

**An Empirical Investigation of the Influence of Back-translation and Context on  
Accounting Judgments: Evidence from China**

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

Department of Accounting and Corporate Governance  
Faculty of Business and Economics  
Macquarie University  
Sydney, NSW, 2190  
Australia

\*Telephone (+61-2) 98509943

Email: [peipei.pan@mq.edu.au](mailto:peipei.pan@mq.edu.au)

\*\*Telephone (+61-2) 98507825

Email: [chris.patel@mq.edu.au](mailto:chris.patel@mq.edu.au)

\*\*\*Telephone (+61-2) 98508530

Email: [rajni.mala@mq.edu.au](mailto:rajni.mala@mq.edu.au)

\*Corresponding author

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## **ABSTRACT**

International convergence of accounting standards has resulted in researchers' greater interests in international accounting research, which often involves the translation from one language into other languages. A number of studies have conducted to examine the cross-cultural and cross-national similarities and differences in accountants' judgments on 'uncertainty expressions'. National culture has been a dominant variable in explaining differences in accountants' judgments. However, it has been argued that the employment of the culture concept has been an excuse for intellectual laziness (Patel, 2004). The differences in subjects' judgments may not be fully attributable to differences in national culture. One of the possible reasons for cross-cultural and cross-national differences in judgments may attribute to language and translation. Importantly, back-translation method, as an established translation method, has been most widely used in cross-cultural and cross-national studies, assuming that equivalence of research instrument can be ensured. No empirical evidence has been provided so far in accounting to examine this implicit assumption. This study questions this implicit assumption in a significant number of cross-cultural and cross-national studies published in leading journals, such as *Accounting, Organizations and Society* (AOS).

To address this gap in literature, a within-subject experiment was conducted among final year undergraduate accounting students from three Chinese universities. The first objective of this study is to examine subjects' judgments on the concept of *control*, which is the essential criterion in preparing consolidated financial reports between the English scenario and the same scenario translated into Simplified Chinese by using back-translation method. The second objective is to examine the influence of economic context, namely financial performance of corporations, on subjects' judgments on the concept of *control*. The interaction effect of back-translation and economic context has also been examined in this study.

This study has significant methodological contributions to international accounting research by providing evidence that subjects made inconsistent judgments on the concept of *control* in English and Simplified Chinese. The influence of translation and back-translation on accounting judgments cannot be underestimated or ignored. National culture may not be the main reason for cross-cultural and cross-national differences in judgments. The results of this study also show that the influence of economic context on subjects' judgments on the concept of *control* varies in different languages. Economic context cannot be ignored in applying IFRS to practice. This study has important implications to international accounting convergence and improving learning and teaching of accounting to university students.

# **An Empirical Investigation of the Influence of Back-translation and Context on Accounting Judgments: Evidence from China**

## **Introduction**

In the current era of globalization, the discipline of accounting has been facing some serious challenges. The increasing adoption of a single set of high quality global accounting standards, namely, International Financial Reporting Standards (IFRS) as national accounting standards has become the focus of international accounting research. Currently, IFRS, the principles based accounting standards, have been adopted in more than 120 English-speaking and non-English-speaking countries (IASB, 2012; Deloitte Touche Tohmatsu, 2012). In order to ensure that IFRS are understandable to and acceptable by non-English-speaking practitioners, IFRS and the related supporting materials have been translated into more than forty languages, including one of the most complex languages, namely, Simplified Chinese (IASB, 2012; Deloitte Touche Tohmatsu, 2012). Implicit in the drive for worldwide adoption of IFRS is the assumption that a single set of accounting standards will result in a greater level of comparability across countries irrespective of differences in languages. However, this assumption is questioned by the challenges related to translation of IFRS into various languages, which is a necessary and vital part in the process of international convergence (IASB, 2012). Although the International Accounting Standards Board (IASB) has implemented various quality-control steps in the translation process to reduce the discrepancies between English and the translated IFRS (IASB, 2012), researchers continue to question whether the translated IFRS and the related supporting materials can convey the equivalent meanings to various stakeholders in complex business contexts (Davidson and Chrisman, 1993; Evans, 2004; Hellmann, Perera and Patel, 2010; Dahlgren and Nilsson, 2012). This study challenges IASB's implicit assumption that accounting is neutral and value free. Comparability of financial information may be impaired by many factors, such as translation.

The danger of misunderstandings inherent in the use of translation as a means of communication in accounting has increasingly attracted the attention of accounting researchers (Bailey, Bylinski and Shields, 1983; Evans, 2004; Hellmann et al., 2010; Dahlgren and Nilsson, 2012). Hellmann et al. (2010) have shown that language and translation influence accountants' judgments when they interpret and apply accounting standards. Accountants' judgment is perhaps one of the most important aspects of

interpreting and applying IFRS (Abacus Editorial, 2004; Pacter, 2005; Wustemann and Wustemann, 2010; Alali and Cao, 2010). The IASB has used the term ‘*substance over form*’ to describe the importance of professional judgments in accounting (IASB, 2009). ‘*Substance over form*’ is the approach that requires business transactions to be accounted for and presented in accordance with their nature and economic reality and not merely by their legal form (IASB, 2010, Framework, para. 35). Accountants are required to extensively exercise their judgments to assess the *substance* of a transaction (Jamal and Tan, 2010). Specifically, the IASB has extensively used ‘uncertainty expressions’ in IFRS, such as ‘*probable*’, ‘*control*’, ‘*sufficient certainty*’, ‘*substantial*’, ‘*reliably*’, ‘*reasonably certain*’, and ‘*absolute certainty*’, which requires high level of professional judgments. Consistent judgments on these ‘uncertainty expressions’ are difficult to achieve (Piercey, 2009; Doupanik and Riccio, 2006; Chand and Patel, 2011; Alali and Cao, 2010). Given the current focus on international convergence of financial reporting, a number of studies have examined the similarities and differences in accountants’ judgments on ‘uncertainty expressions’ cross cultures and nations (Doupanik and Richter, 2004; Doupanik and Riccio, 2006; Tsakumis, 2007; Doupanik and Perera, 2009; Nobes, 2009; Chand and Patel, 2011). It has been shown that accounting professionals assign inconsistent numeric probabilities to these ‘uncertainty expressions’, resulting in inconsistent and incomparable judgments (Doupanik and Richter, 2004; Doupanik and Riccio, 2006; Tsakumis, 2007; Doupanik and Perera, 2009; Nobes, 2009; Chand and Patel, 2011).

Prior studies have shown that inconsistent judgments on ‘uncertainty expressions’ cross cultures and nations have been attributed to differences in *national culture* (Schultz and Lopez, 2001; Doupanik and Richter, 2004; Doupanik and Riccio, 2006; Tsakumis, 2007). For example, Tsakumis (2007) showed that national culture plays a role in disclosure judgments between Greek and U.S. accountants. However, Patel (2004) argued that “the employment of the culture concept has been an excuse for intellectual laziness, whereby ‘culture’ has often served simply as a synonym for ‘nation’ without any further theoretical grounding (p. 63)”. This clearly points out that differences in subjects’ judgments may not be fully attributable to differences in national culture. One of the possible reasons for differences in judgments of subjects cross cultures and nations may attribute to languages and translation. This leads to an important research question, which has not been rigorously addressed so far in cross-cultural and cross-national studies, that is whether subjects’ judgments on ‘uncertainty expressions’ are consistent in different languages.

Translation is an essential process in most cross-cultural and cross-national accounting studies, which involves communicating with subjects in different languages. Translation is defined as “*the communication of the meaning of a source-language text by means of an equivalent target-language text*” (Bhatia, 1992, p. 1051). Importantly, translation is an exchange between different mindsets. Language and translation influence the way people think (Ho, 2004). Back-translation, as an established translation method, is one of the most widely used methods in cross-cultural and cross-national accounting studies (Schultz and Lopez, 2001; Doupnik and Richter, 2004; Doupnik and Riccio, 2006; Tsakumis, 2007; Schweikar, 1986; Chow, Harrison, McKinnon and Wu, 1999; Abernethy and Vagnoni, 2004; Shafer, 2008; O’Connor, Deng and Luo, 2006; Chow, Shields and Wu, 1999; O’Connor, Vera-Munoz and Chan, 2011). According to Brislin (1970), back-translation is where a bilingual expert translates the instrument from the source language into the target language and a second bilingual expert blindly (without access to the original language version) back-translates it to the source language. If an error in meaning is found in the back-translated version when compared to the original, the terms and concepts which are in question are re-translated and again blindly back translated by another bilingual expert. This iterative process is repeated until no errors are found (Brislin, 1970, 1986; Polska, 2007; Barger and Nabi, 2010; Usunier, 2011).

