

# QUESTIONING THE UNCRITICAL APPLICATION OF TRANSLATION AND BACK-TRANSLATION METHODOLOGY IN ACCOUNTING: EVIDENCE FROM CHINA

Peipei Pan\*, Chris Patel\*\*, Rajni Mala\*\*\*

## Abstract

The ‘critical bite’ in this paper lies in providing evidence to challenge the continued and uncritical application of translation and back-translation methodology by the global standard setters and researchers. We applied a within-subject experimental design to examine the influence of translation and back-translation methodology on subjects’ judgments on the key conception of *control* when preparing consolidated financial reports. Semi-structured follow-up interviews were also conducted with randomly selected participants in the experiment. China provides a particularly appropriate national context for this study because Simplified Chinese is one of the most complex languages. Importantly, *control*, as the consolidation criterion, may be linked to the ‘invisible power’ of the Chinese government’s authority in the process of social control. The results show that subjects made inconsistent judgments on *control* in the research instrument in English and the same instrument translated into Simplified Chinese. Additionally, subjects expressed a preference for the legalistic approach, which concentrates on providing specific quantitative criteria and requires little exercise of preparers’ judgments. We suggest that the global accounting standard setters and accounting researchers may consider developing more holistic methodologies for translation. Possible Anglo-American biases, simplistic assumptions and marketing claims by the global accounting standard setters need to be critically examined.

**Keywords:** Global convergence, Translation, Back-translation, China, Judgment

## 1 Introduction

Given the current focus on globalization, the adoption of International Financial Reporting Standards (IFRS) by 128 English-speaking and non-English-speaking countries has increasingly been recognized as an important and controversial topic<sup>2</sup> (Ball, 2006; Schipper, 2010; Sunder, 2011; Pope and McLeay, 2011; IASB, 2013a; Deloitte Touche Tohmatsu, 2013). The International Accounting Standards Board (IASB), which is largely responsible for developing IFRS, claims that IFRS are developed in the ‘public interest’. However, the term ‘public interest’ has not been explained by the IASB. Moreover, there are claims that IFRS largely based on the Anglo-American models are superior, represent best practices and are equally applicable and relevant to all countries (Gallhofer and Haslam 2007, Yonekura, Gallhofer and Haslam, 2012). Indeed, IFRS and the related supporting materials have been translated into more than forty languages, including twenty-three

languages in the European Union (IASB, 2013b; Deloitte Touche Tohmatsu, 2013). This rush towards global convergence is largely driven by the IASB’s implicit assumption that a single set of accounting standards will enhance international comparability of accounting information across countries, irrespective of the possible limitations of translation. Using China as a case study, we challenge this simplistic assumption by the global accounting standard setters.

A number of accounting researchers have provided support for globalization and international convergence of accounting standards and practices (Choi and Mueller, 1992; Hoogvelt, 1997; Lehman, 2005; Pacter, 2005; Nobes and Zeff, 2008; Peng, Tondkar, Smith and Harless, 2008; Douppnik and Perera, 2012; Armstrong, Barth, Jagolinzer, Riedl, 2010; DeFond, Hu, Hung and Li, 2011; Yip and Young, 2012). However, an evaluation of the prior literature on global convergence of financial reporting shows that accounting research largely fails to adequately examine the limitations of translation. It has been suggested that accounting research can be enhanced by including ‘critical bites’<sup>3</sup>, which

<sup>2</sup> For this study, IFRS represent both International Financial Reporting Standards (IFRS), which were issued by the International Accounting Standards Board (IASB), and International Accounting Standards (IAS), which were issued by the IASB’s predecessor, the International Accounting Standards Committee (IASC).

<sup>3</sup> Examples of mainstream accounting research papers with a ‘critical bite’, which are published in Critical Perspectives on

challenge the status quo and the uncritical use of the established methodologies (Laughlin, 1995; Maroun, Turner and Coldwell, 2014, p. 73). The ‘critical bite’ in this paper lies in providing evidence to challenge the fundamental assumption by the global standard setters and accounting researchers that translation provides equivalent meaning of accounting conceptions in different languages. To provide this evidence, we selected the within-subject experimental design in this study because this method enables strong inferences about cause and effect and minimises possible confounding effects from other competing variables. Semi-structured follow-up interviews were conducted with 15 randomly selected participants in the experiment to provide more holistic insights into their responses.

