Effects of national accounting standards convergence to international accounting standards on foreign direct investment

Asieh Farazandehnia[a] and Ali Baghani[b*]

Master's Student, Department of Management and Accounting, Islamic Azad University, Tehran South Branch, Tehran, Iran
Faculty member, Department of Management and Accounting, Islamic Azad University, Tehran South Branch, Tehran, Iran

C H R O N I C L E	A B S T R A C T
	One of the most important factors on attracting foreign investors to invest on Tehran Stock Exchange is to have transparent accounting rules and regulations. When there are some consistency between national accounting standards and international accounting standards, we may, at least, expect foreign investors to have better understanding on financial statements. In 2006, there were some changes on Iranian national accounting standards in an attempt to make them closer to international accounting standards. In this study, we select the information of 153 firms five years before and after this regulation and study the effect of convergence from national accounting standards to international accounting standards on foreign direct investment. Using some statistical tests, the study has determined that there was no meaningful relationship between foreign direct investment before and after change on accounting standards. In addition, there was no difference on the information quality before and after change on accounting standards. However, there was some meaningful relationship between the information quality and foreign direct investment.

1. Introduction

One of the most important factors on attracting foreign investors to invest on Tehran Stock Exchange is to have transparent accounting rules and regulations. Over the past few years, there have been tremendous studies on challenges for foreign direct investment (FDI) (Graham & Krugman, 1995) in several countries. Cheng and Kwan (2000) reported that large regional market, good infrastructure, and preferential policy had a positive impact but wage cost maintained a negative impact on FDI through estimating the impacts of the determinants of FDI in 29 Chinese regions over the period 1985-1995. The impact of education was positive but not statistically significant. Besides, there was also a strong self-reinforcing impact of FDI on itself. In their survey, there was no convergence in the equilibrium FDI stocks of the regions during that period, but there was some convergence in the deviations from

the equilibrium FDI stocks. Buckley et al. (2007) studied the determinants of Chinese outward direct investment (ODI) and the extended to which three special explanations require to be nested within the general theory of the multinational firm using official Chinese ODI data collected from 1984 to 2001. They reported "Chinese ODI to be related to high levels of political risk in, and cultural proximity to, host countries throughout, and with host market size and geographic proximity (1984–1991) and host natural resources endowments (1992–2001)". They also reported strong support for the argument that characteristics of the special theory assist to explain the behavior of Chinese multinational enterprises.

De Mello (1999) estimated the effect of FDI on capital accumulation, and output and total factor productivity (TFP) growth in the recipient economy for a sample of OECD and non-OECD countries over the period 1970-90. Although FDI was anticipated to boost long-run growth in the recipient economy via technological upgrading and knowledge spillovers, it is explained that the extent to which FDI was growth-enhancing relied on the degree of complementarity and substitution between FDI and domestic investment.

When there are some consistency between national accounting standards and international accounting standards, we may, at least, expect foreign investors to have better understanding on financial statements (Chen et al., 2014b). According to Benston (1980), there are accounting standards since we have public accountants, each person and firm may decide the standard by which they wish themselves understand. Therefore, when one talks for a procedure by which uniform accounting standards can be constructed and enforced, the call necessarily is for pursuing them on people who could choose to behave otherwise.

Dechow and Dichev (2002) recommended a measure of one perspective of the quality of working capital accruals and earnings. One role of accruals in this study was to shift or adjust the recognition of cash flows over time so that the adjusted earnings could measure firm performance. Nevertheless, accruals need assumptions and predicts of future cash flows, therefore, they argued that the quality of accruals and earnings was non-increasing in the magnitude of estimation error in accruals. They derived an empirical measure of accrual quality as the residuals from firm-specific regressions of changes in working capital on past, present, and future operating cash flows and showed that observable company characteristics could be (e.g., volatility of accruals and volatility of earnings). They also explained that their measure of accrual quality was positively associated with earnings persistence.

Chen et al. (2014) considered accounting standards as a component of the institutional infrastructure of a location and hypothesize that the convergence of domestic and International Financial Reporting Standards (IFRS) contributes FDI as it reduces information processing expenses for foreign investors. In addition, they studied that the effect of reduced information costs was stronger for partner countries whose accounting systems indicated bigger pre-convergence differences because they magnify the facilitating role of accounting standard convergence for FDI.

Zehri and Chouaibi (2013) identified certain explanatory factors, which more likely clarify the choice of applying IAS/IFRS adopted by developing countries (DCs) up to the year 2008. The empirical results have shown that the DCs most likely to adopt IAS/IFRS had a high level of economic growth, along with a legal system of common law and an advanced educational level. Zeghal and Mhedhbi (2006) developed an analysis of the factors influencing on the adoption of international accounting standards by developing countries. They reported that developing countries with the highest literacy rates, that had capital markets, and that had an Anglo-American culture were more likely to adopt international accounting standards.