The use of back-translation method corresponds to language-free research. A significant number of cross-cultural and cross-national accounting studies published in leading journals, such as Accounting, Organizations and Society (AOS) utilized back-translation method with the assumption that equivalent meaning can be found in all languages by using this translation method (Schweikar, 1986; Chow, Harrison, McKinnon and Wu, 1999; Abernethy and Vagnoni, 2004; Shafer, 2008; O’Connor, Deng and Luo, 2006; Chow, Shields and Wu, 1999; O’Connor, Vera-Munoz and Chan, 2011). However, much concern on back-translation method has been raised in other disciplines, such as linguistic and social psychology (Janssens, Lambert and Steyaert, 2004). Back-translation is mechanically applied to ensure that the target language wording is as near as possible to meaning in the source language (Janssens et al., 2004; Douglas and Nijssen, 2003; Scandura and Dorfman, 2004; Polska, 2007; Barger and Nabi, 2010; Usunier, 2011). The literal meaning is often overlooked without recognizing the capacity of languages to create unique subjective meanings (Russell, 1991). The important meaning contained in the source language may be lost in the back-translation

process (Polsa, 2007). It has been argued that back-translation method may not be able to convey equivalent meanings of text in different languages. For example, Usunier (2011) states that “*This approach (back-translation) is often at the expense of unique cultural meanings (p. 315)*”. Subjects may exercise inconsistent judgments in different languages (Douglas and Nijssen, 2003; Scandura and Dorfman, 2004; Polsa, 2007; Barger and Nabi, 2010; Usunier, 2011). Although much concern has been raised on back-translation method, no rigorous research has been conducted to address this concern in accounting. In order to provide sharp insight into this issue, a within-subject experiment was conducted in this study among final year undergraduate accounting students from three Chinese universities. Back-translation method was utilized to translate the research instrument from English into Simplified Chinese. The first objective of this study is to test the hypothesis that there is a significant difference in subjects’ accounting judgments in English and Simplified Chinese.

Judgments were examined through an accounting case in the within-subject experiment. This accounting case focuses on an important concept of *control* in preparing consolidated financial reports. Among all ‘uncertainty expressions’, the concept of *control*, as the consolidation criterion in preparing consolidated financial reports, is one of the most important and controversial accounting concepts (Hopkins, Houston and Peters, 2000; Biondi and Zhang, 2007; Bhimani, 2008; Baker, Biondi and Zhang, 2010). According to IFRS 27 ‘*Consolidated and Separate Financial Statements*’, *Control* is defined as, “*the power to govern the financial and operation policies of an entity so as to obtain benefits from its activities*”. Accountants are required to exercise professional judgments to interpret and apply the concept of *control*. In this study, the subjects were required to make consolidation judgment in this accounting case, based on the concept of *control*, contained in the English version of IFRS 27 and the Simplified Chinese version of Chinese Accounting Standards for Business Enterprises 33 (ASBE 33). Largely reacting to the forces of globalization and international convergence of financial reporting, Chinese Accounting Standards for Business Enterprises (ASBE) were adopted by all listed companies from 1 January 2007. The ASBE are substantially in line with IFRS. Importantly, the concept of *control* in ASBE 33 is word-to-word translated from IFRS 27. It is assumed by the standards setters that word-to-word translation provides ‘content equivalence’.

Prior studies on accounting judgments have often been examined in context or without context. There is no consensus on the influence of context on accounting judgments on

'uncertainty expressions'. Many prior studies on 'uncertainty expressions' were conducted without context (Chesley, 1986; Reimers, 1992; Davidson and Chrisman, 1994; Doupnik and Richter, 2003; Doupnik and Ricio, 2006). Subjects were only required to provide threshold numerical estimates on 'uncertainty expressions' in isolation. In contrast, context has been developed in many other studies (Amer et al., 1994; Harrison and Tomassini, 1989; Psaros, Patel and Warnakulasuriya, 2003). Many researchers believe that probability expressions become meaningful within a context (Hogarth, 1991; Amer et al., 1995; Simon, 2002; Kochetova-Kozloski, Messier, JR, and Eilifsen, 2011). However, researchers have different interpretation of the term of "context" in prior studies. Many studies define context as the national environment, including political, cultural, institutional and economic reality (Ball et al., 2003; Bozanic, Dirsmith and Huddart, 2012; Isidro and Raonic, 2012). Context has also been defined as a discipline or an area of study (Roberts, 2012). Auditing research often define context as a simulated real situation (Kochetova-Kozloski, 2010; Amer et al., 1995; Kadous, Kennedy and Peecher, 2003). In this study, judgments were examined in context. Importantly, context in this study is a simulated real situation, which respondents are likely to encounter in their working environment. The context specifically refers to economic context, namely, financial performance of corporations in this study.

Although IFRS implicitly indicate accountants' judgments should be independent from some contextual factors, which are not relevant according to the guidance provided in IFRS, motivated reasoning theory suggests that decisions are affected by individual's motivations to arrive at a particular conclusion (Kerler III and Brandon, 2010). These motivations are often embedded in context (Kunda, 1990). Accordingly, accountants, managers and auditors may use the flexibility inherent in IFRS to interpret and process context in a biased manner, resulting in making disclosures that are favoured by their incentives (Libby, Bloomfield and Nelson, 2002; Chen, Sun and Wang, 2002; Psaros, 2007). They may select the reporting disclosure that portrays events favourably when the position is not indicated clearly by the facts and the relevant professional literature. Inconsistent judgments may be made in different context (Psaros, 2007). Subjects, who receive the case of profit-making entity, tend to be motivated to include this entity in the group reporting because the financial performance and position of the group can be improved by doing so. Likewise, subjects, who receive the case of loss-making entity, tend to be motivated to exclude this entity from the group reporting because the financial position of the parent company would be worsened by an inclusion of such entity. As such, the second objective of this paper is to test hypothesis that subjects, who

receive the case of profit-making entity, are more likely to recommend consolidation than subjects who receive the case of loss-making entity.

The interactive effect of back-translation and economic context on subjects' judgments on the concept of *control* is examined in the final hypothesis. No research has done so far in prior literature to examine the interactive effect of these two factors on subjects' judgments. We predict that back-translation and economic context will interact to influence the subjects' consolidation judgments. On the basis of the second hypothesis, economic context will significantly influence subjects' judgments. However, the influence of economic context on subjects' judgment will differ in English and Simplified Chinese because based on the first hypothesis, we predict that there is significant difference in subjects' consolidation judgments in English and Simplified Chinese. As such, it is expected that the influence degree of economic context on subjects' judgments varies in English and Simplified Chinese.

The results of this study furnish evidence that subjects made inconsistent judgment on the concept of *control* in English and Simplified Chinese. Back-translation has a significant influence on subjects' judgments on the concept of *control*. The first hypothesis is supported. The study also provides empirical evidence that the influence of economic context on subjects' judgment on the concept of *control* is constrained. The second hypothesis is supported by using the English research instrument. The judgments of subjects, who received the profit-making entity case, significantly differ from the judgments of subjects, who received the loss-making entity case. However, the second hypothesis is rejected by using the Simplified Chinese research instrument. There is no significant difference in judgments between subjects, who received the profit-making entity case and subjects, who received the loss-making entity case. The third hypothesis on the interactive effect of back-translation method and economic context is supported. These two factors interactively influence subjects' judgments on the concept of *control*. Subjects' judgments are influenced by the economic context at a greater level in English, compared to Simplified Chinese.

This study has significant methodological contributions to prior accounting research. It challenges the implicit assumption in a significant number of cross-cultural and cross-national studies that back-translation method can ensure the equivalent meanings in different language. The experimental design clearly distinguishes subjects' inconsistent judgments on the concept of *control* in English and Simplified Chinese. Prior international accounting



research has largely relied on survey questionnaires such as studies by Schultz and Lopez (2001), Doupnik and Richter (2004), Doupnik and Riccio (2006) and Tsakumis (2007). We acknowledge the advantages of using survey questionnaires to investigate accountants' judgments, however, accounting research has reached the stage where there is a need to move from survey based research to experimental research design, which provides a stronger support for research findings (Nelson, 2003; Pownall and Schipper, 1999; Kachelmeier, 2010). This study responds to the calls for the need of experimental design in judgment research.

This study has important implications for the ongoing international accounting convergence. Even though IFRS have been adopted by a number of countries, IASB's objective to enhance comparability of financial information may still be difficult to achieve. Much attention should be paid by IASB and other standard setters that accountants are required to extensively exercise their judgments to interpret and apply the English and the translated IFRS. These judgments are largely influenced by the translation and economic context. Moreover, International Federation of Accountants (IFAC) may benefit from this study. To achieve the objective of develop standards and guidance that are widely adopted and implemented, and will enable accountants worldwide to provide services of consistently high quality in the public interest, IFAC may grant permission to interested party to allow them to translate these publications into different languages. More emphasis of the translation issues and guidance should be provided to the interested party in order to reduce the inconsistency of its publications in different languages. This study also has implications for improving learning and teaching of accounting. Accounting curricula and textbooks largely focus on accounting techniques. Greater emphasises on the influence of translation and economic context on accountants' judgments may be included in accounting curricula.

The remainder of the paper is organized into six sections. Section two provides background of this study and prior literature. Section three provides theory and hypotheses development. 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.

## **Background and Prior Literature**

### Consolidated Financial Reporting Standards and Reasons for Selecting China

The controversy over accounting for business combinations has been discussed by regulators and standard setters. Prior literature has mainly focused on accounting methods for business combination (Hopkins, Houston and Peters, 2000; Biondi and Zhang, 2007; Baker et al., 2010). For example, Hopkins et al. (2000) show that the methods of accounting for business combinations influence financial analysts' stock-price judgments. Moreover, Biondi and Zhang (2007) present a comparative analysis of IFRS and Chinese accounting standards relating to accounting for business combinations by comparing fair value and historical cost approaches. Further, Baker et al. (2010) address the disharmony in international accounting standards setting by illustrating the Chinese case of accounting methods for business combinations. China allows the pooling of interests method despite rejection of this method by both FASB and IASB. Indeed, the Chinese Ministry of Finance argues that the pooling of interest method is consistent with the political economic context of China.

