



# Faking ISO 9001 in China: An exploratory study



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## KEYWORDS

ISO 9001;  
Quality management system;  
Third-party certification;  
Fake certification;  
Business regulations in China

**Abstract** Over 1.5 million ISO 9001 certificates are in effect worldwide, 30 years after this quality management standard was launched. As the factory of the world, China is by far the leading country for ISO 9001, in terms of both absolute and relative numbers and growth. Nevertheless, practitioners have cast doubts on the reliability of adopting ISO third-party quality certification in this country. In-depth interviews with 40 senior quality managers, consultants, and auditors with broad field experience and other complementary methods paints a disturbing picture. The widespread prevalence of fake ISO 9001 certificates is indicated, together with an eroded credibility of the process of third-party certification. We discuss the profound implications of the study—including whether or not the phenomenon is restricted to China—and introduce suggestions for managers and other stakeholders, as well as avenues for further research.

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## 1. ISO 9001 and China

In its 30<sup>th</sup> year, the process of global dissemination of the ISO 9001 standard appears to be a success story, with at least 1,519,952 certificates in force at

companies from more than 150 countries (ISO, 2016). From the scholarly perspective, the process has been seen as rather rigorous, monolithic, and uniform despite a number of works that have been more critical and pointed to a shadowy side to the process (e.g., Boiral, 2003, 2011; Heras-Saizarbitoria & Boiral, 2015; Walgenbach, 2007). But practitioners in the field have voiced criticisms of the reliability of ISO 9001 certification from its inception (e.g., Avery, 1994; Seddon, 1997).

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The diffusion of ISO standards in countries such as the People's Republic of China (hereafter, China) is particularly striking. By December 2015, close to 300,000 ISO 9001 certificates were in force in that country (ISO, 2016). China is by far the leading country for ISO 9001 in absolute numbers (ISO, 2016) and relative to GDP (Heras-Saizarbitoria & Boiral, 2015). The number of ISO 9001 registrations have doubled or tripled each year since 1997 (Heras-Saizarbitoria & Boiral, 2013). Despite this huge growth—in part due to government policy, as the Chinese Government has seen the voluntary adoption of certification standards as an important tool of regulatory policy (Minard, 2016)—there has been a corresponding rise in suspicions on the part of many practitioners. Evidence and published articles in the practitioner field cast serious doubt on the rigor and strictness of requirements for ISO certification in China. Among many other issues, the validity and the value of ISO 9001 certificates (e.g., Haft, 2015; Slater, 2015), the prevalence of fake ISO certificates (e.g., Paris, 2013; Slater, 2015), and the ready availability of “real but undeserved” certificates (Anjoran, 2015) have been highlighted. But there has been very little structured discussion on the characteristics and implications of the problem, and almost nothing is known about the extent of the phenomenon.

The otherwise fertile scholarly field analyzing the adoption of ISO 9001<sup>1</sup> has ignored this issue and this problem remains unexplored. This article aims to shed light on the reliability of ISO 9001 certificates in China and, more specifically, discuss the phenomenon of fake ISO 9001 certificates in and beyond China by offering suggestions for managers and other stakeholders.

## 2. Fake ISO certificates

ISO 9001 represents a sort of organizational degree, recognized internationally, whose development is driven by institutional and commercial pressures rather than internal needs (Boiral, 2011). The process is intended to increase trust in and legitimation of a quality management system (QMS) and produces a certificate issued by an accredited certification body with the appearance of rigor and strict requirements. It is analogous to the acquisition of an academic degree, which confers social legitimacy and acts as a signal in the labor market (Spence,

1973, 2002). A third-party ISO 9001 certificate working as an organizational degree sends a signal of supposed superior organizational capabilities in markets of goods and services—capabilities that are generally not directly observable by stakeholders due to the opacity of internal practices (Potoski & Prakash, 2009; Terlaak & King, 2006). This type of organizational degree is especially useful in global supply chains in which information asymmetries and lack of knowledge among customers and suppliers are prominent (Uzumeri, 1997).

