IRANIAN JOURNAL OF ACCOUNTING, AUDITING & FINANCE

Journal homepage: https://ijaaf.um.ac.ir
DOI: 10.22067/ijaaf.v3i3.88704
Research Article

The Economic Consequences of the Islamic State of Iraq and Syria: Evidence in the Context of CEO Ability and Accrual Quality

Ameneh Bazrafshan*, Wafaa Salman Abbood

Department of Accounting, Imam Reza International University, Mashhad, Iran

Abstract

We investigate the relationship between CEO ability and accrual quality in the Iraq Stock Exchange. Furthermore, we study how the Islamic State of Iraq and Syria (ISIS) influences the relationship between CEO ability and accrual quality. Using a sample of firms listed on the Iraq Stock Exchange over the years 2012-2018, we show that CEO ability positively affects accrual quality. Moreover, the results indicate that ISIS weakens the relationship between CEO ability and accrual quality.

Keywords: CEO ability, accrual quality, ISIS.

***Corresponding Author**: Assistant Professor of Accounting, Email: bazrafshan@imamreza.ac.ir

1. Introduction

This study examines the role of CEO ability in accrual quality in the Iraq Stock Exchange context. This market provides a unique setting as it has faced a modern terrorist group, the Islamic State of Iraq and Syria (ISIS), leading to very high uncertainty. ISIS gained global prominence in early 2014 when it drove Iraqi government forces out of key cities in its Western Iraqi offensive. ISIS has been designated a terrorist organization by all countries around the world. Nevertheless, we little know about the economic-social consequences of terroristic activities in general and ISIS activities in particular, especially in the context of business.

For these reasons, firstly, this study examines the association of CEO ability and accrual quality in the Iraq Stock Exchange. Secondly, the study explores how the presence of ISIS influences the association.

This study contributes to understanding the association between CEO ability and accrual quality in a vibrant and under-studied emerging market. More importantly, it sheds light on how the presence of ISIS may influence the association. In this regard, while being qualitatively different from other terrorist groups, ISIS has many similarities with street gangs, allowing for the adaptation of effective gang prevention, intervention, and suppression strategies (e.g., Valasik and Phillips, 2017). Thus, readers who understand other kinds of terrorist activities' economic and social consequences may use this paper's results.

This research is structured as follows. In Section 2, the current paper develops hypotheses. Section 3 details the research method. Section 4 presents the findings, and section 5 offers conclusions.

2. Literature review and hypothesis development

The CEO's ability means the effective use of resources by managers. This means that more output can be achieved at a fixed level of resources, or fewer resources can be used to achieve the expected output (Demerjian *et al*., 2012). Therefore, managers' great efficiency improves the organization's net present value. Having a competent manager in an economic entity will lead to a better understanding of accounting methods and principles, leading to better choices than accounting estimates and correct judgments about accruals. Therefore, these managers will perform well in estimating earnings in any complex situation and ultimately report a higher quality of earnings than other competitors. Managers with high ability can better understand the company's internal and external conditions and have high estimation power about accruals. In addition to the quality assessments they make, capable managers identify profitable projects through their knowledge and understanding, and by investing in them, they also improve operational cash flows (Demerjian *et al*., 2013).

Research on the association of CEO ability and corporate reporting provides mixed evidence on how CEO ability influences corporate reporting. For instance, on the one hand, higher CEO ability indicates that managers more effectively manage their companies, therefore, obviating the need for managerial misbehavior such as fraud or earnings manipulation (e.g., Demerjian *et al*., 2013; Huang and Sun, 2017). This leads to lower accrual quality. On the other hand, higher CEO ability reflects more managerial knowledge of the business that may facilitate implementing opportunistic strategies like earnings management, and therefore, lower accrual quality (e.g., Demerjian *et al*., 2017; Hesarzadeh, 2019).

While in the developed or large markets such as US capital markets, empirical evidence emphasizes the first view—i.e., the positive impact of CEO ability on accrual quality— there is rare evidence in the context of emerging capital markets, particularly small markets. For example, the uncertainty in emerging markets is very high

(Hesarzadeh, 2019), and therefore, CEO ability may not significantly be associated with accrual quality. Hesarzadeh (2019) explores how economic policy uncertainty affects accounting quality. They find a negative association between economic policy uncertainty and accruals quality and that the negative association is more pronounced for government-dependent firms and firms with higher political risk. The following research covers developed or large markets.