The interpretation of the concept of *control*, as the heart of the controversy centres on the difficulties in comparing financial statements, has been also discussed by a number of researchers, particularly since the case of Enron Corp. (Bhimani; 2008; Benston and Hartgraves, 2002; Larson, 2008). One accounting issue, which resulted in Enron's collapse, was the use of Special Purpose Entities (SPEs) as off-balance sheet financing vehicles. Specifically, Enron sponsored hundreds of SPEs, with which it did business. Under US Generally Accepted Accounting Principles (GAAP) in place at that time, Enron was not required to consolidate these SPEs with its financial statements if Enron's ownership interest in the SPE was not greater than 50% (Benston and Hartgraves, 2002; Baker and Hayes, 2004). As such, Enron did not prepare consolidated financial statements despite being heavily involved in the SPEs' by guaranteeing bank debts or providing principal assets. When the market price of Enron's stock declined, the SPEs' assets were insufficient to cover their debts, which consequently had to be taken over by Enron and contributed to Enron's collapse. Enron's failure had raised concerns regarding detailed and specific accounting rules for business combinations. The recent global financial crisis has also highlighted a need for better disclosure about the basis of control and the related accounting consequences.

With respect to the Enron collapse, Bhimani (2008) states that if accountants would have been required to apply the economic principle, Enron's SPEs would have been included in consolidated financial statements as Enron had economic control over the partnerships. Subsequently, stakeholders became more receptive of substance over form approach to

formulate accounting standards (Bhimani, 2008). The IASB adopts this approach to develop IFRS, emphasizing that financial statements should reflect the economic substance of transactions rather than merely their legal form.

Chinese Accounting Standards for Business Enterprises (ASBE) were adopted by all listed companies from 1 January 2007. The ASBE are substantially in line with IFRS. Importantly, the concept of *control* in ASBE 33 is word-to-word translated from IFRS 27. According to IFRS 27, *control* is defined as, “*the power to govern the financial and operation policies of an entity so as to obtain benefits from its activities*”<sup>1</sup>. It has been stated in both IFRS 27 and ASBE 33 that the concept of legal control is usually reflected through the ownership of more than half of the voting power of another entity. It 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;*
- *Power to appoint or remove the majority of the member 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 of body.*

In fact, the principles-based accounting standards for business combinations may also result in further inconsistencies in financial reporting. Indeed, the IASB has continuously revised IFRS 27 to improve financial reporting by clarifying the principles that determine when a reporting entity should consolidate another entity. Specifically, it has been stated that the definition of control includes three components, namely, power, returns and the link between power and returns. However, neither IFRS 27 nor ASBE 33 explains the meaning of the components of the definition of control. In particular, the meaning of power and benefits has not been elaborated. How those components have to be linked to constitute control has not been explained.

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<sup>1</sup> *Control* has been translated as “控制” in Simplified Chinese and the definition of control has been translated as, “指一个企业能够决定另一个企业的财务 and 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。”

China has been selected for this study. China's rapid economic development and its expanding share of world trade have significantly changed the economy and accounting in China over the past decades. With the formation of the People's Republic of China (PRC), in 1949, the government adopted a policy of establishing a single public ownership economy with centralized management of businesses and control of all economic resources (Lou, Wang, and Enthoven, 1987; Graham and Li, 1997; Lee, 2001). China had very limited international trade and only a few foreign direct investments. In 1978, China adopted an 'open-door' policy and initiated an unprecedented transition from a centrally planned economy to a quasi-state capitalism and semidemocratic authoritarianism economy (Shambaugh, 2009), where capitalism and free enterprise operate under the watchful eye and sometimes direct intervention of the state (Graham and Li, 1997; Lee, 2001; Perera, 2009). This transition has been facilitated and reinforced by several economic reforms during the last two decades, which have resulted in a sustained increase in international trade and foreign trade investments. Since, 2010, China has emerged into a position where it is now the second largest economy after United States, and the world's largest trading economy (IMF, 2012). It is the world's fast-growing major economy, with growth rates averaging 10% over the past 30 years (Kaplinsky and Farooki, 2010). China is a major driver of global growth.

China's accounting reforms have mirrored the social-economic reforms. The examination of prior literature have clearly shown that the traditional Chinese accounting system was based on the Soviet Union model, which focused on uniform accounting system (Tang, Chow and Cooper, 1996; Graham, 1996; Tang, 2000; ICAS, 2007; Ezzamel, Xiao and Pan, 2007). The primary purpose of this accounting model was "to assist in the implementation of state economic policy and to maintain state control over the means of production" (Adhikari and Wang, 1995, p. 27). Its main task was to report to the central government information required for planning and control purposes (Tang, 2000). This system typically consisted of a chart of accounts, a set of prescribed financial statements, and detailed regulations concerning depreciation, costing and spending. Accountants' professional judgments were rarely used under the uniform and rigid accounting system (Ezzamel et al., 2007).

As the planned centralized economy is gradually replaced by a socialist market economy, the profession of accountancy is emerging and playing an increasingly important role. China's accounting reform commenced in 1985 with the establishment of the 'Accounting

*Regulations for Joint Ventures*' (the 1985 Regulation). These regulations introduced Anglo-American accounting practice, representing a radical departure from the previous uniform accounting system (Chow, Chan and Gray, 1995). China continued its accounting reform in 1992 with the promulgation of the '*Basic Standard of Accounting for Business Enterprises*', which was seen as "a landmark move to accelerate the process of switching to a market economy" (Xinhua, 1992). It was a clear signal that Anglo-American accounting principles were to replace the rigid Soviet accounting model practiced in China since 1949 (Tang, 2000). The purpose of these new standards, as described by the officer of Chinese Ministry of Finance (MoF), is to "standardize the financial behaviour of Chinese enterprises and bring China's accounting system in line with international practice" (Xinhua, 1992). More recently, Chinese Accounting Standards for Business Enterprises (ASBE), complying with IFRS were adopted by all listed companies from 1 January 2007.

The adoption of IFRS has forced China to move away from the traditional '*legalistic*' accounting standards to '*substance over form*' accounting standards (ICAS, 2010). This brings to Chinese accountants significant challenges relating to their understanding and judgments on the translated IFRS. This is because the Chinese state government has still been intricately involved with the development and regulation of the accounting profession (Yee, 2012). Accounting rules and regulations are still controlled by Chinese government. The '*legalistic*' approach still barricades the current accounting development in China (Yee, 2009). Given China's unique economic, political and institutional differences from Anglo-American countries, this study will contribute to international accounting research by examining the application of IFRS in a unique national environment.

Simplified Chinese was used to design the research instrument. Chinese language is one of the most complex languages in the world (Bökset, 2006). Chinese is more than just a language associated with the country's 5000-year civilization and oriental philosophical thought; it is also a fast-developing commercial common language 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 (Ding and Saunders, 2006). 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.

Simplified Chinese characters are standardized Chinese characters officially used in the People's Republic of China. In general, schools in China mainland<sup>2</sup> use simplified characters.

### Language and Translation

Given the focus of globalization and international convergence of accounting, a number of cross-cultural comparative studies have been conducted in accounting to examine judgments of accountants with different nationalities on 'uncertainty expressions' contained in IFRS (Doupnik and Salter, 1995; Schultz and Lopez, 2001; Doupnik and Richter, 2003; Doupnik and Richter, 2004; Doupnik and Riccio, 2007; Tsakumis, 2007). IFRS include a large number of 'uncertainty expressions' which have to be translated and interpreted by applying the professional judgment. The translated accounting standards have to be made understandable, applicable and workable in different language environments (Mennicken, 2008; Belkaoui, 1990; Evan, 2004; Dahlgren and Nilsson, 2012). It is important that the conceptual meaning of the standards need to be unchanged when translated in different languages. However, prior research has provided empirical evidence that judgments of accountants with different nationalities on 'uncertainty expressions' are not consistent. For example, Doupnik and Richter (2003) provide evidence that differences exist in interpretation of uncertainty expressions between English-speaking and German-speaking accountants.

The differences found in accountants' judgments between and across nations are often attributable to the differences in national culture. For example, Tsakumis (2007) conducted an experiment to investigate the influence of culture on Greek and U.S. accountants' recognition and disclosure decisions on contingent asset/ liability based on the guidelines of a financial reporting standard. The findings of this study showed that "national culture does play a role in accountants' disclosure judgments (i. e. reporting an event in the notes to the financial statements)" (p. 28). However, it is important to note that the differences in judgments may not necessarily be attributable to the cultural differences. These differences in interpretation may be the result of a language culture effect or due to poor translation and a lack of an equivalent term in the target language. They also argue that individuals are more confident in applying their native language and may be able to make finer and subtler distinctions and interpretations in their own language. Indeed, Doupnik and Richter (2003)

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<sup>2</sup> Mainland China is the part of China not including the Republic of China controlling Taiwan, Hong Kong and Macau. Traditional characters are used in Taiwan, Hong Kong and Macau.

found that nationality alone (at least among German-speaking countries) does not result in significant differences in probabilities assigned to uncertainty expressions used in IFRS. Patel (2004) further argued that

*“Many of (the) studies made little attempt to determine what culture is or to determine what it is about culture that produced the claimed effects. That is, “the employment of the culture concept has been an excuse for intellectual laziness, whereby ‘culture’ has often served simply as a synonym for ‘nation’ without any further theoretical grounding.” (p. 63)*

While a number of cross-cultural and cross-national research provides useful insights into differences in accounting and audit judgments across countries, those insights may be limited. The link between language and thought is often ignored in these studies. 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). Recent research has shown that the particular language we speak influences the way we think about reality, forms one part of the broader question of how language influences thought (Evans et al., 2011). Certain properties of a given language have consequences for patterns of thought about reality. Language embodies an interpretation of reality and language can influence thought about that reality (Lucy, 1997; Evans, 2004; Hellmann et al., 2010; Dahlgren and Nilsson, 2012). The link between language and thought is expressed in the Sapir-Whorf hypothesis, which suggests that language reflects and influences thought (Sapir, 1929; 1949; Kay and Kempton, 1984; Hoosain, 1986; Evans, 2004). Language affects the ease with which we perform mental tasks (Crystal, 1987; Werner, 1994; Belkaoui, 1978).