Just like the occurrence of fake educational degrees (e.g., Ezell & Bear, 2005; Mohamedbhai, 2016), there are fake ISO certificates. There has been reliable evidence that points in that direction, even though the literature has avoided this issue.<sup>2</sup> Practitioners (e.g., Boudreaux, 2010; Haft, 2015; Paris, 2013; Slater, 2015), on the other hand, have been concerned with fake certificates, including in areas such as China where rapid growth in ISO certifications has aroused suspicion among many practitioners. A wide and diverse set of references provides evidence that practitioners are suspicious about the rigor and strictness of ISO 9001 requirements in China. The validity and the value of ISO 9001 certificates (e.g., Boudreaux, 2010; Slater, 2015), the lack of rigor of external audits (e.g., Haft, 2015), the widespread use of fake ISO certificates (e.g., Anjoran, 2015; Paris, 2013; Slater, 2015), and the issue of accreditation mills (BNP Media Staff, 2008; i.e., accreditation bodies that are not legitimate) have all been emphasized.

## 3. Interviews and findings

Referencing and snowball sampling (Miles & Huberman, 1994) were used to define a sample of experienced quality managers, consultants, and auditors who had worked or were working in China and/or with Chinese suppliers. In total, we conducted 40 semi-structured, in-depth interviews between September 2014 and January 2016 with senior quality managers, consultants, and auditors operating and/or living in China (see Table 1). This phase of data collection was stopped at the point of saturation (Eisenhardt, 1989).

The following section summarizes the main results of the study and introduces illustrative quotes that are representative of the respondents' statements.

<sup>1</sup> For a review, see Heras-Saizarbitoria and Boiral (2015).

<sup>2</sup> For a review, see Heras-Saizarbitoria and Boiral (2015).

Table 1. Profile of the interviewees

Number	Role	Profile (interviewee identification codes; number)
6	Chinese Quality Manager	Senior managers of ISO 9001 certified firms (6)
4	Chinese ISO 9001 consultant	Employee of a local firm (2); Employee of an international firm (1); Freelance for an international firm (1)
3	Chinese ISO 9001 auditor	Employee of a Chinese certification body (1); Freelance for certification bodies (2)
5	Expatriate ISO 9001 consultant	Employee of an international firm (3); Freelance for different firms (2)
2	Expatriate ISO 9001 auditor	Permanent employee of international certification body (1); Freelance for different certification bodies (1)
6	International ISO 9001 consultant	Employee of an international firm (2); Freelance for different firms (2); self-employed (2)
6	Expatriate Quality Manager	Senior managers of ISO 9001 certified firms (6)
8	Quality Manager operating with Chinese companies	Senior managers of ISO 9001 certified firms (8)

### 3.1. Diverse phenomena of fake ISO 9001 certificates

Fake ISO 9001 certificates is a widespread problem in China; there was general agreement on the motivation for this phenomenon. First, China's culture does not view counterfeiting with the same level of contempt as other cultures (Hung, 2003). Second, government agencies see this type of certification as a passport to international trade and a way to project an image that the manufacturing industries are cutting edge, world class, etc., so they inappropriately participate in the proliferation of fake certificates. Indeed, many of the respondents saw this type of fraud as relevant but much less harmful than other related frauds: "What is far more common, and much worse, is the occurrence of fake product certificates and test reports."

Based on the qualitative information obtained in interviews and other exchanges with respondents, we detect the following types of fraudulent ISO certificates:

- **Type 1: Counterfeit ISO 9001.** This is a counterfeit ISO certificate, also referred to as a photo-shopped certificate and/or a pirate certification. It is a copy of a real certificate with the name of the company (and frequently the registration number) altered. This may be self-issued or issued by a third party. This group might be further subdivided, depending on whether the firm is aware of the fraud or not.
- **Type 2: Unaccredited ISO 9001.** This type of certificate is issued by a nonaccredited certification body, also referred to as a *certification*

*mill*. For a minority of respondents (two interviewed international consultants), unaccredited ISO 9001 is not necessarily fake certification because accreditation is not considered to be mandatory.

- **Type 3: Paper-worked ISO 9001.** This type of fake certification may appear to be legitimate as it is issued by an accredited certification body following the production of only basic paperwork, which may entail a general, copy-and-paste QMS. The QMS may be very elementary (e.g., just a quality handbook and some general procedures) with no direct reference to specific working instructions of the company. An extreme version of this type of certification would be a certificate issued in a very short period of time (e.g., overnight certifications) with no documentation for the QMS.
- **Type 4: Implemented-but-not-in-use ISO 9001.** This certification entails a more developed QMS prepared ad hoc by a consulting—and, in many cases, auditing—company, but not internalized at all. This type of certification requires the maintenance of a set of structured, fake documentation, such as fake records to be presented in the external audits of surveillance and recertification, which represent a "façade of paperwork" in the words of an expatriate quality manager working with Chinese companies.