Demerjian *et al*. (2013) find that lower accrual quality associated with fewer subsequent restatements, higher earnings persistence, lower errors in the bad debt provision, and higher accrual quality. Salehi *et al*. (2019) examined the relationship between management efficiency and tax avoidance. In the study, data envelopment analysis has been used to assess the efficiency of managers. They show that CEO ability reduces the negative relationship between tax avoidance and company value. Baik *et al*. (2020) find that CEO ability is positively related to accrual quality. More importantly, they show that firms having higher CEO ability incorporate more forward-looking information about cash flows into current earnings through smoothing, thereby enhancing accrual quality. Furthermore, Wells (2020) shows that individual manager fixed effects explain a statistically and economically significant proportion of the cross-sectional variation in accrual quality, comparable to that of Firm dummies. Variation in managerial attributes that impact accrual quality is applied as firms switches manager-type. Francis *et al.* (2020) demonstrate that better firms make accounting information significantly more relevant to equity market valuation. Salehi *et al*. (2019) reveal a significant and direct relationship between managerial ability and internal control quality and real earnings management and internal control quality. Oskouei and Sureshjani (2020) argue that firms with different efficiency may make various decisions in economic and financial crisis conditions. As an important issue, real earnings management is at the center of attention for many firms in a crisis condition. They show that firms with higher efficiency take less usage of real earnings management. Their results also indicate that efficiency, economic, and financial crises have significant and negative effects on real earnings management.

Hence, CEO ability is expected to be significantly associated with accrual quality proxies, including earnings restatement, earnings persistence, accruals quality, and earnings response coefficient. Thus, the following hypothesis is formed:

H1: There is a significant relationship between CEO ability and accrual quality.

Utilizing remote sensing data and commercial satellite imagery, Stergiou (2016) provides a unique perspective on ISIS-controlled areas' internal situation. As it can give an incredible picture of the economic life situation in these areas, of course, in most of them, electricity shortages, large numbers of displaced people, reduced agricultural products, and increasing violence can be widely seen. While ISIS in Raqqa and Mosul, as its strategic capitals, has helped maintain stable local business by building strong government structures, in other areas, it has either neglected vital resources or replaced the government. The report shows that the main reason for the collapse of the economic situation in the territory controlled by ISIS was its inefficiency to separate its territory from the areas controlled by other armed opposition groups. In addition, external military pressure on ISIS prevented the group from realizing its governmental ambitions across key parts of the ISIL caliphate. This had major implications for the group's efficiency to support the performance of the local economy. This report is for those seeking to understand the impact of ISIS on local populations in Iraq and Syria, as well as those seeking to counter ISIS funding, stabilize the post-war situation, and more comprehensive efforts to understand the economic impact on rebel rule.

As Stergiou (2016) explained, to discern an organization's financial position and strength, revenue must be examined in conjunction with expenses to establish the so-

called burn-rate. According to Johnston (2014), ISIS spend its surplus pursuing four objectives: continue to expand its territorial bases in Iraq and Syria, expand its influence in other strategic parts of MENA; fund plots for attacks in North America, Western Europe or elsewhere and fund a sharia-based state in the territory it currently controls (Johnston, 2014). The first and the last appear more likely, with state-building being the most recourse- demanding.

H2: The presence of ISIS has a significant effect on the relationship between CEO ability and accrual quality.

3. Methodology

3.1. Variables

The independent variable of this research is CEO ability. Demerjian et al.'s (2012) model was selected to measure the CEO's ability in this study. This model is as follows:

$$max\,\theta = \frac{sales}{v_1 CoGS + v_2 SG\&A + v_3 NetPPE + v_4 R\&D + v_5 Goodwill + v_6 Intan}$$

In this model, the calculated value of the company is in the range of zero to one. After that, the company's efficiency is divided into two separate parts, including the efficiency of CEO power and its inherent characteristics. This is based on the control of 4 intrinsic indicators of the company consisting of market share, company size, cash flow from operations, and company life using the following model:

$$Firm\_Efficiency_{it} = \alpha_0 + \alpha_1 Ln\,(Total\_Asset)_{it} + \alpha_2 Market\_Share_{it} + \alpha_3 Positive\ Free\ Cash\ Flow_{it} + \alpha_4 Ln\,(Age)_{it} + Year\ Indicator + \epsilon_{it}$$

Where Ln (Total_Asset) is the natural logarithm of the total assets, Market_Share, the ratio of company sales to industry sales, Positive Free Cash Flow, equal to 1 if the operating cash flow is positive and if it is negative is zero, *Ln (Age)* is the natural logarithm of the age of the company. The residuals of this model show the extent of management efficiency (*CEO.abi*).