Accounting, as the language of business, should be communicative (Oliver, 1974; Hellmann et al., 2011). The importance of communication has been widely recognized in accounting literature. Communication is the pivotal problem in accounting and very few accounting concepts can be used unconditionally without some risk of being misinterpreted (Johnson, Koh and Killough, 2009). Accountants may be able to agree upon the literal meaning of accounting concepts (denotative meaning), but the subjective or emotional meaning of these concepts (connotative meaning) may be different to each accountant (Osgood, Suci and Tannenbaum, 1957). Virtually all accounting concepts have denotative as well as connotative meanings (Flamholtz and Cook, 1978). Even with agreement between communicating parties

as to denotative meaning, the parties can display different behaviours in their response to a concept, thus implying the importance of connotative meaning in driving individual behaviour (Flamholtz and Cook, 1978; Hronsky and Houghton, 2001).

Prior accounting studies have focused on the differences in meanings of selected accounting concepts among various professional groups, such as account preparers, users of financial reports, accounting academics and accounting students (Haried, 1972, 1973; Oliver, 1974; Houghton, 1987; Hronsky and Houghton, 2001; Johnson et al., 2009). The importance of connotative meaning of accounting concepts on accounting judgments can be traced back to the 1970s. Haried (1972, 1973) pointed out that accountants have the primary responsibility for reducing semantic problems in external accounting communication. Followed by Haried (1972, 1973), Oliver (1974) further used semantic differential technique to measure the meaning of several important accounting concepts among accounting professionals and educators. A confounding lack of communication with regard to these accounting concepts was found in Oliver's study. Moreover, Belkaoui (1980) stated that the rationale from the linguistic relativity paradigm is that the accounting treatments of socio-economic accounting affect individual investment decisions in a way which depend on the professional group of the user and the investment strategy adopted. In Belkaoui (1980)'s study, bankers seemed to be more aware of the importance of accounting information and specific information. It has been shown that the perception of accounting concepts vary 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 principal finding of this research is that accountants and shareholders do not share the same meaning for the concept 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 Ohgartaigh (2009) extend Bourdieu (1991)'s work on language and symbolic power to



explore the shared meanings contained in true and fair value<sup>3</sup>. They have found that the meaning of concepts in accounting and auditing emanate from the practice of the field. Ambiguous concepts happen in a habitus which is inculcated, structured, durable and transportable in the practice of professional accounting. Furthermore, Johnson et al. (2009) argue that effective communication implies that for any particular word/term, 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 focussed on the extent to which various parties to the communication process attribute the same meanings to the key accounting concepts (Haried, 1972, 1973; Oliver, 1974; Houghton, 1987; Hronsky and Houghton, 2001; Johnson et al., 2009; Hronsky and Houghton, 2001). Most studies have examined the differential meanings of accounting concepts held by preparers and users of financial accounting information. However, little research has been conducted to examine the possible differences of meanings of accounting concepts 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; Dahlgren and Nilsson, 2012). People who speak different languages perceive and evaluate external realities differently (Belkaoui, 1980; Evan, Baskerville and Nara, 2011). The division of reality is not identical from one language to another (Glanert, 2008). No two languages are ever sufficiently similar to be considered as representatives of the same social reality. The worlds in which different societies live are distinct worlds, not merely the same world with different languages (Evan, 2004). The context of each language has assumed an increasingly important role, and translation can be seen as a re-contextualization (Dahlgren and Nilsson, 2012). Translation involves the movement of text across time and space, and whenever texts move, they also shift frames and discourse worlds (House, 2006). Translation is always a shift, not between two languages, but between two cultures (Eco, 2001). Exact equivalence, or an exact transfer of meaning in translation, is almost impossible.

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<sup>3</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).

Prior studies have pointed out that certain accounting concepts in English do not have simple one-to-one equivalents in other languages (Belkaoui, 1980; Evans, 2004; Cao, 2002; Hellmann et al., 2010). Literal translation of some accounting concepts and terms is difficult. This will lead to a blurring of meaning or loss of significant differences in the concepts (Evan, 2004). For example, there are many concepts in English unknown to the Chinese accounting system. 'Fair value' has been introduced to China and translated in Simplified Chinese<sup>4</sup>. In English, fair value is defined as '*the amount for which an asset could be exchanged, or a liability settled, between knowledgeable, willing parties in an arm's length transaction* (IAS, 3)'. However, the Chinese translation of 'fair value' means in a fair trading situation, the amount for which an asset could be exchanged, or a liability settled, between two willing parties with the full knowledge of this fair trading. The meaning of '*arm's length transaction*' embedded in the English accounting concept is lost in the translation of fair value to Chinese. As such, the influence of language and translation on subjects' judgments on accounting concepts cannot be ignored. Increasing the number of languages in which accounting standards are issued increases the likelihood that users of the translated standards will disagree on the meanings of accounting concepts used (Davidson and Chrisman, 1994).

#### Economic Context and Accounting Judgments

Research in psychology has shown that contextual information influence interpretation of vague expressions (Borges and Sawyer, 1974; Cohen, Dearney, and Hansel, 1958; Hormann, 1983; Budescu, Broomell, and Han-Hui, 2009). However, the role of context in auditing and accounting may not be agreed among researchers. Many prior studies on judgments have been conducted without context. Subjects were only required to provide threshold numerical estimates on 'uncertainty expressions' in isolation or make auditing or accounting judgments in sentence, assuming context is not a fundamental factor in the interpretation of uncertainty expressions in accounting and auditing (Chesley, 1986; Reimers, 1992; Davidson and Chrisman, 1994; Douppnik and Richter, 2003; Douppnik and Ricio, 2006). By supporting this assumption, some considerable evidence has been provided. For example, Amer et al., (1994) conducted a study where probability expressions were assessed in the context of varying

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<sup>4</sup> According to ASBE 3, 'fair value' is translated as '公允价值' in Simplified Chinese. The translated definition of 'fair value' in Simplified Chinese is '在公平交易中，熟悉情况的交易双方自愿进行资产交换或债务清偿的金额' (ASBE 3).

probabilities concerning the collection of a material receivable. The results reported were remarkably similar to Reimers (1992) who did not use a context.

In contrast, context has been developed in many other studies (Amer et al., 1994; Harrison and Tomassini, 1989; Psaros, Patel and Warnakulasuriya, 2003; Douppnik and Richter, 2004). The term of “context” is too general. Researchers have different interpretation of the term of “context” in prior studies. Many studies define context as the national environment, including political, cultural, institutional and economic reality (Ball et al., 2003; Bozanic, Dirsmith and Huddart, 2012; Isidro and Raonic, 2012). Context has also been defined as a discipline or an area of study. For example, Roberts (2012) designed his study in tax context. Experimental and survey research often define context as a simulated real situation, which respondents are likely to encounter in their working environment (Kochetova-Kozloski, 2010; Amer et al., 1995; Kadous, Kennedy and Peecher, 2003). Context is recognized as an important factor to influence accounting and auditing judgments in these studies. To assess probability accounting and auditing judgments without a context is inevitably an artificial task. Lack of context has often been a reason for low response rate in accounting empirical studies. For example, Simon (2002) stated that “the main reason cited for questionnaires being returned uncompleted, was lack of a context within which to access the probability expressions. (p. 610)”. Different studies manipulated different contextual features. Some features may influence interpretation of probability expressions more than others. But the effect of context on judgments cannot be erased totally by the little effect of contextual factor in some studies (Amer et al., 1995). In this study, a simulated real situation is used to represent context. The context specifically refers to economic context, namely, financial performance of corporations.

A large number of studies on auditors’ judgments have done in context by providing a simulated real situation (Amer et al., 1995; Hackenbrack and Nelson, 1996; Kadous, Kennedy and Peecher, 2003; Kerler III and Brandon, 2010; Schultz, Bierstaker and O’Donnell, 2010; Knechel, Salterio and Kochetova-Kozloski, 2010). For example, Amer et al. (1995) conducted an experiment wherein audit managers provided interpretations of the three SFAS No. 5 probability expressions as well as nine other probability expressions used in the professional literature. The results of the experiment indicate that interpretations of the expression probable are influenced by a contextual feature, whereas interpretations of remote and reasonable estimable are not. Hackenbrack and Nelson (1996) show that auditors tend to

interpret ambiguous standards in ways that lend support to client-preferred accounting methods. Moreover, Kadous, Kennedy and Peecher (2003) show that performing a quality assessment amplifies the effects of auditors' directional goals on their acceptance of client-preferred methods and on their ratings of the quality of that method. Auditors making quality assessments are more likely to identify the client's method as the most appropriate method when they are more committed to their directional goals. Further, Schultz, Bierstaker and O'Donnell (2010) find that auditors' judgments are largely influenced by the audit methods and decision support tools. Furthermore, Knechel, Salterio and Kochetova-Kozloski (2010) conducted an experiment to examine the effect of two complex audit technologies commonly used by auditors, benchmarking of performance measures and strategic analysis, on the risk judgments of auditors carrying out the initial planning of an audit.