Largely based on the Anglo-American models, the IASB has extensively used ‘uncertainty expressions’ in IFRS, such as ‘probable’, ‘control’, ‘sufficient certainty’, ‘substantial’, ‘reliably’, ‘reasonably certain’, and ‘absolute certainty’. The term ‘*substance over form*’ has been used by the IASB to describe the importance of accounting judgments in interpreting these ‘uncertainty expressions’ (IASB, 2010, Framework, para. 35). Preparers are required to extensively exercise their judgments to assess the *substance* of a transaction (Ball, 2006; IASB, 2010; Jamal and Tan, 2010; Schipper, 2010; Douppnik and Perera, 2012). Prior research has suggested that the Anglo-American biases may be promoted by *substance over form* approach, which requires extensive preparers’ judgments (Douppnik and Perera, 2012; Nobes, 2009; Heidhues and Patel, 2011). An implicit assumption underlying global accounting convergence is that preparers in all countries have a preference for *substance over form* approach. However, countries such as China, Germany and Japan have traditionally used the legalistic approach to develop accounting standards before converging to IFRS (Tang, 2000; Ezzamel, Xiao and Pan, 2007; Heidhues and Patel, 2011; Tsunogaya, Okada and Patel, 2011). Accounting standards based on the legalistic approach concentrate on providing specific quantitative criteria and numerical thresholds and requires very little exercise of preparers’ judgments. Whether preparers from countries such as China have preference for the traditional legalistic approach or the IASB’s *substance over form* approach has not been examined in the accounting literature. Moreover, translation of IFRS into more than forty languages adds further complexity to the *substance over form* approach.

Examining the literature relating to global convergence, a number of studies have shown that preparers across cultures assign inconsistent numeric probabilities to ‘uncertainty expressions’, resulting in inconsistent and incomparable judgments (Douppnik and Richter, 2003; 2004; Douppnik and Riccio, 2006;

Tsakumis, 2007; Douppnik and Perera, 2012; Nobes, 2009; Piercey, 2009; Alali and Cao, 2010; Hu, Chand and Evans, 2013). *National culture* has been considered as the dominant variable in explaining inconsistent judgments on ‘uncertainty expressions’ across cultures (Schultz and Lopez, 2001; Douppnik and Richter, 2003; Douppnik and Riccio, 2006; Tsakumis, 2007; Hu et al., 2013). Moreover, quantified and narrowly focused dimensional approaches such as Hofstede’s (1980) and Hofstede and Bond’s (1988) cultural dimensions, Gray’s (1988) framework of accounting values have largely dominated cross-cultural accounting research (Heidhues and Patel, 2011). However, the differences in subjects’ judgments may not be fully attributable to differences in *national culture* (Belkaoui and Picur, 1991; Lindsay, 1992; Patel, 2004; Heidhues and Patel, 2011). Translation is an important process for cross-cultural studies, which involves more than one languages. The language used in testing subjects’ judgments and translation may be confounded with *national cultural* effects (Ji, Zhang and Nisbett, 2004). It is not clear whether any differences in subjects’ judgments across cultures are due to differences in cultural beliefs, norms or values, or the specific languages of testing.

Translation, which involves communicating with subjects in different languages, is essential and vital to global convergence of financial reporting. Translation and back-translation methodology is considered as a well-established translation methodology by the global standard setters, national regulators and accounting researchers, based on the implicit assumption that this methodology can ensure equivalent meaning of text in all languages (Chow, Harrison, McKinnon and Wu, 1999; Chow, Shields and Wu, 1999; Schultz and Lopez, 2001; Douppnik and Richter, 2004; Abernethy and Vagnoni, 2004; Douppnik and Riccio, 2006; Tsakumis, 2007; Shafer, 2008; O’Connor, Deng and Luo, 2006; O’Connor, Vera-Munoz and Chan, 2011). Translation and back-translation methodology requires a bilingual expert translates the texts from the source language into the target language and a second bilingual expert blindly (without access to the original language texts) back-translates the texts in the target language into the source language. If an error in meaning is found in the back-translated version compared to the original, the terms and conceptions in question are re-translated and again blindly back-translated by another bilingual expert. This iterative process is repeated until no errors in meanings are found (Brislin, 1970, 1986; Polsa, 2007; Barger, Nabi and Hong, 2010; Usunier, 2011).

Although translation and back-translation methodology is one of the most widely used translation methodologies in accounting, concerns on translation and back-translation methodology have been raised in linguistic and social psychology disciplines (Douglas and Nijssen, 2003; Janssens, Lambert and Steyaert, 2004; Scandura and Dorfman, 2004; Barger et al., 2010; Chidlow, Plakoyiannaki and

Accounting, include Nouri and Kyj (2008), Charron and Lowe (2008), Upton and Arrington (2012), and Schreck (2014).

Welch, 2014). It has been argued that translation and back-translation methodology may not convey equivalent meanings of texts in different languages (Douglas and Nijssen, 2003; Janssens et al., 2004; Barger et al., 2010; Baskerville, Xue and Rhys, 2013). One word in one language may correspond to different connotations in another language (Ji et al., 2004). For example, the key conception of *control* when preparing consolidated financial reports is defined as ‘the power to govern the financial and operation policies of an entity so as to obtain benefits from its activities’ (IAS 27). However, when this conception is translated into Simplified Chinese, the conception of *control* may also be linked to the ‘invisible power’ of the Chinese government’s authority in the process of social control (Yee, 2009; Zhu and Du, 2010). Indeed, the important connotative meanings contained in languages may not be shown by applying translation and back-translation methodology. Preparers may not interpret the same ‘uncertainty expressions’ consistently in different languages.