Lin et al. (2015) studied the choice between standard and non-standard FDI production strategies for Taiwanese multinationals. They reported that different production behaviors of MNEs depended on the foreign market size, trade costs, factor advantage, fixed investment costs and firm characteristics. In

addition, each production strategy was influenced by various determinants as implied by their hypotheses. Nurunnabi (2015) performed an empirical investigation to study the impact of cultural factors on the implementation of global accounting standards (IFRS) in a developing country. The study approved the pressures of coercive, mimetic and normative institutional isomorphism to follow legitimacy via social expectations. In contrast to other studies, a lack of enforcement and a high level of corruption were detected during the periods of democratic government.

2. The proposed study

In 2006, there were some changes on national accounting standards in an attempt to make them closer to international accounting standards. In this study, we select the information of 153 firms five years before and after this regulation and study the convergence of national accounting standards on international accounting standards on foreign investment. The proposed study of this paper uses two dependent variables including *Information quality* and *Foreign direct investment (FDI)*. In addition, *Change of standards for convergence* is considered as an independent variable. Finally, Gross Domestic Product (GDP) is considered as control variable. Quality of accrual of financial statements is calculated by the method proposed by Dechow and Dichev (2002) as follows,

$$WC_t = b_0 + b_1 CFO_{t-1} + b_2 CFO_t + b_3 CFO_{t+1} + \varepsilon_t, \tag{1}$$
$$\Delta WC_t = \Delta AR + \Delta Inventory - \Delta AP + Other\ Assets(net), \tag{2}$$

where in Eq. (1), working capital (WC) is a function of operating cash flow (CFO) at time t-1, t and t+1, respectively. In addition, ΔWC, ΔAR, $\Delta Inventory$ ($QI = -|\varepsilon_t|$), ΔAP and Other Assets(net) represent change in working capital, change in receivable accounts, change in inventory, change in payable accounts and net value of other assets, respectively. The second model is also as follows,

$$FI_t = \alpha_0 + \alpha_1 QI_I + \alpha_2 GDP + \varepsilon_t, \tag{3}$$
$$QI = -|\varepsilon_t|, \tag{4}$$

where FI represents foreign direct investment. Finally, ε represents residuals.

2.1. First model

The implementation of Kolmogorov-Smirnov yields Z = 1.317 with P-value = 0.094, which means the data are normally distributed. In addition, Fig. 1 demonstrates the residuals, which indicate the data follow normal distribution.
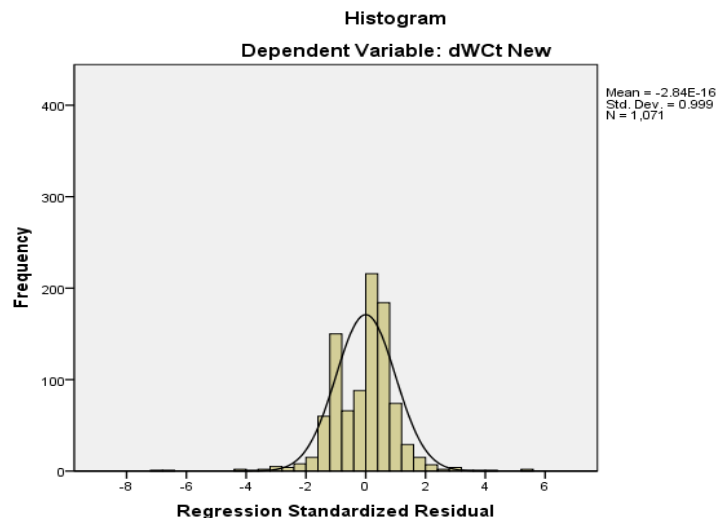

Fig. 1. Regression Standardized residual

$$WC_t = 20.393 + 9.32\text{E-06 } CFO_{t-1} + 5.49\text{E-06} CFO_t + 1.80\text{E-06} CFO_{t+1} + \varepsilon_t, \qquad (5)$$

P-value 20.393   0.000   0.000   0.006

$R^2 = 0.493$, Durbin-Watson = 1.258, F = 264.124 P-value = 0.000

As we can observe from the results of regression analysis, Durbin-Watson value is within desirable level, which means there is no correlation between residuals. R-Square is equal to 0.493, which means the regression model represents approximately 49% of the changes on the dependent variable. F-value is equal to 264.124, which means there is a linear relationship between independent variables and dependent variable. The coefficients of CFO_{t-1} and CFO_t are statistically significant, which means these two variables influence on working capital.

2.2. The second model

The implementation of the Kolmogorov-Smirnov yields $Z = 0.614$ with P-value = 0.845, which means the data are normally distributed.

$$FI_t = -4212.64 + 151.63\ QI_t + -6.47\text{E-06}\ \ GDP_t + \varepsilon_t \qquad (6)$$

P-value   0.026   0.003   0.017

$R^2 = 0.919$, Durbin-Watson = 2.159, F = 22.598 P-value = 0.007

As we can see from the results of regression analysis, Durbin-Watson value is within desirable level, which means there is no correlation between residuals. R-Square is equal to 0.919, which means the regression model represents approximately 92% of the changes on the dependent variable. F-value is equal to 22.598, which means there is a linear relationship between independent variables and dependent variable. The coefficients of two independent variables are statistically significant, which means they have positive and negative effects on foreign direct investment.

