Using the ARDL to Interpretation of the relationship between accounting fraud and tax risk in High tech companies

Case study ALI BABA Group (2007-2020)

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Received: 17/10/2021 Accepted: 19/03/2022 Published:12.../04/2022

Abstract:

This study aims to measure the relationship between tax risk and accounting fraud in the international companies. Therefore, ALI BABA group was selected as a case study during the period 2007-2020. In the context of financial statements, the Beneish model is used to detect accounting fraud practices. Also to capture the effect of accounting fraud on tax risk (CashETR), we estimated the long-run linkage by using the ARDL bounds testing approach to cointegration. The test results prove of this study ALI BABA group practice accounting fraud during all years of study when the condition M-score ≻-2.22. Then, there is feedback long run and relationship between Accounting fraud and tax risk about three variables DEPI a positive effect on tax risk, while the negative effect of TATA, SGI.

Keywords: accounting fraud; tax risk; ARDL; high tech companies.

JEL Classification Codes: M41, F65, G32.

1. INTRODUCTION :

Financial statements serve a fundamental part in computing a company's taxation. The falsified financial statements mainly contain elements of overstatement of sales, assets and profit or understatement of liabilities, expenses or losses. In taxation, false financial statements

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involve overstatement of purchases or under-reporting of income to produce lower overall tax liabilities and can lead to tax risk (Noor, R. M., et al, 2012, p: 43).

Tax risks refer to the uncertainty of the enterprise's tax payments in the future (Guenther et al., 2017, p: 115). This uncertainty imposes additional costs on businesses, such as the risk of being penalized by tax authorities (Bauer and Klassen, 2014, p: 2), reputational damage (Hanlon and Heitzman, 2009, p: 127), increased external consulting fees (Rego, 2012, p: 775) and increased difficulty in profit forecasting (McGuire et al., 2013, p: 5). Since tax risk is by definition "risky," it has been argued that firms must provide risk-taking incentives for managers to encourage them to undertake risky value-maximizing strategies that reduce the firm's tax payments . Despite the view that reducing corporate taxes is risky, there is a lack of empirical evidence linking tax-reduction activities to an increase in firm risk. (Guenther, D. A, et al, 2013, p: 2).

The issue of misstatements in financial reports is a major concern facing the accounting profession. The techniques used in fraudulent financial reporting, also known as financial malpractice, can be defined as acts of deception in financial statements to gain undue advantage and they have been used extensively throughout the world. As one would expect, the techniques used in fraudulent reporting adopted by companies in their financial reports could lead to issues of tax non-compliance and may result in the reduction of tax liabilities of the taxpayers (Mamo, J., Aliaj, A., 2014,p:55). According (Ryan McMorrow, Yuan Yang, 2021, p: 1) the $2.8bn penalty, which was set at 4 per cent of Alibaba's 2019 revenues, concludes an antitrust investigation into the company founded by Jack Ma. It comes as Chinese authorities have stepped up scrutiny on deal making and anti-competitive practices in its once lightly regulated technology sector. In addition observed High tech companies become more examined by the tax authorities in light of the decline in tax revenues for countries.

The purpose of this study was to investigate to measurement of accounting fraud practices in The ALI BABA group and the relationship

with tax risk during 2007-2020. The current study attempts to answer the following main questions: **How can accounting fraud lead to tax risk in ALI BABA group during the period (2007-2020)?**

The motivation of this study stems from many considerations. Firstly, this study updates the existing literature of relationship between accounting fraud and tax risk in economic institution in long period (2007-2020) because show a clear result in this study. Secondly, The ALI BABA group is a company that stimulates research on the subject, especially after warned investors higher taxes and recent antitrust investigation and fines on the Internet sector at the end 2020, which may affect its reputation and the possibility of being accused of tax evasion. Also, the unclear relation between accounting fraud and tax risk in the research literature is a catalyst for research on this study. The structure of the paper is as follows: Section 2 reviews Definition and measure of accounting fraud and tax risk in the economic institution and the literature on relationship between them. While Section 3 presents the data and outlines the methodology. Section 4 discusses the empirical findings. Finally, Section 5 provides some concluding remarks.