This study makes a contribution by questioning the uncritical application of translation and back-translation methodology in accounting. Specifically, subjects were required to make their judgments on the conception of *control* when preparing consolidated financial reports through an accounting case included in a research instrument in English and the same research instrument translated into Simplified Chinese. The research instruments were prepared by using translation and back-translation methodology. Among all ‘uncertainty expressions’, the conception of *control*, as the consolidation criterion in preparing consolidated financial reports, is one of the most important and controversial accounting conceptions (Hopkins, Houston and Peters, 2000; Biondi and Zhang, 2007; Bhimani, 2008; Baker, Biondi and Zhang, 2010; Stenka and Taylor, 2010). China provides a particularly appropriate national context for this study because Simplified Chinese, which is official language in the People’s Republic of China, is one of the most complex languages in the world<sup>4</sup>. Importantly, the conception of *control* has deep connotative meanings in Simplified Chinese and this conception is linked to the Chinese government’s hierarchical control on economy and accounting, embedded in China’s unique social, political and economic environment. Additionally, *control* also strongly features within families and in organisations (Mahoney, 2008)

Subjects were selected from final year undergraduate accounting students in three leading Chinese universities. Students were selected because the possible confounding influence of subjects’ professional experience and organizational culture on their judgements can be controlled to large extent. The results of this study show that when preparing

consolidated financial reports, subjects made inconsistent judgments on the conception of *control* in the research instrument in English and the same research instrument in Simplified Chinese. This study provides empirical evidence to various accounting standard setters and accounting researchers that the limitations of applying translation and back-translation methodology in accounting cannot be ignored. We suggest that the global accounting standard setters and accounting researchers may consider developing holistic methodologies for translation. Additionally, the results of the follow-up interviews suggest that students have a preference for the legalistic approach, as opposite to the IASB’s *substance over form* approach. Possible Anglo-American biases, simplistic assumptions and marketing claims by the global accounting standard setters need to be critically examined.

The remainder of the paper is organized into six sections. Section two provides the background of this study and prior literature, followed by theory and hypothesis development in section three. Section four explains the research design and data collection. Section five presents the results of the study. Conclusions and implications are in the final section.

## 2 Background and prior literature

### 2.1 Consolidated financial reporting standards

The controversy over accounting for business combinations has been discussed by regulators and accounting standard setters (Hopkins et al., 2000; Baker and Hayes, 2004; Biondi and Zhang, 2007; Bhimani, 2008; Benston and Hartgraves, 2002; Larson, 2008; Baker et al., 2010; Stenka and Taylor, 2010). With an implicit assumption that stakeholders became more receptive of the *substance over form* approach, the IASB adopts this approach to develop IAS 27 ‘Consolidated and Separate Financial Statements’. According to IAS 27, *control* has been identified as the consolidation criterion in preparing consolidated financial reports. *Control* is defined as, ‘the power to govern the financial and operation policies of an entity so as to obtain benefits from its activities’. It has been stated in IAS 27 that the legal *control* is usually reflected through the ownership of more than half of the voting power of another entity. However, IAS 27 (para. 13) recognizes that *control* also exists when *control* can be clearly demonstrated after assessing the *substance* of the businesses even though the parent owns half or less of the voting power of an entity<sup>5</sup>.

<sup>5</sup> IAS 27 (para. 13) recognizes that *control* also exists when the parent owns half or less of the voting power of an entity when there is:

- ‘Power over more than half of the voting rights by virtue of an agreement with other investors;
- Power to govern the financial and operating policies of the entity under a statute or an agreement;

<sup>4</sup> In general, schools in mainland China use simplified Chinese characters. The importance of Simplified Chinese in the world context is discussed in Section Two.

The IASB has repeatedly revised IAS 27, claiming to improve financial reporting by clarifying the principles that determine when a reporting entity should consolidate another entity. Specifically, it has been stated in IAS 27 that the definition of *control* includes three components, namely, ‘power’, ‘returns’ and the ‘link between power and returns’. However, these three components have not been appropriately explained in IAS 27. In particular, the meaning of power and returns has not been adequately elaborated. The manner in which these three components are linked to constitute *control* has not been explained. As such, preparers are required to extensively exercise their judgments in interpreting and applying the conception of *control* (Baker and Hayes, 2004; Baker et al., 2010; Stenka and Taylor, 2010).