Although the importance of context in auditing judgments has demonstrated well in prior studies, little emphasis has been placed on the importance of context on judgments in the area of financial reporting. In fact, accountants' judgments are different from auditors. For example, Schultz et al. (2010) state that accountants normally do not have decision support tools<sup>5</sup>, which are often used by auditors, to make their judgments. Knechel et al. (2010) also point out that auditors use benchmarking of performance measures and strategic analysis in the initial planning of an audit. Moreover, although accountants are required by professional standards to exercise professional judgment in different practice setting, their judgments may be influenced by different factors, such as personality and organizational culture, and hence their behaviour of making judgments may differ. For example, Roberts (2010) find that experienced Certified Public Accountants are as client-supportive in audit settings as they are in tax settings when exercising their professional judgment, and ethical standards mandating impartiality in auditing are not uniformly being followed. As such, the findings in auditing may not hold true in the area of financial accounting. This study contributes on prior literature to examine the importance of economic context on judgments in the area of consolidated financial reporting.

## **Theory and Hypotheses Development**

### **The Influence of Translation on Accounting Judgments**

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<sup>5</sup> Explain decision support tools.

The earlier discussion has shown that IFRS contains a large number of ‘uncertainty expressions’ and importantly, accountants are required to exercise their professional judgments in interpreting and applying these expressions in practice. In order to ensure that IFRS are understandable, applicable and workable in different language environments, IFRS have been translated into more than forty languages. It is important that the conceptual meaning of the standards need to be unchanged when translated into different languages, (Mennicken, 2008; Belkaoui, 1990; Evan, 2004; Dahlgren and Nilsson, 2012). However, 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; House, 2006; Dahlgren and Nilsson, 2012). The translated ‘uncertainty expressions’ may not have the same meaning to accountants, which may result in accountants’ inconsistent judgments on these expressions.

In order to provide empirical evidence on the issue whether subjects exercise consistent judgments in different languages, this study utilized back-translation method, which is most widely used in cross-cultural and cross-national accounting studies, to develop the research instrument. We challenge the implicit assumption held in these studies that subjects consistently response in different languages (Powell, Strickland and Burnaby, 1992; Ittner and Larcker, 1997; Mendoza, Collins and Holzmann, 1997; Roxas and Stoneback, 1997; Ittner, Larcker, Nagar and Rajan, 1999; Wong-on-wing et al., 2007; Burkert and Lueg, 2012). Specifically, it is expected that subjects make inconsistent consolidation judgments on the concept of *control* between English scenario and the same scenario translated into Simplified Chinese.

Virtually all accounting concepts have denotative and connotative meanings (Flamholtz and Cook, 1978). Denotative meaning refers to the ordinary or literal meaning of a concept, while connotative meaning is subjective or emotional meaning (Osgood et al., 1957). By using back-translation, denotative equivalence may be achieved, however, connotative equivalence is very difficult to ensure (Flamholtz and Cook, 1978; Hronsky and Houghton, 2001). Subjects may focus on different important meanings in sentences between English and Simplified Chinese, as the sequence of addressing the importance in these two languages are different. For example, Simplified Chinese places within the sequence of the strongest and most emotionally laden sentences, usually near the end, whereas, English usually places the strongest laden sentences at the beginning (Anolli, Wang, Mantovani and Toni, 2008).

Importantly, language and political ideology can be said to be closely linked (Yee, 2012). Political ideologies serve as the ‘invisible power’ of Chinese government in the process of social control and in the construction of a particular social order. China, as the second largest economy in the world, is one throughout which the government has traditionally played an important role. Chinese government takes a more-top-down approach under state corporatism (Yee, 2012). Corporatist organizations are created and maintained by the state, and the weight of decision-making power is also said to lie very heavily on the side of the state. For example, the existence of state-owned enterprises (SOEs) in China. From the founding of the People’s Republic of China in October 1949 through to August 1983, there was no independent government audit institution in China as the economic activities of SOEs were centrally controlled and closely supervised by the relevant government finance bureaus. While China has embarked on a series of reforms since 1980s that have included privatization, corporation, and the implementation of an incentive contract system for SOEs managers, the government retains dominant control through its ownership of non-tradable state-owned shares or through its administrative authority over important SOE decisions. SOEs account for the majority of China’s economy<sup>6</sup>. 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 share (Sun and Tong, 2003). Specifically Chinese government wants to maintain its control or influence over the SOEs and so it retains substantial ownership in many listed firms (Chen, Firth, Xin and Xu, 2008). The controlling shareholder (whether state or private) owns what are called state or legal person shares, and these are not publicly traded.

The ‘invisible power’ of Chinese government has been embedded in the connotative meaning of ‘*control*’. This important meaning has been lost in the process of translation and back-translation. Recall that human judgments and reactions are largely influenced by connotative meaning (Osgood et al., 1957; Houghton, 1988). If the connotative meanings of the concept of *control*, contained in IFRS 27 and ASBE 33 differ, then it is more likely that subjects make inconsistent consolidation recommendation in English and Simplified Chinese. Specifically, compared to English context, subjects tend to be conservative to exercise their judgments on the concept of *control* in Simplified Chinese, as their

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<sup>6</sup> Among the top 500 Chinese manufacturing enterprises in China in 2009, 50% were state owned creating 62% of total profits.

judgments may be limited by government's 'invisible power'. As such, the following hypothesis has been developed:

*H1: There is likely to be a significant difference in subjects' consolidation recommendation between English scenario and the same scenario translated into Simplified Chinese.*

### Influence of Economic Context on Accounting Judgments

Recall from the early discussion that financial reporting practice may not be determined by accounting standards alone. IFRS permits enough judgment to let managers' reporting choice affect accounting numbers (Schipper, 2005; Isidro and Raonic, 2012). Financial reporting practice under a given set of standards is sensitive to the context where account preparers' judgments are made. Douppnik and Richter (2004) found that accountants' interpretations of probability expressions with reference to the specific accounting context differ from their interpretations of these expressions in isolation. Indeed, financial reporting practice is determined by the interaction between accounting standards and context, in which preparers' incentive is often embedded (Ball, Robin and Wu, 2003; Douppnik and Richter, 2004; Isidro and Raonic, 2012) For example, manager and auditor incentives influence the decision, and hence whether economic losses are recognized in a timely fashion or are incorporated in income gradually over the entire life of the impaired future cash flows. Preparers' (i.e. managers' and auditors') financial reporting incentives depend on the sources of demand for, and political influence on, financial reporting (Ball et al., 2003).

Motivated reasoning theory suggests that decisions are affected by individual's motivations to arrive at a particular conclusion (Kerler III and Brandon, 2010). Individuals will reach a preferred conclusion to the extent that they can make a justifiable case for doing so (Kunda, 1990). Motivated reasoning research suggests that reasonable directional goals can bias the information (or evidence) gathered in the reasoning process, the depth of information processing, and the manner in which the information is combined in the decision to support the preferred conclusion (Piercey, 2009; Kerler III and Brandon, 2010). Piercey (2009) states that individuals assess the probabilities of events with other motivations (e. g., optimism or pessimism). For example, when performing a financial statement audit, individuals repeatedly assess the likelihood that a client's financial statements contain material errors or misstatements. A common concern within this context is that motivations to maintain a

profitable relationship between one' employer and the client can create preferences for an individual to assess the client optimistically rather than accurately. Such preferences tend to bias individuals' assessments of their clients' financial statements. Kerler III and Brandon (2010) conducted an experiment to examine how two contextual factors, client importance and auditor trust, impact auditors' directional goal commitment and decision-making at the transaction level. It has been reported that an individual will make the preferred judgment while maintaining an "illusion of objectivity". This is supported by findings in auditing research that suggest auditors are more likely to accept the client's preferred position when guidelines are ambiguous regarding the appropriate accounting treatment.

With regards to consolidated financial reporting, both IFRS 27 and ASBE 33 offer extensive opportunities for accountants to exercise their judgments (Baker and Hayes, 2004; Bhimani, 2008). Although it has been implicitly indicated that accountants' judgments should be independent from some contextual factors, which are not relevant according to the guidance provided in IFRS, prior studies have shown that accountants, managers and auditors use the flexibility inherent in IFRS to make disclosures that are favoured by their incentives (Libby, Bloomfield and Nelson, 2002; Chen, Sun and Wang, 2002; Psaros, 2007). Financial-reporting practice is contingent on the interaction between accounting standards and preparers' incentives (Ball, Robin, and Wu, 2003). Incentives may influence accountants' judgments on the decision to report a subsidiary's performance on a consolidated basis given that both (i.e. consolidation and non-consolidation) are feasible (Mian and Smith, 1990). Accountants may select the reporting disclosure that portrays events favourably when that position is not indicated clearly by the facts. Accountants may use all available information to arrive at the predetermined desired disclosure.