The dependent variable of this research is accrual quality, which is measured by the model of McNichols (2002) as follows:

$$\frac{WCA_{i,t}}{AvgTA_{i,t}} = C + \lambda_1 \frac{CFO_{i,t-1}}{AvgTA_{i,t}} + \lambda_2 \frac{CFO_{i,t}}{AvgTA_{i,t}} + \lambda_3 \frac{CFO_{i,t+1}}{AvgTA_{i,t}} + \lambda_4 \frac{\Delta REV_{i,t}}{AvgTA_{i,t}} + \lambda_5 \frac{PPE_{i,t}}{AvgTA_{i,t}} + \varepsilon_{i,\tau}$$

In this model, *WCA* reflects working capital accruals, and *CFO* is cash from operations. Further, ΔREV is a change in sales, and *PPE* denotes property, plant, and equipment. The residuals' absolute value indicates accruals quality, and the lower the value, the better the accruals quality. Thus for a better interpretation of results, this paper multiplies the absolute value by mines one. According to this adjustment, the higher *AQ.*, the better the accruals quality.

To quantify the ISIS presence in Iraq (*ISIS*), this paper uses a dichotomous variable. Specifically, the *ISIS* is coded one for the years after the presence of ISIS in Iraq (i.e., 2014 onwards) and coded zero for the years before the presence of ISIS in Iraq.

3.2. Models

To test the first hypothesis (*H1*), i.e., the association of CEO ability and accrual quality metrics this paper relies on the following equation:

$$AQ_{t+1,i} = a_0 + a_1\,CEO.abi_{t,i} + a_2\,Size_{t,I} + a_3\,S.V_{t,i} + a_4\,C.F.V_{t,i} + a_5\,O.C_{t,i} + a_6\,B.A_{t,i} + a_7\,Loss_{t,i} + a_8\,\Delta S.V_{t,i} + a_9\,ROA_{t,i} + Year\ Indicators + Firm\ dummies + \epsilon_{t,i} \quad (1)$$

Based on prior studies (e.g., Baik *et al.*, 2019; Demerjian *et al.*, 2012; 2017; Wells,

2020), this study is used the following control variables potentially influence accrual quality.

- *Size*: the natural logarithm of the firm's market value at the end of the year.
- *SV*: the standard deviation of the ratio of sales to total assets over the last three years.
- *CFV*: the standard deviation of operating cash flow to total assets over the last three years.
- *OC*: The natural logarithm of the time it takes to buy raw materials to reach the cash generated from a product's sale.
- *Loss*: A dummy variable set equal to 1 if the company reports a loss in the current year and otherwise zero.
- *BA*: If the auditor is the Iraqi Court of Audit, the number is one and zero otherwise.
- *SV Changes (ΔSalesGrowth)*: changes in sales in percent.
- *Return on Assets (ROA)*: income before extraordinary items, scaled by total assets.

To test the second hypothesis (*H2*), i.e., the impact of ISIS on the association of CEO ability and accrual quality metrics—including earnings restatement, earnings persistence, accruals quality, and earnings response coefficient— this paper enjoys the following four equations, respectively:

$$AQ_{t+1,i} = a_0 + a_1\ CEO.abi_{t,i} + a_2\ ISIS_{t,i} + a_3\ ISIS\times CEO.abi_{t,i} + a_4\ Size_{t,I} + a_5\ S.V_{t,i} + a_6\ C.F.V_{t,i} + a_7\ O.C_{t,i} + a_8\ B.A_{t,i} + a_9\ Loss_{t,i} + a_{10}\ \Delta S.V_{t,i} + a_{11}\ ROA_{t,i} + \text{Year Indicators} + \text{Firm dummies} + \epsilon_{t,i} \quad (2)$$

Consistent with explanations about the first hypothesis test, in equations (2), the significant level of a_3 is applied to confirm or reject the association of CEO ability and earnings restatement/ accruals quality. Further, in equations (6) and (8), the significant level of a_4 is applied to confirm or reject the association of CEO ability and earnings persistence/ earnings response coefficient.

3.3. Sample

This study's statistically studied population is all 35 active-industrial companies of the Iraqi Stock Exchange for 7 years from 2012 to 2018. The years 2012 to 2014 areas the years before the emergence of ISIS in Iraq and 2015 to 2018 as the years after the emergence of ISIS in Iraq. Thus, the final sample of this research is 245 firm-year observations.

4. Findings

4.1. Descriptive statistics

This study's descriptive findings, including mean, median, standard deviation, minimum, and maximum, are presented in Table 1. As can be seen, on average, 36% of companies have restated their earnings. The mean values for earnings persistence, accruals quality, and earnings response coefficient are 0.158, 0.070, and 0.016, respectively.