Type 1 certification is widespread: "Get the paper is a common mindset in China." Nevertheless, in the view of many of the interviewees (around 70%), this type of fraudulent certification is not the majority, since a company can pay a little money and obtain

Type 2 certification with ease, or even Type 3 issued by a legally accredited Chinese body: “As registers are so lax, it is so easy to get a pass that factories are prone to pay a little bit more and get a legal certificate.” As pointed out by Anjoran (2015), companies prefer a “real but undeserved” certificate: “It is so easy to get [ISO 9001] that it is very rare to find a photoshopped one.” As explained in Section 3.3, most of those interviewed thought that Type 2 certification is a deep problem for China.

Type 3 is probably the most widespread type of fraud. Most of the respondents see this type as a fraudulent organizational degree—a commodity. Type 3 is frequently compared to other fake degrees (e.g., university degrees) and licenses (e.g., driving license) that can be bought for money in China. This is in line with the comment by Haft (2015) that asserted that factories can secure certification in China “by abiding by ISO standards on paper but not in practice” (Haft, 2015, p. 114). Although it is difficult to talk about the price of these fake certificates, some interviewees did mention this aspect: “I myself have been offered an ISO [9001 certification] for an equivalent of 6,000 euros.” Most of the respondents agreed that in more recent years it has become easier and faster to get any type of fake ISO 9001 certificate: “In China it is now easier to get this certificate than a long time ago—faster and easier.”

The interviewees also thought that Type 4 is widespread as it is in many other areas if not around the globe. Type 3 and Type 4 seem to be related to the commodification of ISO certificates analogous to the degree purchasing syndrome in education; companies buy an organizational degree (Boiral, 2011).

It has to be underlined that a minority of the interviewees gave a different definition—and as a result, a different typology—of fake ISO 9001 certifications. It was a laxer one as they just differentiated between fake certifications (similar to Type 1 or counterfeit ISO 9001), and certifications that are not fake in their view but were not issued under a structure of credibility (i.e., certificates issued by a certification body not signatory of the IAF MLA).

### 3.2. Unreliability of ISO 9001 audits

The issue of the unreliability of the external audit practice was underlined during the interviews. A critical and worrying picture of ISO 9001 audits was drawn by the respondents. Close to 90% of the interviewees referred to the lax requirements for audits of the design and implementation of QMSs in China. Expatriate ISO 9001 consultants and auditors, international ISO 9001 consultants, and expatriate quality managers and quality managers

working with Chinese companies were the interviewees who addressed this question most. One of the most frequently mentioned features was the comparatively lax procedure for auditing ISO 9001 in China:

In China if you pass the certification at least you need the first level [referring to the first level of documentation for a QMS (i.e., the quality handbook)] and the second level [i.e. the procedure handbook]. And for the third [i.e. working instructions and other related documents] it depends on the team that makes the audit.

Another very frequently mentioned issue was related to the audits of surveillance and/or renewal or recertification of ISO 9001. For most respondents (around 70%), audits might be carried out with no visit to the company, particularly in the case of Type 3 fake certification: “They [the auditors and as a result the certification bodies] update certificates without any kind of visit”; “QMS auditing staff only do some paperwork”; “The first time checking [initial audit], we were required to do according to the requirements. When rechecking [renewal], they directly checked records, instead of going into the factory.”

The interviewees and some other evidence indicated that there were multiple ways to fail to implement the regulations, especially when auditing and consulting were not separated:

First, they help you to implement the [Quality Management] System, then they do the audit in the same company, so who makes the implementation and who makes the audit are the same company and they are flexible. They know which points are important for the audit and which not.