## 2.2 Reasons for selecting China

China provides a particularly appropriate national context for this study. The conception of *control* is embedded in China’s unique social, political and economic environment through direct intervention of the Chinese government’s. Chinese government’s *control* is a major feature of China’s economy and accounting (Adhikari and Wang, 1995; Tang, 2000; Lee, 2001; Ezzamel et al., 2007; ICAS, 2007, 2010; Shambaugh, 2009). The Chinese Accounting Standards for Business Enterprises (ASBE) substantially in line with IFRS were adopted by all listed companies from 1 January 2007. Importantly, the conception of *control* in ASBE 33 ‘*Consolidated and Separate Financial Statements*’ is a word-for-word translation from IAS 27.<sup>6</sup> It is important to examine whether preparers from China, whose social, political and economic environment is different from the Anglo-American countries, make consistent judgments on key accounting conceptions, such as the conception of *control* in English and in Simplified Chinese in the face of globalization.

Simplified Chinese characters, which are standardized Chinese characters officially used in the People’s Republic of China<sup>7</sup>, is selected for

- *Power to appoint or remove the majority of the members of the board of directors or equivalent governing body and control of the entity is by that board or body; or*
- *Power to cast the majority of votes at meetings of the board of directors or equivalent governing body and control of the entity is by that board or body.’ (IAS, 27, para. 13).*

<sup>6</sup> *Control* has been word-for-word translated as ‘控制’ in Simplified Chinese and the definition of *control* has been translated as, ‘一个企业能够决定另一个企业的财务和经营政策，并能据以从另一个企业的经营活动中获取利益的权利’。Word-for-word translation of the *control* conception provides content equivalence in this study.

<sup>7</sup> There are two commonly used forms of writing Chinese languages in China, namely Simplified Chinese and Traditional Chinese. Simplified Chinese, which was first put to public use in 1964 by the Chinese Communist Party, has been selected in this study. In general, schools in mainland China use simplified characters.

examination in this study because it is considered as one of the most fast-developing commercial languages commonly used in the Pacific Basin (Ding and Saunders, 2006; Breslin, 2009). Its practical value has surpassed that of French, German, and even Japanese in much of the world and its future opportunities seem limitless (Bökset, 2006; Ding and Saunders, 2006).

## 2.3 Language and translation

Language is a powerful tool in shaping thought about abstract domains and one’s native language plays an important role in shaping thought (Belkaoui, 1978; 1980; Evans, 2004; Ji et al., 2004). Recent research has shown that the particular language we speak influences the way we think about reality (Evans, Baskerville and Nara, 2011). Language embodies an interpretation of reality, and language can influence thought about that reality (Lucy, 1997; Evans, 2004; Hellmann, Perera and Patel, 2010; Dahlgren and Nilsson, 2012).

Accounting, as the language of business, should be communicative (Oliver, 1974; Hellmann et al., 2011). Communication is the pivotal issue in accounting and accounting conceptions cannot be used unconditionally without some risk of being misinterpreted (Johnson, Koh and Killough, 2009). Virtually all accounting conceptions have denotative and connotative meanings (Flamholtz and Cook, 1978). Denotative meaning refers to the ordinary or literal meaning of a word, while connotative meaning is subjective or emotional meaning of a conception (Osgood, Suci and Tannenbaum, 1957). Preparers may be able to agree upon the denotative meaning of words used in accounting standards. However, the connotative meaning of accounting conceptions may vary among preparers (Osgood et al., 1957). As such, preparers may display different behaviours in their responses to accounting conceptions, reflecting the importance of connotative meaning in driving individuals’ judgments and behaviours (Flamholtz and Cook, 1978; Hronsky and Houghton, 2001).

The importance of connotative meanings of accounting conceptions in accounting judgments has been recognized in prior research. Haried (1972, 1973) pointed out that accountants have the primary responsibility for reducing semantic problems in external accounting communication. Oliver (1974) further used the semantic differential technique to measure the meaning of several important accounting conceptions among accounting professionals and educators. A confounding lack of communication with regard to these accounting conceptions was found in Oliver’s study. Moreover, Belkaoui (1980) stated that the rationale from the linguistic relativity paradigm is that the different accounting treatments affect individual investment decisions in a way that depends on the professional group of the user and the investment strategy adopted. Belkaoui (1980) found that the perception of accounting conceptions varies in the manner, with which they can be recognized,

grasped or understood by different professional groups. Furthermore, Houghton (1987) empirically examined the connotative meaning and the cognitive structure within which that meaning is held of ‘true and fair view’ from the points of view of accountants and private (non-institutional) shareholders. The finding of this research is that accountants and shareholders do not share the same meaning for the conception of ‘true and fair view’. Accountants could not accurately perceive the shareholders’ meaning. Adelberg and Farrelly (1989) also found significant differences in the connotative meaning between accountants and users because of differences in professional affiliations.