Specifically, accountants may select predetermined reporting disclosures by choosing to assess case specific information consistent with their predetermined beliefs if standards allow for judgments. In this paper, the context refers to the economic context, which is manipulated on the basis of the financial performance of the associated entity. Specifically, the research instrument of this study includes an accounting case study where the concept of *control* has not been clearly indicated and both consolidation and non-consolidation judgments are possible. The financial situation of the associated entity is manipulated as profitable, or loss making. It is proposed that if the associate entity makes a significant profit in the reporting period, subjects have more incentive to include this associated entity in the group financial



reports, as the financial performance and position of the group can be improved by doing so. As such, subjects are more likely to make consolidation judgment in the profit-making case. Likewise, if the associated entity makes a significant loss in the reporting period, subjects have less incentive to include this subsidiary in the group financial reports, as the financial position of the parent company would be worsened by an inclusion. Subjects are less likely to make consolidation judgment in the loss-making case. Consequently, the following hypothesis is formulated:

*H2: Subjects, who receive the case of profit-making entity, are more likely to recommend consolidation than subjects who receive the case of loss-making entity.*

### Interactive Effect of Back-translation and Context on Accounting Judgments

Translation can be seen as a re-contextualization, which is always a shift, not between two languages, but between two cultures (Dahlgren and Nilsson, 2012; Eco, 2001). By using back-translation method, many cross-cultural studies assumed that the best translation of research instrument from one language to the other(s) can be achieved. However, back-translation is often at the expense of unique cultural meanings of different languages (Polsa, 2007; Usunier, 2011). Exact equivalence or an exact transfer of meaning in translation is questionable. H1 focuses on the influence of translation on subjects' judgments. By using back-translation method, subjects may focus on different important meanings in sentences, as the sequences of addressing the importance in these two languages are different.

Importantly, prior accounting studies have shown that although the literal meaning (denotative meaning) of an accounting concept may be agreed by account preparers, the subjective meaning (connotative meaning) of such concept may differ and account preparers may make different judgments on this concept (Haried, 1972, 1973; Oliver, 1974; Houghton, 1987; Hronsky and Houghton, 2001; Johnson et al., 2009). The important meaning contained in accounting concepts may be lost in the process of translation and back-translation. Recall the earlier discussion, Chinese political ideologies serve as the 'invisible power' of the state in the process of social control and in the construction of a particular social order. This 'invisible power' of the Chinese government has been embedded in the connotative meaning of control in the key consolidation criterion. Given the strong influence of 'invisible power' of the Chinese government, Chinese accountants' interpretation of the concept of control, contained in IFRS 27 may have different connotative meaning, compared to the same

standards word-to-word translated to Simplified Chinese, that is ASBE 33. As such, it is expected that subjects make inconsistent judgments on the concept of *control* between English scenario and the same scenario translated into Chinese.

H2 focuses on the influence of context on subjects' judgments on the concept of *control*. Recall from the early discussion that decisions are affected by individual's motivations to arrive at a particular conclusion (Kunda, 1990; Piercey, 2009; Kerler III and Brandon, 2010). Prior studies have shown that accountants, managers and auditors use the flexibility inherent in IFRS to make disclosures that are favoured by their incentives (Libby, Bloomfield and Nelson, 2002; Chen, Sun and Wang, 2002; Psaros, 2007).

Relating to consolidated financial reporting, accountants may select the reporting disclosure that portrays events favourably, given that both (i.e. consolidation and non-consolidation) are feasible (Mian and Smith, 1990). In this paper, the context refers to the economic context, which is manipulated on the basis of the financial performance of the associated entity. The financial situation of the associated entity is manipulated as profitable, or loss making. The financial performance and position of the group can be improved by including a profit-making entity in the group financial reports. Likewise, the financial position of the parent company would be worsened by an inclusion of a loss-making entity. As such, it is expected that subjects, who receive the case of profit-making entity, are more likely to recommend consolidation than subjects who receive the case of loss-making entity.

No research has been done so far in prior literature to examine the interactive effect of back-translation and context on subjects' judgments. This study is a pioneering study to examine the interaction effect of these two factors on subjects' judgments. It is expected that back-translation and context will interactively influence the subjects' consolidation judgments. On the basis of H2, context will significantly influence subjects' consolidation judgments. Subjects are more likely to make consolidation judgments in the case of profit-making entity, compared to the loss-making entity. However, the degree of the influence of context is not the same between English scenario and the same scenario translated into Chinese, as we expect a significant difference in subjects' judgments between English and Simplified Chinese versions of research instrument in H1. Consequently, the following hypothesis is formulated:

*H3: Back-translation and context will interact to influence the subjects' consolidation judgments. The influence degree of context on subjects' judgments varies between English scenario and the same scenario translated into Simplified Chinese.*

*(Subjects with case scenario in English are more likely to make the consolidation recommendation for a profit-making entity, compared to the loss-making entity.)*

*Subjects with same scenario translated in Chinese are likely to make the same consolidation recommendation for a profit-making entity and for a loss-making entity.)*

## **Research Method**

### Sample selection

To examine the research hypotheses, a within-subject experiment was conducted. Subjects were chosen from final year undergraduate accounting students in three Chinese universities. More importantly, all subjects met the following criteria. First, subjects are Chinese native speakers and they have been educated in China. The official language in schools in China is Simplified Chinese. As such, subjects should be able to understand the research instrument in Simplified Chinese. Second, subjects have passed College English Test (CET) Band 4. CET is mandatory for university students in China. The vocabulary requirement for CET Band 4 is 4000 words. Subjects, who have passed CET Band 4 have met the language requirement to understand the research instrument in English. Third, subjects were enrolled in an undergraduate professional accounting degree and they are currently undertaking an auditing course. This auditing course is the final compulsory course for the professional accounting degree in those three universities. In order to take this auditing course, students have to complete a number of accounting courses, including the course relating to consolidated financial reporting, as prerequisites. As such, all subjects had satisfactory understanding of accounting standards relating to consolidated financial reporting.

The choice of accounting students as subjects in experimental research remains controversial. There is a tendency to assume that accounting professionals always make the best subjects for judgmental experiments. However, numerous papers have been published discussing the validity of accounting and auditing experiments in which students are the subjects (e.g. Ashton and Kramer, 1980; Walters-York and Curatola, 1998; Patel and Psaros, 2000; Peecher and Solomon, 2001; Liyanarachchi and Milne, 2005). In this experiment, we use final year university accounting students as subjects for three reasons. First, this paper focuses on the influence of translation and context on judgments. By using student subjects, the possible

influence of organizational culture of accounting firms on judgments can be controlled to large extent. Prior research has shown that organizational culture of accounting firms influences accountants' judgments (Patel, 2003; Chow, Harrison, McKinnon, and Wu, 2002; Jones and Higgins, 2006; Chand, 2012). For example, Chand (2012) provided empirical evidence that there is a significant difference between the judgments of the Big 4 and non-Big 4 accountants within a country when interpreting and applying selected IFRS that contain uncertainty expressions in practical situations. In this study, 89.6% of the subjects have no accounting experience (shown in Table 1). As such, using student subjects in the current paper can minimize the confounding influence of organizational culture of accounting firms on subjects' judgements.

Second, the judgments of final year undergraduate accounting students are very important to different stakeholders, especially graduate employers. Final year undergraduate accounting students are the proxy of entry-level accounting practitioners, as 89.4% of the respondents in this study have the intention to become a member of accounting professional bodies in future (see details in Table 1).

Third, we acknowledge that accounting students and practitioners differ in terms of some characteristics, such as average age, and practice experience. This may harm external validity of this study. However, it has been argued that internal validity is a necessary condition for external validity (Cook and Campbell, 1979; Peecher and Solomon, 2001). The extent of the threat of external validity by using student subjects is unknown (Peecher and Solomon, 2001). Indeed, accounting students are adequate surrogates for practitioners in many accounting studies (Ashton and Kramer, 1980; Houghton and Hronsky, 1993; Liyanarachchi and Milne, 2005). Ashton and Kramer (1980) reported that for nearly two third of cases in their study, the internal control judgments of student surrogates and independent auditors did not differ significantly. Houghton and Hronsky (1993) find that accounting students and practitioners share the similar cognitive structure within which meanings of fundamental accounting concepts are held. Liyanarachchi and Milne (2005) provide further evidence on the validity of using students as experimental surrogates for accountants. Their experiment suggested some consistency in terms of investment strategy effects on environmental disclosures between accounting students and practitioners. In general, students' short-term and long-term investment decisions compare well with those of the practitioners.

### Research Instrument Design

The influence of translation and context on subjects' judgments on the concept of '*control*', as specified in IFRS 27 and ASBE 33, was examined through an accounting case study. The research instrument consists of three parts. Part 1 includes questions relating to subjects' familiarity to IFRS, ASBE and ASBE 33. The subjects were also required to provide their judgments on the concept of '*control*' without accounting specific case information.

Part 2 contains a detailed accounting case relating to consolidated financial reporting. In this part, all subjects were asked to presume that they are the financial controller of a company (Dunball Electrical) which has 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 is also contained in the accounting scenario to assist all subjects with answering 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' 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' future borrowings and terms of operations.

Two versions of research instrument were developed based on the financial performance of Tonens Finance in the previous twelve months. Specifically, the financial performance of Tonens Finance has been manipulated as making either a significant profit or a significant loss in the previous twelve months. As a check of this manipulation, all subjects were asked a debriefing question to determine their perceptions of the financial impact of preparing consolidated reporting. Subjects were asked to indicate their answers to one question on a ten-point likert 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 in Group 1 are expected to give score of equal or above 6, as Dunball Electrical's financial position will look better by including Tonens Finance. However, subjects in Group 2 are expected to give score of equal or less than 5 because the significant loss in Tonens Finance may negatively impact Dunball Electrical's financial position.

All subjects were required to provide their judgment on whether they would recommend to senior management that consolidated statement be prepared based on the concept of *control*, stated in IFRS 27 in English version and ASBE 33 in Simplified Chinese version. The financial impact of consolidation recommendations (i.e. consolidate or not consolidate) on Dunball Electrical's financial position has been reflected through Dunball Electrical's consolidated accounts including Tonens Finance<sup>7</sup> and Dunball Electrical's group accounts with investment in Tonens Finance<sup>8</sup> respectively in the instrument.

In Part 3, 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.