As a result of this superficial approach, ISO 9001 certification may be rapidly obtained in China. Overnight certification is available for Types 1 and 2 fake certifications, and in some extreme cases the fieldwork suggests even for Type 3. Nevertheless, Type 3 and Type 4 certification usually takes longer, although much shorter than the periods described in the literature. Although some interviewees and other sources stated that a set of legally established certified bodies offered certification in 7 to 10 days, most put the timescale at about 3 months or less: “In 3 months, and even faster, they can have the certification ( . . . ) 1 month is too fast.” As pointed out by an expatriate manager: “Here you can get it [ISO 9001] much faster, even in 3 months. That certification is not real, because it is not related at all to the situation of your factory.”

The mean time to implement and certify ISO 9001 is 12–18 months (e.g., Heras-Saizarbitoria &

Boiral, 2015). Very few companies got certification in 6 months or less, and in those cases the company was in pretty good shape, and “a period of 3 months is just maybe possibly feasible in theory. Such a case only happens rarely” (Ardianto, 2013, p. 14). Nevertheless, this is not the case in China as it happens more often than ‘rarely.’ A report by UNIDO (2015) showed that nearly 34% of the organizations said they took 4 to 6 months from starting to implement their QMS to becoming certified and 7% of the organizations said they got it in less than 3 months after their decision to begin implementing the standard, but this percentage was close to 12% for the firms that obtained certification in the last 3 years. Due to this issue, the report recommended that the certified bodies might “pay special attention to the audit of organizations that claim to have implemented their system in 3 months or less” (UNIDO, 2015, p. 27).

### 3.3. Mistrust of ISO 9001 certification and accreditation bodies

As with the other concerns, the evidence points to a clear mistrust of ISO 9001 certification and accreditation bodies. Certification bodies can be divided into two classes. More than 90 certification bodies operate in China, many of them part of large multinational groups (e.g., LRQA China Shanghai or Beijing BSI), which, in the opinion of the interviewees, are first class and are more trusted: “If the [ISO 9001] certification is issued by one of the top bodies it gives me some faith.”

Nevertheless, for many other international bodies, the relationship with the parent company is quite confusing. As it was underlined by an expatriated: “Here in China it is very difficult, if not impossible, due to generally muddied aspects of the business environment, to verify the supposed link of a certification body.” According to six respondents, it is important to note that there is no centralized database of certificates, nor a clear database of official certification bodies. Desk-based research also showed that direct information sources provided on the internet by the Chinese accreditation body about accredited certification bodies did not work either. As many of the interviewees mentioned, companies that want to check the reliability of a certificate face great difficulties:

In theory, it is easy to call the registrar and ask if a certain company is certified. But in practice, it is not easy at all, as the business environment here is very opaque ( . . . ) Due to a general lack of trust of certified bodies, it is not

feasible to check if a [ISO 9001] certificate is real or fake.

The implications for certified bodies affiliated with international bodies was also reported in the interviews. One senior international consultant recalled being on the advisory board of a certification body. They opened an office in China and within a few weeks of operation “the Chinese office submitted some 700 certificates for approval by the U.S. office.” The U.S. office realized these were fake certificates, so they shut down the Chinese office and reported them. One respondent said: “But this is because they did the right thing, and did not cheat. It is unknown how many registrars would not report the incident and merely keep the money.” This type of certified body is referred to as a *certification mill*. They may be properly accredited (i.e., accredited by CNAS) or not. The latter issue is Type 2 fake ISO 9001 certificates. The extent of this problem was not clear to the interviewees, who were a set of senior international consultants and auditors, since ISO has no clear requirements for a certification body to be accredited. This type of certification should be considered dubious certification, as certificates are issued by dubious bodies. This type of certification might also be considered fake if the standard appears to be an empty shell completely disconnected from internal practices. One interviewee explained: “Basically, the dubious certification bodies sell off the shelf quality systems complete with a certificate. When I audit the factories they have very little knowledge of ISO 9001 or their supposed quality documentation.”

The phenomenon of accreditation mills in China was also indicated in the field work. As several interviewees remarked, the ISO has no requirements for a certification body to be accredited. The ISO website states that: “In most countries, accreditation is a choice, not an obligation and the fact that a certification body is not accredited does not, by itself, mean that it is not a reputable organization” (Hales & Gooch, 2004, p. 219). However, many companies feel more comfortable with suppliers who present certificates issued by an accredited certification body (something that is mandatory for both AS9100 and IATF/TS16949 certification). But, as one of the interviewees noted: “The waters get even muddier when some registers [i.e. certification bodies] have accreditation but it is not from an accrediting body recognized by the IAF.”