Hronsky and Houghton (2001) established a link between connotative meaning and decision outcomes in accounting by providing empirical evidence that changing the wording of regulatory requirements may mitigate aggressive reporting. Moreover, Hamilton and Ógartaigh (2009) extended Bourdieu’s (1991) work on language and symbolic power to explore the shared meanings contained in true and fair value<sup>8</sup>. They found that the meaning of conceptions in accounting and auditing emanate from the practice of the field. Furthermore, Johnson et al. (2009) argued that effective communication implies that for any particular word, the name (denotative meaning) and the interpretation (connotative meaning) are similar for the individuals involved in the communication process.

In summary, studies conducted in the accounting domain have primarily focused on the extent to which various parties, such as preparers and users of financial reports, accounting academics and accounting students in the communication process attribute the same meanings to the key accounting conceptions (Haried, 1972, 1973; Oliver, 1974; Houghton, 1987; Houghton and Hronsky, 1993; Hronsky and Houghton, 2001; Johnson et al., 2009). However, little research has been conducted to examine the possible differences of meanings of accounting conceptions from one language to other languages. The earlier discussion has shown that the danger of misunderstandings inherent in the use of language as a means of communication in accounting has increasingly attracted researchers’ attention (Evans, 2004; Hellmann et al., 2010; Sunder, 2011; Dahlgren and Nilsson, 2012). The worlds in which different societies live are distinct worlds, not merely the same world with different languages (Glanert, 2008; Evan, 2004). Translation involves the movement of text across time and space, and whenever texts move, they also shift frames and discourse worlds (Eco, 2001; House, 2006; Dahlgren and Nilsson, 2012). Exact equivalence, or an exact transfer of meaning in translation, is almost impossible.

### 3 Theory and hypotheses development

The earlier discussion has shown that translation can be seen as a re-contextualization, which involves the movement of text across time and space, and whenever texts move, they also shift frames and discourse worlds (Evan, 2004; Ji et al., 2004; House, 2006; Dahlgren and Nilsson, 2012). Virtually, all accounting conceptions have denotative meaning (literal meaning) as well as connotative meaning (subjective or emotional meaning) (Flamholtz and Cook, 1978). Denotative equivalence in different languages may be achieved by using the back-translation methodology, which is most widely used in the process of developing international standards and cross-cultural accounting studies. However, connotative equivalence is difficult to achieve (Flamholtz and Cook, 1978; Hronsky and Houghton, 2001; Ji et al., 2004). Importantly, human judgments and reactions are largely influenced by connotative meaning (Osgood et al., 1957; Houghton, 1987). As such, even when the back-translation methodology is used, the translated conceptions may not have the same connotative meaning and this may lead to inconsistent judgments.

With regards to consolidated financial reporting, the equivalent denotative meaning of the word of ‘control’, contained in IAS 27 and ASBE 33 may be achieved as this word has been translated word-for-word from English into Simplified Chinese. However, the connotative meanings of the conception of *control* in English and Simplified Chinese may not be consistent. It has been suggested that specific words in English may correspond to multiple words with different connotations in Simplified Chinese (Ji et al., 2004). Importantly, prior research has shown that connotation and political ideology embedded in languages are closely linked (Cooper, 1995; Yee, 2009; Yee, 2012). Political ideologies, such as *control* serve as the ‘invisible power’ of the Chinese government’s authority in the process of social control and in the construction of a particular social order. It has been suggested that inconsistent application of the conception of *control* in business combination between China and English-speaking countries is mainly attributable to China’s unique social, political and economic environment (Zhu and Du, 2010). Specifically, the Chinese government’s authority is one of the most important components to understand the meaning of the conception of *control* in China (Zhu and Du, 2010). Indeed, the Chinese government takes a more-top-down approach under state corporatism (Yee, 2012). Most of corporatist organizations are created and maintained by the state, and the weight of decision-making power is also said to lie heavily on the side of the state, which can be reflected in the existence of state-owned enterprises (SOEs) in China. The Chinese SOEs account for the bulk of China’s economy. For example, the majority of China’s listed firms are controlled by state shareholders who retain their dominant control in the form of non-tradable state-owned shares (Sun and

<sup>8</sup> Bourdieu (1991) argues that language is more than a means of communication but is very much a social practice, a mode of power, and a means by which social relations are reproduced and transformed (Everett, 2002).

Tong, 2003)<sup>9</sup>. The Chinese government, in order to maintain its control or influence over the SOEs, retains substantial ownership in many listed firms (Chen, Firth, Xin and Xu, 2008).

In this study, subjects who were proficient in using both English and Simplified Chinese in interpreting and applying accounting standards were selected. Subjects were required to exercise judgments on the conception of *control* when preparing consolidated financial statements based on the research instrument in English and the same instrument translated into Simplified Chinese. The Chinese government's 'invisible power', with the focus of *control*, *subordination*, *obedience* and *hierarchical orders* embedded in the connotative meaning of the conception of *control*, comes through in the language of Simplified Chinese. Accordingly, the following hypothesis has been developed:

*H: There is likely to be a significant difference in subjects' consolidation judgments between the research instrument in English and the same research instrument translated into Simplified Chinese.*

## 4 Research method

### 4.1 The experimental design

To examine the research hypotheses, the within-subject experimental design and semi-structured follow-up interviews were conducted in this study. Subjects were selected from final year undergraduate accounting students in three leading Chinese universities, which provide some assurance that the selected subjects were competent in using English.