The method of translation and back-translation 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 Chinese version was translated back to English by an independent accounting academic. The discrepancies between different versions of instrument were discussed and this process was repeated three times until all discrepancies were eliminated.

A pilot test of research instrument was conducted among sixteen accounting academics and ten professional accountants with expertise in the area of consolidated financial reporting. They were asked to complete the research instrument. Importantly, they were specifically asked to evaluate the instrument with objective of improving its understandability and comment on the realism of the accounting case in the instrument. Each participant in this pilot test was interviewed to gain further insight into their responses. Based on their feedback, content and questions were refined to improve understandability. After making changes to the instrument, the research instrument was further pilot tested among ten final year accounting students, who have completed the course relating to consolidated financial reporting and speak both English and Simplified Chinese. They were asked to complete the instrument and comment on the readability and understandability of the research instrument. No issues were

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<sup>7</sup> If consolidation recommendation is made, Dunball Electrical prepares consolidated account including Tonens Finance.

<sup>8</sup> If the recommendation is not to consolidate, Dunball Electrical prepares group accounts with investment in Tonens Finance.

identified from students' feedback. The pilot test provided evidence that an appropriate accounting case scenario had been developed.

### Implementation of the within-subject experiment

One of the most controversial problems relating to within-subject experiment is that observed changes are due to the sequencing of the treatment rather than to the treatment (Singleton and Straits, 2005). In order to control for order effects, this study implemented a method, called counterbalancing. This consists of reversing the sequence of distribution of the English and the Simplified Chinese versions of instrument, so that different groups of subjects experience either sequence. Specifically, a formal fifty minutes session was organized in each Chinese university to conduct this experiment. Subjects in each session were equally classified in two groups, namely groups of profit-making case and loss-making case. Two versions of instrument, based on the financial performance of Tonens Finance, were targeted to distribute to these two groups. In each group, half of subjects received the Chinese version of instrument, while the other half of subjects received the English version. Twenty minutes were allowed for subjects to complete the research instrument. After the researchers collected the completed instrument back, the subjects, who initially completed Chinese version, received the English version of instrument, while the subjects, who initially completed English version, received the Chinese version of instrument. The subjects were allowed twenty minutes to complete the second instrument. The researchers then collected the completed instrument back from subjects at the end of the session.

## **Results and Discussion**

### Subjects' Profiles

The total number of 144 usable responses was collected from three universities, among which, 60 instruments were English version and 84 instruments were Chinese version. All subjects were born in China with Chinese nationality. They were educated in China<sup>9</sup> and their first language is Simplified Chinese. Of the respondents, 16% were from University 1, 15.3.0% were from University 2 and 68.8% were from University 3. 81 copies of completed instrument were from Group 1, where subjects received the case of associated entity making profit in the reporting period, and 63 copies were from Group 2, where subjects received the case of associated entity making loss in the reporting period.

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<sup>9</sup> Participants' formal education includes primary education, secondary education, and tertiary education.

77.8% of the respondents were male and 22.2% were female. 91.7% of the respondents were in the age group of 20 to 24. This is because the research was conducted among university accounting students. 87.5% of the respondents are willing to join professional bodies, such as CPA China in future. The demographic data of respondents are shown in Table 1.

To assess the degree of consensus in respect of subjects' judgments, Analysis of Variance (ANOVA) and Correlation Analysis were conducted. The judgment type (consolidate or not consolidate recommendation) was the dependent variable and the languages of research instrument (English or Simplified Chinese versions) was an independent variable and the associate entity's financial performance (profit making or loss making) was the other independent variable. Consolidation recommendation was denoted as 1, and 2 was denoted for subjects' recommendation that the performance of the associated entity should not be included in the group reporting.

#### Influence of translation on subjects' judgments on consolidation

It was expected that subjects' consolidation judgment in English version instrument would differ from their judgment in Simplified Chinese version instrument. The descriptive statistic of subjects' judgments based on the versions of research instrument is provided in Table 2. Table 2 shows that the mean likelihood of consolidation recommendation for subjects, who received the case of profit making entity is 1.00 by using English version of research instrument and 1.49 by using Simplified Chinese version of research instrument. Additionally, subjects, who received the case of loss-making entity, responded differently between English and Simplified Chinese versions. The mean likelihood of consolidation recommendation is 1.85 by using English version and 1.62 by using Simplified Chinese version of research instrument. For the case of profit-making entity, subjects' consolidation judgments by using English version of research instrument is significantly ( $p=0.000$ ) different from their responses by using Simplified Chinese version of research instrument. Similarly for the case of loss-making entity, the difference in subjects' judgments between English and Simplified Chinese versions of research instrument is significant ( $p=0.053$ ). The results provide strong support for H1. The descriptive results are reported in Table 2 and the ANOVA results are reported in Table 3.

#### Influence of context on subjects' judgments on consolidation



It is expected that subjects, who receive the case of profit-making entity, are more likely to recommend consolidation than subjects who receive the case of loss-making entity. The results of this comparison are presented in Table 4 and 5. For using English version of research instrument, as hypothesized, the mean likelihood of consolidation judgments for subjects, who received profit-making entity is 1.00, while for subjects, who received loss-making entity is 1.85. This result has shown that by using English version of research instrument, subjects, who received the case of profit-making entity significantly ( $p=0.000$ ) tend to recommend consolidation, compared to subjects, who received the case of loss-making entity. In contrast, for using Chinese version of instrument, the mean likelihood of consolidation judgment for subjects, who received profit-making entity is 1.49, while for subjects, who received loss-making entity is 1.62. This difference is not significant ( $p=0.232$ ). As such, H2 is supported in the English version, but rejected in the Simplified Chinese version.

#### Interactive Effects of Back-translation and Context on Subjects' Judgments

Table 6 shows the interactive effects of back-translation and context on subjects' judgments. The individual effects of back translation ( $p=0.062$ ) and context ( $p=0.000$ ) on subjects' consolidation judgments are significant and they interact to have a significant effect on subjects' judgments ( $p=0.000$ ). The mean likelihood judgment of subjects with the case of profit-making entity in English is 1.00, while subjects with the case of profit-making in Simplified Chinese, subjects with the case of loss-making in English and Simplified Chinese is 1.49, 1.85 and 1.62 respectively. This demonstrates that the degree of context's influence on subjects' judgments is greater by using English version of research instrument, compared to using Simplified Chinese version of research instrument. Subjects with case in English made the consolidation recommendation for a profit-making entity, compared to the loss-making entity. Subjects with same scenario translated in Chinese made the same consolidation recommendation for a profit-making entity and for a loss-making entity. As such, H3 is supported.

#### Correlation between translation, context and subjects' judgments

To examine the extent of the relationship exists between the dependent variable and two independent variables, correlation analysis was conducted. Table 7 provides a matrix of the correlation coefficients for the three variables. The results show that the correlation between translation and subjects' judgments is highly significant (Pearson correlation coefficient is

0.179, 2-tailed  $p=0.032$ ). Additionally, the results show that the correlation between the context and subjects' judgments is highly significant (Pearson correlation coefficient is 0.428, 2-tailed  $p=0.000$ ).

### **Conclusions and Implications**

A within-subject experiment within a country was conducted among final year undergraduate accounting students from three Chinese universities in this study to examine the influence of back-translation and context on subjects' judgments relating to the concept of *control*, contained in IFRS 27 and ASBE 33. The interaction effects of back-translation and context were also examined.

This study provides experimental evidence that back-translation has a significant influence on subjects' judgments on the concept of *control*. Subjects made inconsistent judgment on the concept of *control* between the English scenario and the same scenario translated into Simplified Chinese by using back-translation method. This study also provides evidence that the influence of context on subjects' judgment is constrained in different languages. The results show that context significantly influences subjects' judgments in English; however, the influence of context on subjects' judgments in Simplified Chinese is insignificant. Back-translation and context interact to influence subjects' judgments on the concept of *control*.

This study challenges the claim made by a significant number of cross-cultural and cross-national studies published in leading journals, such as AOS, that culture is a dominant variable in explaining differences in judgments across culture and nations. It has been implicitly assumed in a number of cross-cultural and cross-national accounting studies that back-translation method, as one of the most widely used translation method, can ensure the equivalence of research instrument in different languages. However, this study provides strong evidence that the exact equivalence of text in English and Simplified Chinese cannot be achieved by simply using back-translation method. The influence of back-translation on subjects' judgments cannot be ignored in cross-cultural and cross-national studies. Culture may not be the main reason for differences in judgments across culture and nations. Indeed, translation is considered as a cultural and political message transmission process (Janssens, Lambert and Steyaert., 2004; Usunier, 2011). Rather than "walking through dictionaries" (Janssens et al., 2004) using the mechanical perspective, the cultural and political perspectives on translation has been suggested in cross-cultural and cross-national studies.

This study also contributes to the debate on the importance of context on accounting judgments. There is no consensus on the importance of context on judgments in prior research. The interaction effects of back-translation and context have rarely examined. This study provides empirical evidence that subjects are motivated by incentives embedded in economic context, when they are required to make judgments. However, the degree of the influence of economic context varies in English and Simplified Chinese. As such, the question whether context has significant influence on accounting judgments cannot be simply answered in one language environment. When international accounting researchers examine the issues related to context, the interaction effects of context and translation cannot be ignored.