In China, the accreditation of certification bodies is carried out by CNAS, which is China’s sole member of IAF. Nevertheless, there are many accreditation



mills connected to certification mills that issue Type 2 ISO 9001 fakes:

The majority come from certification bodies created by an individual who then pretends the certificates are legitimate. But this person is just a man with a printer, and prints certificates for anyone willing to pay, often without conducting an audit. These certificates have impressive logos on them, but they are for non-existent companies or companies operated by the same person. They often claim to be accredited by an independent third party, but that accreditation body is also owned by the same person. They do not abide by ISO 17011 or 17021.

One international consultant said that the owners of this type of mill are usually “unscrupulous local consultants that offer the full package of accreditation, certification, and superfluous consultancy with or without the awareness of the customer companies.” This is a fake structure that violates the rules established by ISO 17021 and ISO 17011 and the legal framework of the country.

### 3.4. Lack of signaling value of ISO 9001 certificates

Since fake ISO 9001 certification is seen as a widespread problem in China, the signaling value of the certification has been profoundly eroded. As pointed out by a set of managers:

- “We cannot check if one certificate is fake or not and then it means nothing for us.”
- “The problems of passing certificates could be solved by money; there is no trust.”
- “For me, if a supplier claims that he has either ISO 9001 or ISO 14001 it means nothing. Why? Because I put 6,000 euros on the table and I simply buy it.”

The erosion of the reliability of other certification schemes was also frequently presented as an analogy to try to explain the general erosion of credibility of third-party certification schemes in China. For example, an interviewee described the case of the CSA certification of the Canadian Standards Association:

They used to go to the laboratory and buy it. (. . .) take a thousand euros and give me the CSA [certificate], I do some papers and done, and that is it (. . .) The CSA [managers] fed up with this have put many more requirements

than would be necessary. For example, it is now easier to get a CSA in the U.S. than in China (. . .) The Chinese now go to the U.S. to get the [CSA] certification because in China they do not get it [as it is more difficult].

The interviewee pointed out the difficulty of checking the authenticity of an ISO certificate in China: “Often [the process of authentication] takes days or weeks to accomplish through phone calls and/or emails to the registrar.” As a result of this situation, companies carry out regular second-party audits (or confirmatory audits) of ISO certified suppliers in the same ways as if they were not ISO 9001 certified. As underlined by one manager: “In my view, as for all the experienced [quality management] colleagues that I have around, you do nothing with the ISO 9000. I carry out my own second party audit . . . I do not trust the third-party audit.” As pointed out by another interviewee: “An audit [by a second party] of the same level of intensity has to be carried out of all the suppliers, whether they are ISO [9001] certified or not.”

Although quantifying fake ISO 9001 certificates in China is very difficult because of its illegitimate and sometimes fraudulent nature, it was also addressed in the field work. Some of the respondents gave us some figures. A senior supply chain auditor for U.S. clients told us the following: “My experience from conducting supply chain audits for U.S. clients shows 50% are fake.” Another senior international consultant told us: “75% of China’s alleged certifications do not comply with IAF rules or ISO 17021/17011 and are fake certifications.”

### 3.5. Dissemination of the fake ISO 9001 phenomenon

The fake certifications we describe in this article seem to go beyond an anecdotal problem limited to a specific geographical area. Most of the evidence gathered in our research confirms this. A senior consultant who worked in more than 50 countries told us: “I do believe, not only China, there are fake certificates. Many other countries have real and fake.” Others made similar comments, including:

- “There are fake accreditation bodies and certification bodies operating in North America, Western Europe, and throughout Asia.”
- “This is not the case only in China but also all over the world. The problem of this standard is that it audits mainly easy-to-prepare documents.”
- “Here in Europe, we have the very same cases of fraudulent behavior. And guess what, not only the

companies are involved but the reputable body that issues the certificates as well. So, nothing nice to teach the Chinese about.”