The research instrument, which consists of two parts was used in the within-subject experimental design. Part 1 includes questions relating to subjects' familiarity with IFRS, ASBE and ASBE 33. Importantly, a detailed accounting case relating to consolidated financial reporting, which respondents are likely to encounter in their working environment, is also contained in Part 1. In Part 2, subjects' demographic information was collected, including gender, age, education background, nationality, first language, working experience in accounting and whether they plan to become a member of professional accounting bodies.

A number of prior judgment studies have pointed out that examination of preparers' judgments without a context is an artificial task (Amer, Hackenbrack and Nelson, 1995; Harrison and Tomassini, 1989; Psaros, Patel and Warnakulasuriya, 2003; Psaros, 2007; Douppnik and Richter, 2003; 2004; Schipper, 2010; Pope and McLeay, 2011). 'Uncertainty expressions' become meaningful within a context (Simon, 2002). As such, in this study, all subjects were asked to presume that they were the financial controller of a

company (Dunball Electrical), which had acquired a stake in another company (Tonens Finance) in the previous twelve months. The following summary information of Dunball Electrical's stake in Tonens Finance was also contained in the accounting scenario to assist all subjects with answering the questions:

1. Tonens Finance has 11 members on its board of directors. Of these, 5 are senior management of Dunball Electrical.

2. Dunball Electrical owns 33 percent of Tonens Finance's voting shares. The remainder of the shares are held by a wide range of investors.

3. An arrangement exists that gives Dunball Electrical the right to approve Tonens Finance's future borrowings and terms of operations.

Importantly, financial performance of Tonens Finance was manipulated as making either a significant profit or a significant loss in the previous twelve months to depict the possible scenarios, which respondents may encounter in reality. All subjects were required to provide their judgment on whether they would recommend to senior management that consolidated statement be prepared based on the conception of *control*, stated in IAS 27 in the English and ASBE 33 in the Simplified Chinese.

As a check of this manipulation, all subjects were asked a debriefing question to determine their perceptions of the financial impact of preparing consolidated reports. Subjects were asked to indicate their answers to one question on a ten-point likert-type scale (1= very much worsened; to 10= very much improved): 'Do you believe that Dunball Electrical's financial position is worsened or improved by including Tonens Finance in its consolidated accounts?' Subjects who received the case of Tonens Finance making a profit, were expected to give a score of six or above, as Dunball Electrical's financial position would look better by including Tonens Finance. However, subjects who received the case of Tonens Finance making a loss were expected to give a score of five or less because the significant loss in Tonens Finance might negatively impact Dunball Electrical's financial position. The responses from subjects, who failed the manipulation check, were excluded from further data analysis.

Translation and back-translation methodology has been used in designing this instrument. Specifically, this research instrument was initially designed in English. The English version was translated into Simplified Chinese by the author. The Simplified Chinese version was translated back into English by an independent accounting academic. The discrepancies between different versions of the instrument were discussed and this process was repeated three separate occasions until all discrepancies were eliminated. A pilot test of the research instrument was conducted among sixteen accounting academics and ten professional accountants with expertise in the area of consolidated financial reporting. Based on their feedback, content and questions were refined to improve understandability.

<sup>9</sup> In 2009, of the top 500 Chinese manufacturing enterprises, 50% were State owned creating 62% of total profits; top 500 service sector, 94% of total assets, 92% of total profits and 61% of total firms (Xiao, Yang and Janus, 2009)

Within-subject design, which permits strong inferences about cause and effect, has been widely used in the linguistic and translation literature (Kroll and Stewart, 1994; Van Hell and DeGroot, 1998; Bernardini, 2001; Tyler, Mueller and Ho, 2011; Tosun, Vaid and Geraci, 2013). By using a within-subject experiment, the potential ‘*sampling effect*’ can be largely controlled (Greenwald, 1976; Singleton and Straits, 2005; Charness, Gneezy and Kuhn, 2012; Tyler et al., 2011; Tosun et al., 2013).

Specifically, at each of the three Chinese universities, subjects were randomly classified into two groups. In one group, each subject received the research instrument with Tonens Finance making a significant profit in the previous twelve months. In the second group, each subject received the research instrument with Tonens Finance making a significant loss in the previous twelve months.

