international standard consists of some 30-50 important subjects. The three largest and recognised non-governmental organisations are the International Organization for Standardisation (1947), the International Electrotechnical Commission (1906) and International Telecommunication Union (1865), followed by a number of independent standard-setters (such as, e.g. the Universal Postal Union, ASME, the ASTM International, the IEEE, the World Wide Web Consortium, SAE International, the Internet Engineering Task Force, Tappi). A list of the most important international standard-setters was published by the Financial Stability Board [FSB, 2017].

One of the most important standard-setting organisations is the International Standards Organization – ISO, an independent, non-governmental international organisation with a membership of 163 international bodies. Its role consists (through its members) in bringing together experts “to share knowledge and develop voluntary, consensus-base, market relevant International Standards that support innovation and provide solutions to global challenges” [www 1]. It has to be stressed that the activities of ISO are based on a voluntary information exchange and multilateral co-operation. ISO published 21,716 International Standards [www 3].

**Table 1.** International standards characteristics and a long-term outlook

No.	Criteria	Standards characteristics	Outlook
1	Approach to standards and standardisation	significantly modified	more flexible
2	Number of standards	permanently growing	growing and more specialised
3	Standards quality	significantly upgraded	continued
4	Standards complexity	permanently growing	continued
5	Types of Standards	growing variety	unification tendency
6	Standards development methods	upgraded	more complex
7	Standards dissemination	satisfactory	new methods; new communication channels
8	Standards monitoring	stricten	continued
9	Compliance	stricten	continued
10	Sanctions	limited use	frequent use
11	Marketing	developing	more sophisticated digital marketing
12	Number of standard-setters (S/S)	growing and diversifying	unification tendency
13	Mutual Relations of (S/S)	not satisfactory	improving
14	Role of S/S in FMI	growing	continued
15	Financial Reporting Standards	substantially upgraded	continued
16	Accountancy Standards and Reporting	modified	further modification
17	Auditing Standards	relatively stable	improving
18	Cost of Standards	significantly growing	continued

## 2. Discussion of selected specific questions

The level of members' co-operation within individual international organisations and mutual co-operation among international organisations primarily depends on the process of economic globalisation.

Many unsolved questions are the main reason why potential barriers and limits of standardisation actually exist. They are still discussed, and there is a hope that practical way of their solution will be found [Pavlát, Kubíček, 2010, p. 75].

Let me comment on five frequently discussed typical topical questions.

- 1) The capacity of standards-setters is lagging behind the needs of standardisation caused by the rapid growth of information techniques and technologies. The standard-setting process is difficult, and a speed-up by means of a radical change of habitual procedures is risky. In addition, the impact of technological changes is irregular and different in different industrial branches. In other words, the lagging elements of the financial market infrastructures' system (which are interconnected), create barriers to others elements' growth. A striking example is a rather chaotic (unregulated) growth of multi-functionality of certain financial services (for example, within the payments system).

- 2) The term ‘globalisation’ and the slogan ‘think globally, act locally’ is a very popular concentrated expression for the supposed ‘best practice’ of the international standardisation. However, under a deeper examination, it is not as clear as it seems to be: firstly, a ‘global thinking’ is an indefinite way of thinking (everybody understands it in his own way and is trying to impose its own explanation on the other people); secondly, economic entities operating on the territory of a foreign state are able to ‘act locally’, if the central authorities of the given state allow them to act in the way they intend to act; foreign economic entities have to apply for licenses (because most economic and other activities are licensed), the result of their applications is uncertain. If, e.g. an industrial product or a service does not correspond to the ‘domestic’, i.e. local standards, then the foreign subject will have to adapt its product to local standards. There are numerous examples to be found globally (e.g. McDonald’s adapted menu choices in the Middle East and Far East countries). This, of course, does not comply with the concept of a world-wide standardisation. Thirdly, there is a question whether a national ISO standard-setter should be selected or nominated (by whom?) or should a free competition of different market entities decide? In different countries, pragmatic solutions prevail.
- 3) There is a very difficult question of standards interpretation which is closely connected with the standards translation to member countries languages. The ISO standards are the result of a broad and long discussion between ISO members which are supposed to present the common view of their national members. As soon as a common consensus of ISO-members is accepted by relevant ISO-bodies, the relevant Standard, approved by ISO, is expected to be applied by all entities (‘united’ by the national ISO-member aegide) operating in all ISO-members countries.

However, this only seems to be simple as that. One can imagine situations in which a state, where some foreign entities operate, does not accept a ‘standard’, or a situation when such a state refuses to respect ISO-standards and sticks to its own system.