Overall, the mean value of quality measures shows that the accrual quality in Iraq is poorer than the equivalents in the US capital markets (see, for example, Bhattacharya *et al.*, 2012, showing that the means of *AQ.* in US capital markets is 0.030).

4.2. Hypothesis test

4.2.1. Test of *H1*

The first hypothesis (*H1*) states a significant relationship between CEO ability and accrual quality (*AQ*). To test this hypothesis, consistent with Equations (1), the present study regresses the four accrual quality metrics on the CEO's ability. Table 2 reports the results. In general, F statistics for four equations indicate the appropriate fitness and significance of all models. Following past research (e.g., Petersen 2009; Fernández

Méndez *et al*. 2016), standard errors are adjusted for heteroscedasticity and cross-sectional correlation in all equations' estimations clustering at the firm level. Notably, untabulated results suggest that: (a) Durbin-Watson statistics for four equations are between 1.5 to 2.5, indicating no significant autocorrelation concern. (b) Variance Inflation Factors (VIFs) are all lower than three, showing that multicollinearity is not a severe concern about the results. On the other hand, the adjusted R^2s for the models vary from 38% to 72%, relatively comparable to prior studies (e.g., Baik *et al*., 2020; Francis *et al*., 2020).

Table 1. Descriptive statistics

Variable	Mean	Median	STD.	Min	Max
AQ	-0.070	-0.074	-0.289	-0.322	0.000
CEO.abili	0.000	0.023	0.363	-0.593	0.535
ISIS	0.571	1.000	0.495	0.000	1.000
Size	9.684	9.708	0.578	8.358	11.421
S.V	0.115	0.074	0.121	0.0001	0.741
C.F.V	0.351	0.081	1.641	0.0001	3.891
Operating Cycle	116.58	107.34	69.597	20.097	297.78
B.A	0.073	0.000	0.261	0.000	1.000
Loss	0.408	0.000	0.492	0.000	1.000
ΔS.V	0.336	0.021	1.940	-0.979	21.618
ROA	0.003	0.013	0.187	-0.683	0.470

In particular, the p-values for the *CEO.abi* are 0.049 and 0.000 under Equation (1) and (3). These suggest that management efficiency significantly affects earnings restatement (*Restate*) and accruals quality (*AQ*). Specifically, the results show that higher CEO ability leads to higher accruals quality.

Table 2. Test of H1

	AQ. (Equation 1)	
	Coef.	**Prob.**
Constant	0.459**	0.014
CEO.abi	0.309***	0.000
Size	-0.046**	0.013
SV	-0.059*	0.516
CFV	-0.003	0.629
OC	0.0003**	0.039
BA	0.017	0.651
Loss	-0.044	0.143
ΔS.V	0.001	0.807
ROA	0.180**	0.027
Year Indicators	Included	
Firm dummies	Included	
Adjusted R^2	0.383	
F (p-value)	7.795 (0.000)	
Obs.	245	

4.2.2. Test of *H2*

Based on the second hypothesis (*H2*), this paper expects that the presence of ISIS has a significant effect on the relationship between CEO ability and accrual quality. To provide empirical evidence on this issue, consistent with Equations (2), the present study regresses four accrual quality metrics on CEO ability and ISIS interactions.

Table 3 reports the results. Generally, p-values for the interactive variable of *ISIS×CEO.abi* can be said that the presence of ISIS weakens the relationship between the

CEO ability and accrual quality. Thus, collectively, the results demonstrate that the presence of ISIS has a significant effect on the relationship between CEO ability and accrual quality, confirming the second hypothesis.

Table 3. Test of H2

	AQ. (Equation 2)	
	Coef.	**Prob.**
Constant	0.425***	0.003
CEO.abi	0.318***	0.000
ISIS	-0.032**	0.029
CEO.abi×ISIS	-0.119**	0.036
Size	-0.042**	0.004
SV	-0.012	0.831
CFV	-0.002	0.619
OC	0.0003***	0.000
BA	-0.001	0.957
Loss	0.047**	0.015
ΔS.V	0.0008	0.983
ROA	0.110**	0.031
Year Indicators	Included	
Firm dummies	Included	
Adjusted R^2	0.462	
F (p-value)	14.114 (0.000)	
Obs.	245	