To address the concern of using the within-subject experimental design that the observed changes are due to the sequencing of the experimental conditions rather than to the conditions, *counterbalancing*, which consists of reversing the sequence of the distribution of the English and the Simplified Chinese versions of the instrument was used in implementing the experiment (Greenwald, 1976; Singleton and Straits, 2005). Specifically, for both groups, half of the subjects received the Simplified Chinese version of the instrument, while the other half received the English version. Each subject was allowed twenty minutes to complete the research instrument, and then the researchers collected the completed instrument. After 24 hours, the subjects who initially completed the Simplified Chinese version received the English version of the instrument, while the subjects who initially completed the English version received the Simplified Chinese version of the instrument. Again, subjects were allowed twenty minutes to complete the same instrument in the second language. The researchers then collected the completed instrument.

#### 4.2 Semi-structured follow-up interviews

Fifteen students, who had participated in the experiment, were randomly selected and they were asked a series of open-ended questions. Questions were designed to find out the reasons for their responses to the research instrument in English and in Simplified Chinese. We were particularly interested in exploring the consistency of their responses and their interpretations of *control* in these two languages. Additionally, we were also interested in examining whether students have a preference for the IASB’s *substance over form* approach, which requires extensive exercise of judgments or the legalistic approach, which requires very little exercise of judgments. All interviews were conducted in Mandarin and students were told that their responses were anonymous and that the information they provided would be treated in strict confidence. Each

interview lasted for approximately half an hour and notes were taken during the interviews.

## 5 Results and discussion

After excluding subjects, who failed the manipulation check, a total of 65 subjects’ responses were collected from three universities. All subjects were born in China and educated in Simplified Chinese. Of the respondents, 16.9% were from University 1, 16.9% were from University 2 and 66.2% were from University 3. The pre-testing results confirm that there is no significant difference in responses among subjects from the three Chinese universities. The results also confirm that the sequencing of distributing research instrument did not impact subjects’ judgments. As such, the useable responses were grouped together for further statistics tests.

Overall, 53.8% of the respondents were female and 86.2% of the respondents were in the age group of 20 to 24 years. 93.9% of the respondents had less than one year or no professional accounting experience, which minimizes the confounding influence of subjects’ professional experience and organizational culture on their judgements. A total of 96.9% of the respondents had intentions to study towards the qualified Certified Public Accountants (CICPA). The demographic details of the respondents are shown in Table 1.

To assess the degree of consensus regarding subjects’ judgments, the paired-sample t test was conducted. The judgment type (recommendation to consolidate or not to consolidate) was the dependent variable. The language of the research instrument (English or Simplified Chinese) was the within-subject independent variable. The detailed results are reported in Table 2. For the case of Tonens Finance making profit, subjects’ consolidation judgments by using the research instrument in English is significantly ( $p=0.002$ ) different from their responses by using the research instrument in Simplified Chinese. Similarly, for the case of Tonens Finance making loss, subjects’ consolidation judgments in the research instrument in English significantly differ from their judgments in the same research instrument in Simplified Chinese is ( $p=0.03$ ). The results provide strong support that accounting students’ consolidation judgments in the research instrument in English are significantly different from their judgments in the same research instrument in Simplified Chinese.

The results of the follow-up interviews confirmed that fourteen out of fifteen students made inconsistent consolidation recommendations when responding in English and Simplified Chinese. Specifically, eleven students linked their explanations of *control* in Simplified Chinese to the deeply held connotative meaning of *control* embedded in Chinese society, which focuses on *control*, *subordination*, *obedience*, and *hierarchical orders* (Goldin, 2011; Hwang, 2013; Yu, 2014). This connotative meaning of *control* in Simplified Chinese clearly influenced students’ responses to the research instrument. The

essence of the responses from these eleven students was captured by Xin's (not his real name) and Meiting's (not her real name) responses below:

*"As you can see, my responses are not the same in English and Simplified Chinese. 'Control' reminds me of the strict control at home, strict control at school, strict control at university and strict control of my boss at part-time work. Our society is all about control. The government virtually controls all our activities. I cannot possibly be objective when you ask me to apply the meaning of control to accounting. The word 'control' is highly emotional and this emotion is attached to the meaning of control in any context. I do not think any Chinese people can be objective when they apply the word 'control' in any context."*—Xin's explanation

*"When you gave me this research instrument, which requires me to decide whether I would make consolidation recommendation or not, 'control' actually has a different meanings to me in Chinese and English. As you know, control is very important in changing the behaviour of Chinese people. The government has a hand in everything we do. So whether I like it or not, the meaning of the word 'control' gives me different understanding in English and Chinese. I think the consolidation standards should not use the word 'control', but provide more helpful guidance."*—Meiting's explanation

Additionally, thirteen students expressed strong preference for the legalistic approach, which was traditionally used by the Chinese government to develop accounting standards before converging to IFRS. Moreover, these students suggested that the word 'control' should not be used in accounting standards. For example, Lixin (not his real name) and Meimei (not her real name) provided some insights into their preference for the legalistic approach, which captured the essence of most responses from students:

*"Why can't the standard setters provide more guideline and more information? It is better to use 50% as the consolidation criterion. Why does the IASB confuse us? How can accounting be objective and comparable when the word 'control' is used in standards? Do you think Chinese make the same judgments as Americans—I do not think so."*—Lixin's explanation

*"I cannot understand why the standard setters use words such as 'probable', 'reasonable' and 'control' in accounting standards? Why can't they simply give us the specific percentage? This will improve comparability and consistency of information within and across countries. Additionally, I will not make mistakes by referring to the specific percentage. Judgments are subjective and confusing."*—Meimei's explanation

## 6 Conclusions and implications

The results show that accounting students made inconsistent judgments on the key conception of *control* when preparing consolidated financial reports in the research instrument in English and the same

instrument translated into Simplified Chinese. The findings of this study have implications for the global standard setters and national regulators. IFRS and the related supporting materials have been translated into more than forty languages, including twenty-three languages in the European Union. The quality of translating IFRS is essential for adoption of IFRS in non-English-speaking countries. The IASB has been criticised for unquestioningly applying inappropriate methodology to translate IFRS into various languages. Preparers may make inconsistent judgments on 'uncertainty expressions' in different languages because the connotative meanings of 'uncertainty expressions' embedded in different languages may be different. We suggest that the IASB's claim that comparability of financial information can be enhanced by adopting a single set of accounting standards may not be achieved unless the quality of translation process is significantly improved. Additionally, the global accounting standard setters have clearly assumed that preparers in all countries have a preference for *substance over form* approach, which requires preparers to extensively exercise their judgments. Our findings based on the follow-up interviews suggest that students have a preference for the legalistic approach, which is based on quantitative criteria.

The challenge for translating global accounting standards into other languages than English is to adapt accounting conceptions in a culturally relevant and comprehensible form while maintaining the meaning in the original language (Sperber, 2004, Chidlow et al., 2014). Indeed, translation is considered as a cultural and political message transmission process. Rather than a narrow linguistic transfer, we suggest that the quality of translation may be enhanced by taking into account countries' social, political and economic environment embedded in the connotative meanings of languages. It is suggested that quality of translation may be improved by involving various expert stakeholders in the translation process to ensure that connotative meanings of key accounting conceptions, such as the conception of *control* are holistically communicated in the translated texts. We suggest that adequate emphasis and guidance is provided to preparers in various countries in interpreting the connotations of key accounting conceptions.

We also challenge the claim by a significant number of cross-cultural studies that *national culture*, mostly based on Hofstede's (1980) cultural dimensions and Gray's (1988) framework of accounting values, is a dominant variable in explaining differences in judgments across countries. It is important to note that the differences in subjects' judgments across cultures may be related to different languages and translation, rather than the claimed differences in *national culture*. We suggest that cross-cultural researchers may question the quality and usefulness of their translated research instruments.

Our findings also contribute to accounting education for improving learning and teaching global



accounting standards. Examination of the current accounting curricula and textbooks show that a heavy emphasis is placed on the technical aspect of accounting and relevant and unique social, political and economic contexts are often ignored. We suggest that students question the fundamental assumption by the global accounting standard setters and accounting researchers, who claim that translation ensures equivalent meanings of texts in different languages.

We suggest that additional insights may be gained by applying more holistic and critical perspectives to examine translation and back-translation methodology across a number of languages. Future research may also examine possible Anglo-American biases, assumptions and marketing claims by the global accounting standard setters.

**Table 1.** Respondents' profile

<b>Subjects from three universities</b>	Total (N=65)	Percentage
University 1	11	16.9%
University 2	11	16.9%
University 3	43	66.2%
<b>Subjects who received the case of Tonens Finance making a profit or making a loss</b>	Total (N=65)	Percentage
Profit-making entity	34	52.3%
Loss-making entity	31	47.7%
<b>Gender</b>	Total (N=65)	Percentage
Female	35	53.8%
Male	30	46.2%
<b>Age</b>	Total (N=65)	Percentage
Under 20	8	12.3%
20-24	56	86.2%
30-34	1	1.5%
<b>Years of accounting experience</b>	Total (N=65)	Percentage
None	61	93.9%
Less than 1 year	3	4.6%
1-4 years	1	1.5%
<b>Plan to join accounting professional bodies</b>	Total (N=65)	Percentage
Yes	63	96.9%
No	2	3.1%

**Table 2.** Descriptive statistics and the paired-sample t test results of the influence of translation and back-translation on subjects' judgments

		<b>Languages</b>		Significance level: p=
		<i>English</i>	<i>Simplified Chinese</i>	
<b>Profit-making case</b>	Mean	0.88	0.53	
	SD	0.327	0.507	t=3.447
	N	34	34	P=0.002
<b>Loss-making case</b>	Mean	0.19	0.45	
	SD	0.402	0.506	t=-2.278
	N	31	31	P=0.030

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