The evidence from the complementary desk-based research and direct contact with consulting and auditing services is that fake ISO 9001 certification might also be a problem in India, where certification can take 10 working days (QC Certification, 2011) or 1–7 days (GQS, 2015), and in Pakistan, where currently there is no recognized national accreditation body signatory of the IAF MLA and the IAF has no office so there is no structure to police it. Fake ISO 9001 certification scandals have also been seen in diverse countries such as Kenya (Ndonga, 2012), Kazakhstan (Moldashev, Khusainov, & Sprygin, 2014), the United Arab Emirates (Farooqui & Sengupta, 2017), and the U.S. (ISOQAR, 2016). One accreditation institution, the ANAB (the ANSI-ASQ National Accreditation Board), which is a signatory of the IAF MLA, provides evidence on a section of cases of fake certificates from China as well as Ecuador, Korea, Indonesia, Pakistan, the U.S., Spain, Italy, and Sweden (ANAB, 2018).

## 4. Recommendations

### 4.1. Recommendations for research

The findings of the fieldwork summarized in this article raise deep concerns about the reliability and credibility of ISO 9001 certification in China. In the words of one of the interviewees: “The existence of fake certificates actually harms the reputation of ISO’s certification.” The supposed value of ISO 9001 as a signal of supplier characteristics that reduces search and monitoring costs in supply chains is definitely questionable.

These findings are in line with previously published, less detailed evidence in the scarce scholarly literature of years ago (Yeung & Mok, 2005; Zeng, Tian, & Tam, 2007) and in the more recent practitioner literature (e.g., Haft, 2015; Paris, 2013; Slater, 2015). They contradict the findings of the recent UNIDO (2015) report, which indicated that for 75% of the close to 7,000 company representatives surveyed, the credibility of ISO 9001 certification bodies operating in China is good or very good. In our view, the differences may be accounted for by social desirability bias (Heras-Saizarbitoria & Boiral, 2015) in the responses to this type of institutional report aimed at analyzing the legitimacy of third-party certification, especially as the report was promoted by CNAS.

In addition, fake ISO 9001 certification seems to be widespread and is similar to other certification schemes, such as the problem of fake educational degrees. If the situation portrayed in this exploratory research is the case for China and for other Asian and Western countries, there is a need to research this issue in more depth. Qualitative and quantitative studies to analyze the intensity and the extent of the problem are needed in this under-researched field.

### 4.2. Recommendations for practitioners

Managers operating with Chinese ISO 9001 certified companies, and probably with certified companies elsewhere, should be aware of the eroded signaling value of the certificates. The classical principle of caveat emptor (let the buyer beware)—the buyer is responsible for checking the quality and reliability of a product or service before purchase—is still widely applicable. Paradoxically, it also applies to alleged signaling instruments such as ISO 9001 certificates. It seems that customers cannot rely on certifiable standards to assure their suppliers’ conduct. Therefore, customers should reduce their information asymmetries not just with the suppliers but also with certification bodies. They should establish a sort of ranking of certification bodies (i.e., ranking of the actors who are supposed to rank the suppliers). In other words, signaling for the body that signals, checking—among many other issues—the validity of a certification body’s accreditation, its background, expertise (e.g., industry experience), and reputation is important.

As the supposedly reliable resources aimed to eliminate information asymmetries are not working, managers from companies should check whether the ISO certificate is fake or not, at least for Type 1 and 2 fake certificates. For that purpose, the traceability/hierarchy or the chain of accreditation/certification should be analyzed: the IAF assesses the accreditation body, who in turn accredits the certification body, who in turn audits a company and issues them the certification for conformity to the international ISO 9001 standard. As the accreditation bodies are supposed to provide reliability to certification bodies, the IAF is supposed to provide reliability to accreditation bodies. This information should be analyzed by managers on the websites and/or with a direct contact with the bodies. If the status of a specific certificate cannot be verified on the website or by a direct request to a certification body and/or the reliability of the certification body could not be assured by a legitimate accreditation board, managers should not rely on the certificate.

In light of the evidence, information managers and other stakeholders may try to second-guess the role of certain agents and certain global bodies regarding the way they analyze the dissemination and implications of ISO 9001 certifications. The trend is that ISO certifications are used and perceived as organizational degrees, primarily intended to improve corporate image and legitimacy, as found in this research and many previous studies. Nevertheless, due to the process of commodification of ISO certifications and the associated conflicts of interest, ISO certificates are in danger of becoming the emperor's new clothes.