5. Conclusion

This paper examines whether CEO ability influences accrual quality in the Iraq Stock Exchange. Furthermore, the paper explores how ISIS influences the association of CEO ability and accrual quality. The results indicate that CEO ability leads to higher accrual quality. These results are consistent with recent studies (e.g., Hesarzadeh, 2019) that suggest higher uncertainty strongly reduces accrual quality. This study extends the understanding of the relationship between CEO ability and accrual quality in a very vibrant and under-studied emerging market. More importantly, it sheds light on how the presence of ISIS may influence the association. In this regard, while being qualitatively different from other terrorist groups, ISIS has many similarities with street gangs, allowing for the adaptation of effective gang prevention, intervention, and suppression strategies (e.g., Valasik and Phillips, 2017). Thus, readers who understand other kinds of terrorist activities' economic and social consequences may use this paper's results. However, this paper encourages readers to exercise some causation as the research sample is limited to a small emerging market. Further, this paper's accrual quality measures are limited to the four widely used measures; therefore, the results may not be generalizable to other measures.

References

Bhattacharya, N. Ecker, F. Olsson, P.M. and Schipper, K. (2012). Direct and mediated associations among earnings quality, information asymmetry, and the cost of equity. The *Accounting Review*, 87(2), 449-482. https://doi.org/10.2308/accr-10200

Baik, B. Choi, S. and Farber, D.B. (2019). Managerial Ability and Income Smoothing. *The Accounting Review*, 95(4), 1–22. https://doi.org/10.2308/accr-52600

Demerjian, P. Lev, B. and McVay, S. (2012). Quantifying managerial ability: A new measure and validity tests. *Management Science*, 58(7), 1229–1248. https://doi.org/10.1287/mnsc.1110.1487

Demerjian, P. Lev. B. Lewis, M. and MacVay. S. (2013). Managerial ability and Earnings

quality. *The Accounting Review*, 88(2), 463-498. Doi: 10.2139/ssrn.1650309

Demerjian, P. Lewis-Western, M. and McVay, S. (2017). How Does Intentional Earnings Smoothing Vary With Managerial Ability?. *Journal of Accounting, Auditing & Finance*, 35(2), 406–437. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2426313

Fernández Méndez, C. Pathan, S. and Arrondo, R. (2016). Monitoring capabilities of busy and overlap directors: Evidence from Australia. *Pacific-Basin Finance Journal*, 35, 444–469.Doi: 10.1016/j.pacfin.2015.05.006

Francis, B. Iftekhar, H. Ibrahim, S. and Qiang, W. (2020). Managerial ability and value relevance of earnings. *China Accounting and Finance Review*, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3519263

Huang, X. and Sun, L. (2017). Managerial ability and real earnings management. *Advances in Accounting*, 39, 91–104. https://doi.org/10.1016/j.adiac.2017.08.003

Hesarzadeh, R. (2019). Are the individual and collective roles of accrual quality measures the same? Evidence in the context of information uncertainty. *Spanish Journal of Finance and Accounting / Revista Española de Financiación y Contabilidad*, 48(2), 160–202.

Johnston, P.B. (2014). Countering ISIL'S Financing. RAND Office of External Affairs. November 13. http://www.rand.org/content/dam/rand/pubs/testimonies/CT400/CT419/RAND_CT419.pdf (accessed 02 Jun 2015).

Oskouei, Z.H. and Sureshjani, Z.H. (2020). Studying the relationship between managerial ability and real earnings management in economic and financial crisis conditions. *International Journal of Finance & Economics*, https://doi.org/10.1002/ijfe.2031

Petersen, M.A. (2009). Estimating standard errors in finance panel data sets: Comparing approaches. *Review of Financial Studies*, 22(1), 435–480. https://doi.org/10.1093/rfs/hhn053

Salehi, M. Mousavi Shiri, M. and Hossini, S.Z. (2019). The relationship between managerial ability, earnings management and internal control quality on audit fees in Iran. *International Journal of Productivity and Performance Management*, 69(4), 685–703. https://doi.org/10.1108/IJPPM-07-2018-0261

Stergiou, D. (2016). ISIS political economy: financing a terror state. *Journal of Money Laundering Control*, 19(2),189–207. https://doi.org/10.1108/JMLC-06-2015-0021

Valasik, M. and Phillips, M. (2017). Understanding modern terror and insurgency through the lens of street gangs: ISIS as a case study. *Journal of Criminological Research, Policy and Practice*, 3(3), 192–207. https://doi.org/10.1108/JCRPP-07-2016-0014

Wells, K. (2020). Who Manages the Firm Matters: The Incremental Effect of Individual Managers on Accounting Quality?. *The Accounting Review*, 95(2), 365–384. https://doi.org/10.2308/accr-52505