ISO is authorised (by its rules) to issue binding explanation, however, it cannot be expected that all state authorities will be willing to take these explanation as binding. If a state accepts any standards to become a base for a law (or another rule), the situation is more favourable because some sanctions will be fixed for breaching the law. But again, the standards’ explanation is another field where globalisation is trying to take the lead and reduce the state sovereignty.

The quality of standards translations to other languages is another question which is permanently ‘on the table’. It is a similar problem as the conservation of ‘old’ fonts, metrics (weights, etc.) or traditional titles of money. This question could be analysed from different aspects, and possible reasons of such state which does not want to change anything, are understandable. However, such attitudes are contradictory and contra-productive for many states because globalisation expects that all countries will be interested (in a long-time horizon) to accept the English and Latin fonts – as a world-wide business language. Many states (especially the small states with an open economy) respect the existing globalisation trend on this field.

The Standards explication (ISO-Standards, etc.) is closely connected with standards translation into many languages which is very difficult and costly. Let me take an example from the Czech Republic (CR): as for a majority of Standards (of whatever standards’ type), it is almost certain that ‘somebody’ is ready (for business reasons) to present his own translation as soon as possible to be the first one on the market, at the cost of quality. Such dubious translations (called ‘calque’) cannot be authorised by anybody, and – in fact – in the CR this situation have not been solved yet. And the result: uncertainty of business relations based on unauthorised translations gives way to unnecessary trials. The way out of this is either to risk an arbitrage, or to agree to a certain language to be obligatory used (in a given business agreement) by both partners.

- 4) In literature, there are different standards’ classifications. Every standard-setter has an inherent interest to present its own classification which is used in its business practice. For example, the ISO classification construction differs from IFRS classification methodology. In my opinion, for educational use another classification could be used. It could be based on a multi-criterial approach.
- 5) International standards’ universality has been an evergreen of discussions in the 20<sup>th</sup> century. Now, because the globalisation trend seems to continue (in spite of Brexit and some other events), standards’ universality is still a long-term target.

This is – i.a. – reflected in theoretical and/or practical attempts to integrate the different forms of reporting in one comprehensive system. Evidently, this is a process which cannot be started when necessary preconditions for its success do not exist. One of such preconditions is, for example, to find ways of a better co-existence of the two accounting systems because any unification under the current political situation in the world would probably fail.

In the field of standardisation, a world-wide standardisation based on feasible business solutions and pragmatic compromises should be preferred to the integration-like imposed concepts of ‘universality’. This does not include partial modifications. Let me illustrate it on the example of corporations reporting obligations. The scope of Annual reports of certain groups of economic entities is expanding to such an extent that the full text of many reports – instead of supporting the transparency – has hundreds of pages so that these reports simply lose their credibility. The habitual ARs content is flooded by reports which could be easily integrated or simply left out.

## **Conclusions**

Under the condition that in the long-term horizon the economic globalisation will continue, a slower pace of international standardisation is expected. For the time being, this view is supported by Brexit, by the interruption of TTIP negotiations, etc., and by the unstable international political situation (the case of the North Korea, terrorism, uncontrolled migration, etc.).

My partial analysis, based on 18 characteristics of international standards, shows that for seven items a continuation of the present trends is expected. For 11 items, substantial changes are already starting. They are mainly based on digital technologies. Their impact will include, for example, new techniques a methodology of standard-setting, more flexibility on standard setting, dissemination and marketing, and a better co-ordination of involved bodies’ activities. All this would help to the rational international standards’ implementation.

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## STAN OBECNY I POTENCJALNA PRZYSZŁOŚĆ STANDARYZACJI MIĘDZYNARODOWEJ

**Streszczenie:** Artykuł dotyczy wpływu globalizacji i internacjonalizacji na międzynarodową normalizację. Ustalenia oparte na analizie literatury naukowej oraz dostępnych dokumentach rządowych i ustanawiających standardy dowodzą, po pierwsze, rosnącego znaczenia standaryzacji dla stabilności międzynarodowej, a po drugie, coraz większej współpracy międzynarodowych organizacji standaryzacyjnych w zakresie standaryzacji. Dzięki wzajemnemu zaufaniu jakość standardów została znacznie ulepszona. W wyniku badań opracowano wstępne długoterminowe perspektywy standaryzacji.

**Słowa kluczowe:** międzynarodowa standaryzacja, globalizacja, wpływ globalizacji na standaryzację.