This study has important implications for accounting standards setters and regulators. Recall that IFRS and the related supporting materials have been translated into more than forty languages. Translation almost inevitably leads to a loss in meaning and function of the translation in the target text. The IASB's objective that comparability of financial information is enhanced by adopting a single set of accounting standards may not be achieved. Accounting judgments are extensively required in interpreting and applying the English and the translated IFRS. Accountants may make inconsistent judgments based on IFRS in different languages. IASB and accounting standards setter and regulators in countries, which have adopted or consider to adopt IFRS, cannot be underestimated the translation issues. It is urgent to strengthen this translation process and alleviate translation problems by pre-empting these at the drafting stage, by involving translators and linguistically aware, multi-lingual staff. This study may particularly interests to Chinese accounting regulators. Chinese government and regulators should be aware that adoption of the translated IFRS cannot ensure consistency in judgment on the concept of *control*. Comparability of financial information may be impaired. Greater guidance should be provided to accountants to make accounting judgments.

International Federation of Accountants (IFAC) may benefit from this study. One of the primary objectives of IFAC is to “develop standards and guidance that are widely adopted and implemented, and will enable accountants worldwide to provide services of consistently high quality in the public interest”. To achieve the objective, upon request, IFAC may grant permission to interested parties to allow them to translate these publications into different

languages. In IFAC's translation policy statement, it is stated that "*the interested party shall design and implement a translation process that will enable a faithful translation, with no omission or addition (other than translation footnotes), of the final IFAC publication(s). A faithful translation respects the intent, tone and the organization of the final IFAC publication(s).* (p. 7)" However, it is important to note that literal translation cannot ensure the equivalence of its publications in English and the translated languages. More emphasis of the translation issues and guidance should be provided to the interested party in order to reduce the inconsistency of its publications in different languages.

Accounting educators may be interested in this study. Although technical knowledge is the foundation for an accounting career, the current accounting curricula and textbooks have heavy emphasis on the technical aspect of accounting. The importance and complexity of accounting judgments has not been sufficiently discussed in accounting courses. A number of accounting education research has pointed out that university accounting education programmes are struggling to retain their relevance in the face of an increasingly uncertain future. It has been argued that detailed accounting technical knowledge alone is of limited use. Indeed, this study has clearly shown that the influence of translation and context on accounting judgments cannot be ignored in accounting practice. More emphasis on accounting judgments should be incorporated into accounting curricula.

Some limitations of this study need to be noted. First, while the scenarios used in this study were developed with the aim to depict real world examples and are representative of the types of judgments accountants encounter in practice, they cannot represent all possible cases. We note that the consolidation decision in practice will depend on the decision-making dynamics of the organization. However, this study only examines individual judgment rather than the final decision in an organization. Second, using students as subjects in this experimental research may harm external validity.

**Table 1: Respondents' profile**

<b>Responses from three universities</b>	Total(N=144)	Percentage
University 1	23	16.0%
University 2	22	15.3%
University 3	99	68.8%
<b>Different versions of responses (Language)</b>	Total(N=144)	Percentage
English version	60	41.7%
Chinese version	84	58.3%
<b>Different versions of responses (financial performance)</b>	Total(N=144)	Percentage
Profit-making entity	81	56.3%
Loss-making entity	63	43.8%
<b>Familiarity with Chinese Accounting Standards (CAS)</b>	Total(N=144)	Percentage
Very familiar	6	4.2%
Familiar	71	49.3%
Undecided	50	34.7%
Not familiar	17	11.8%
Not familiar at all	0	0.0%
<b>Familiarity with Chinese Accounting Standards 33 (CAS 33)</b>	Total(N=144)	Percentage
Very familiar	2	1.4%
Familiar	46	31.9%
Undecided	54	37.5%
Not familiar	28	19.4%
Not familiar at all	14	9.7%
<b>Gender</b>	Total(N=144)	Percentage
Female	112	77.80%
Male	32	22.20%
<b>Age</b>	Total(N=144)	Percentage
Under 20	11	7.60%
20-24	132	91.70%
30-34	1	0.70%
<b>Years of accounting experience</b>	Total(N=144)	Percentage
None	129	89.60%
Less than 1 year	13	9.00%
1-4 years	2	1.40%
<b>Plan to join in accounting professional bodies</b>	Total(N=144)	Percentage
Yes	126	87.5%
No	18	12.5%

**Table 2 Mean scores of judgments of subjects in English and Simplified Chinese versions of research instrument**

Context	Language	Standard		N
		Mean	Deviation	
Profit	English	34	1.00	0.000
	Chinese	47	1.49	.505
Loss	English	26	1.85	.368
	Chinese	37	1.62	.492

**Table 3 Univariate analysis of the effect of translation on subjects' judgments**

Context	Source of Variance	Sum of Squares	Df	Mean Squares	F	Significance Level
Profit	English/Simplified	4.724	1	4.724	31.779	.000
	Chinese					
Loss	English/Simplified	.770	1	.770	3.885	.053
	Chinese					

Significant at  $p < 0.10$

**Table 4 Mean scores of judgments of subjects in the case of profit-making and loss-making entities**

Language	Context	Standard		N
		Mean	Deviation	
English	Profit	34	1.00	0.000
	Loss	26	1.85	.368
Chinese	Profit	47	1.49	.505
	Loss	37	1.62	.492

**Table 5 Univariate analysis of the effect of context on subjects' judgments**

Language	Source of Variance	Sum of Squares	Df	Mean Squares	F	Significance Level
English	Profit/loss	10.549	1	10.549	180.767	.000
Chinese	Profit/loss	.362	1	.362	1.452	.232

Significant at  $p < 0.10$

**Table 6 Univariate analysis of the interaction effects of translation and context on subjects' judgments**

Source of Variance	Sum of Squares	Df	Mean Squares	F	Significance Level
Translation	0.604	1	0.604	3.546	0.062
Context	8.240	1	8.240	48.405	.000
Translation * Context	4.387	1	4.387	25.770	.000

Significant at  $p < 0.10$

**Table 7 Results of correlation between translation, context and subjects' judgments**

Source		Translation	Context	Subjects' judgments
<b>Translation</b>	Pearson			
	Correlation	1	0.007	.179*
	Sig. (2-tailed)		0.933	0.032
	N	144	144	144
<b>Context</b>	Pearson			
	Correlation	0.007	1	.428**
	Sig. (2-tailed)	0.932		0
	N	144	144	144

Significant at  $p < 0.10$

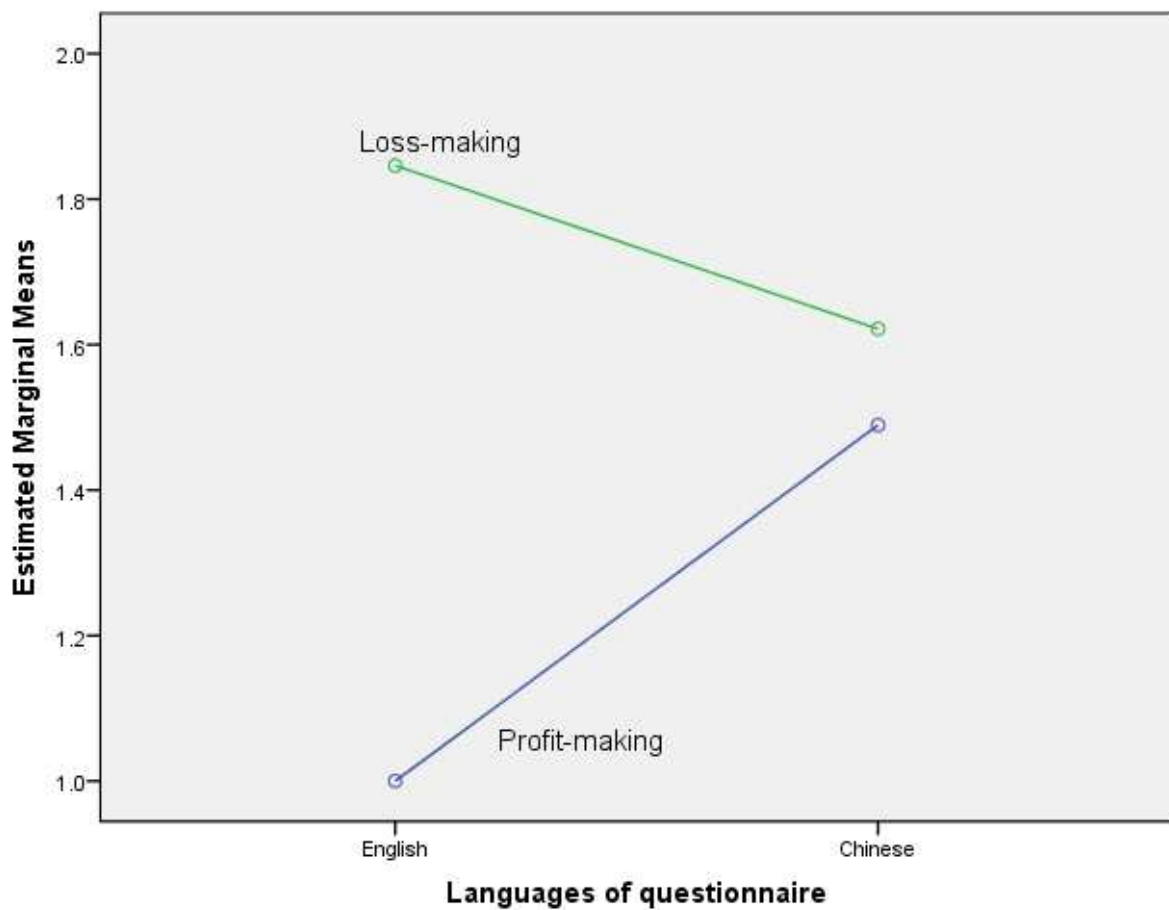


Figure 1 Interaction effects of translation and context on subjects' judgments

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