### 4.3. Recommendations for standardization and accreditation bodies and policy makers

The need to establish effective measures is urgent. The ISO should lead efforts to eradicate fraud with the collaboration of other international institutions such as the IAF, the World Trade Organization (WTO), and UNIDO. The roles and the interests of ISO and IAF are obvious. The former aims to develop and foster market-relevant international standards that are used effectively by industries (ISO, 2015); the issue of fraudulent certificates erodes trust and impairs effectiveness. The latter aims to assure that accredited certificates may be relied upon by governments, companies, and consumers worldwide. The motto of the IAF—Certified Once, Accepted Everywhere—seems to be threatened in the light of the gathered evidence. Therefore, both international institutions might feel very directly threatened as the signaling value of the ISO 9001 standard becomes questionable.

Competent accreditation bodies, and perhaps the ISO itself, should require certification bodies to have validation portals on their websites. Some well-known international registrars have portals in which ISO and other certificates can easily be verified. This best practice should be extended if the signaling value of the certificates is to be preserved. A single international repository to obtain real-time ISO certification information would be advisable. The ISO analyzed the option to launch an ISO database, which would include only IAF-based accredited certificates. This ISO database was supposed to be launched in 2014 but was not. In late 2015, the IAF determined that a new international database for QMSs should be created in order to make it possible to check whether or not a certification is issued by an accredited certification body or registrar (Ramaley, 2016). This type of database would be a good way to improve the transparency and to

recover the signaling value of certifications such as ISO 9001 as it would allow firms to determine the reliability of the certifications of potential suppliers. The OASIS database managed by the International Aerospace Quality Group, which lists AS9100 certifications for the aerospace industry, has demonstrated that a single repository can work. But in order to build this type of tool, a clear consensus and the clear support of all the key actors, such as the certification bodies, is necessary.

Previous experience with other standards and certification could be valuable. As underlined by Ramaley (2013), the trust-but-verify approach adopted by the IAF has been used in a set of industrial sectors for decades (e.g., aerospace) and this institution has cooperated with public regulators and coercive forces such as Interpol to identify and take action against fake certificates. But for this purpose, both the rules of the game and the legal competency of different actors should be clarified and reinforced. This issue is also related to the global standardization, accreditation, and certification scheme—the so-called ‘conformity assessment scheme’ or the ‘chain of certification’—in force in each country, as the mentioned scheme can be more or less regulated by the public. In the EU, there is a centralized approach and in the U.S. the scheme is decentralized and market-oriented. In Europe, a specific European regulation—Regulation (EC) No 765/2008, setting out the requirements for accreditation—was established in order to improve “the quality of certificates” and “the degree of rigor applied in the performance of accreditation,” fostering a system which “functions by reference to binding rules” (EC, 2008). As a result, in the EU each member state appoints a single national accreditation body that performs accreditation with authority derived from the state, and with a scheme of self-regulation or soft law somehow regulated by the hard law. This approach could avoid the trend for the dissemination of Type 2 ISO certifications, and also indirectly Type 1 certifications, as more reliability and confidence is given to the whole system. Conversely, without the mentioned approach, lax public regulation of ISO certifications favors the emergence and dissemination of Type 1 and 2 fake certifications, undermining their value (e.g., the signaling value).

For the WTO, the issue of certificate fraud could be seen as a discouraging unfair practice that undermines competition. The WTO, with ISO and the other main international organizations for standardization, formed a strategic alliance with the common aim of promoting the preparation, adoption, and application of standards based on the principles of non-discrimination and harmonization



and the objective of preventing international standards from becoming unnecessary technical barriers to free trade. If they are serious in this goal, the WTO should also foster both the research and the adoption of specific measures against fraud. This is also the case of UNIDO (2015), which aims to enable normative functions and standards and quality-related activities in the international field, among its main enabling functions. Pursuing the analogy to the phenomenon of fake educational degrees analyzed in the literature review, a lesson could perhaps be learned from the measures that have been imposed to stop the operation of fake degree manufacturers and degree mills in the educational field by UNESCO, another UN institution (Mohamedbhai, 2016).

Public regulators and public policy makers should consider establishing or improving a clear legal and regulatory framework for the accreditation and certification scheme in each country and region, with the corresponding mechanisms to enforce it. In other words, the hard law of regulatory public power should be employed to control the boundaries of a very relevant soft law initiative effectively. After the launch of the ISO 9000 family of standards 30 years ago, in-depth reflection is now due.

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