3. The results

In this section, we present details of regression analysis on various models presented earlier.

3.1. The first hypothesis: The effect of convergence of accounting standard on FDI

The first hypothesis of the survey investigates whether there is a meaningful change on foreign direct investment as a result of convergence on national accounting standards to international standards. Table 1 presents some basic statistics on FDI five years before and after standardization.

Table 1
The summary of mean and standard deviation of FDI before and after convergence of accounting standard

Period	Mean	Standard deviation
Before	3399.64	887.25141
After	2844.12	1184.09649

The implementation of the Kolmogorov-Smirnov yields $Z = 0.719$ with P-value = 0.679, which means the FDI data are normally distributed. Moreover, the implementation of t-student test yields t=0.840 with P-value = 0.426, which means there is not any statistical difference on FDI before and after convergence of accounting standards.

3.2. The second hypothesis: The effect of convergence of accounting standard on quality of information

The second hypothesis of the survey studies whether there is a meaningful change on quality of information as a result of convergence on national accounting standards to international standards. The

implementation of the Kolmogorov-Smirnov yields Z = 0.668 with P-value = 0.764, which means the data associated with information quality are normally distributed. In addition, the implementation of t-student test yields t=1.152 with P-value = 0.293, which means there is not any statistical difference on quality of information before and after convergence of accounting standards.

3.3. The third hypothesis: The relationship between quality of information and FDI

The last hypothesis of this survey is associated with the relationship between quality of information and FDI. The implementation of Pearson correlation ratio yields r = 0.78 with Sig. = 0.022, which means there was positive and meaningful relationship between quality of information FDI.

4. Conclusion

In this paper, we have presented an empirical investigation to study the effects of adaptation of international accounting standards on attract foreign investors. We have explained that the regulation was taken into account in 2006 and although there was some small change on foreign investment, statistically, there was not any meaningful relationship on foreign direct investment before and after accounting regulation. In addition, our survey has indicated that the accounting regulation had no impact on quality of information. Nevertheless, there was some positive and meaningful relationship between quality of information and foreign direct investment. The moral story is that as Dunning and Narula (2003) stated before, FDI may be a good catalyst for economic reform and should be promoted in developing countries.

Acknowledgement

References

Benston, G. J. (1980). The establishment and enforcement of accounting standards: methods, benefits and costs. *Accounting and Business Research*,*11*(41), 51-60.

Buckley, P. J., Clegg, L. J., Cross, A. R., Liu, X., Voss, H., & Zheng, P. (2007). The determinants of Chinese outward foreign direct investment. *Journal of international business studies*, *38*(4), 499-518.

Chen, C. J., Ding, Y., & Xu, B. (2014a). Convergence of accounting standards and foreign direct investment. *The International Journal of Accounting*, *49*(1), 53-86.

Chen, C.J.P., Ding, Y., & Xu, B. (2014b). Response to discussant "Convergence of accounting Standards and foreign direct investment". *The International Journal of Accounting*, 49(1), 97-100.

Cheng, L. K., & Kwan, Y. K. (2000). What are the determinants of the location of foreign direct investment? The Chinese experience. *Journal of International Economics*, *51*(2), 379-400.

Dechow, P. M., & Dichev, I. D. (2002). The quality of accruals and earnings: The role of accrual estimation errors. *The Accounting Review*, *77*(s-1), 35-59.

De Mello, L. R. (1999). Foreign direct investment-led growth: evidence from time series and panel data. *Oxford Economic Papers*, *51*(1), 133-151.

Dunning, J., & Narula, R. (2003). *Foreign Direct Investment and Governments: Catalysts for Economic Restructuring*. Routledge.

Graham, E. M., & Krugman, P. (1995). *Foreign direct investment in the United States*.

Lin, H. L., Hsiao, Y. C., & Lin, E. S. (2015). The choice between standard and non-standard FDI production strategies for Taiwanese multinationals. *Research Policy*, *44*(1), 283-293.

Nurunnabi, M. (2015). The impact of cultural factors on the implementation of global accounting standards (IFRS) in a developing country. *Advances in Accounting*, *31*(1), 136-149.

Zeghal, D., & Mhedhbi, K. (2006). An analysis of the factors affecting the adoption of international accounting standards by developing countries. *The International Journal of Accounting*, *41*(4), 373-386.

Zehri, F., & Chouaibi, J. (2013). Adoption determinants of the International Accounting Standards IAS/IFRS by the developing countries. *Journal of Economics, Finance and Administrative Science*, *18*(35), 56-62.