2. Definition and measure of accounting fraud and tax risk:

2.1 definition of accounting fraud:

The Oxford English Dictionary defines fraud as wrongful or criminal deception intended to result in financial or personal gain (Oxford University Press, 2009). In academic literature fraud is defined as leading to the abuse of a profit organization's system without necessarily leading to direct legal consequences. The accounting fraud is also defined by accounting professionals as deliberate and improper manipulation of the recording of data in financial statements in order to achieve an operating profit of the company and appear better than it actually is (Sharma, A., & Panigrahi, P. K., 2013,p:1). According to the ACFE (2014), financial statement fraud is a deliberate fraud performed by a manager or employee with no reports on actual financial statement information, for example, fictitious revenues, too low expenses report(Herawati, N,2015,p: 924).

In addition, accounting fraud is an important event in evaluating companies and thus also an important news event. The often extreme actions, tensions, and personalities involved in accounting fraud create a compelling story, consistent with sensationalism (Miller, G. S, 2006, p: 1002). Also, Fraud and earnings management differ in that earnings management can be within or outside of generally accepted accounting principles (GAAP), whereas alleged fraudulent accounting is invariably outside of GAAP (Erickson, M., et al, 2006, p: 113).

2.2 measure of accounting fraud:

There are several methods to measure but, we used financial indicators in the Beneish model to detect accounting fraud practices; the formula of M-Score is as follows:

$$Mscore = -4.840 + 0.920 * DSRI + 0.115 * DEPI + 4.679 * TATA + 0.528 * GMI + 0.404 * AQI - 0.172 * SGAI + 0.892 * SGI - 0.327 * LVGI$$

Where:

Days' sales in receivable index (DSRI) = (Net Receivables$_t$ / Sales$_t$) / (Net Receivables$_{t-1}$ / Sales$_{t-1}$)

GMI: Gross Margin Index = [(Sales$_{t-1}$ – Cost of Goods Sold$_{t-1}$) / Sales$_{t-1}$] / [(Sales$_t$ – Cost of Goods Sold$_t$) / Sales$_t$])

AQI: Asset Quality Index = [1 - (Current Assets$_t$ + Property$_t$+Plant$_t$+Equipment$_t$ + Securities$_t$) / Total Assets$_t$] / [1 - (Current Assets$_{t-1}$ + Property$_t$-1+Plant$_t$-1+Equipment$_{t-1}$ + Securities$_{t-1}$) / Total Assets$_{t-1}$)]

SGI: Sales growth Index = Sales$_t$ / Sales$_{t-1}$

DEPI: Depreciation Index = [(Depreciation$_{t-1}$/ (Property$_t$-1+Plant$_t$-1+Equipment$_t$-1+Depreciation$_{t-1}$)]/ [(Depreciation$_t$ / (Property$_t$+Plant$_t$+Equipment$_t$ + Depreciation$_t$)]

(Depreciation$_t$-1/(PP&E$_{t-1}$ + Depreciation$_{t-1}$)) / (Depreciationt/(PP&E$_t$ + Depreciation$_t$))

LVGI: Leverage Index= [(Current Liabilities$_t$ + Total Long-term Debt$_t$)/Total Assetst] / [(Current Liabilities$_{t-1}$ + Total Long-term Debt$_{t-1}$) / Total Assets$_{t-1}$]

TATA: Total Accruals to Total Assets= (Current Assets$_t$ - Cash Flow$_t$ - tax Payable$_t$ -depriciation$_t$-amortization$_t$) / Total Assets$_t$

(SGAI)Selling, General, & Admin. Expenses Index: (SG&A $Expense_t/Sales_t$) / (SG&A $Expense_{t-1}/Sales_{t-1}$)

If the coefficient M-score ≻ -2.22, it indicates that the institution has practiced accounting fraud. (Özcan, A., 2018, p: 3)

2.3 definition of tax risk:

In finance the term "risk" is generally used to describe the spread or dispersion of possible outcomes or payoffs from an investment, reflecting the degree of uncertainty about the future (Guenther, D. A., et al, 2013,p:1). In addition, Tax risk is the potential that a chosen action or activity, or the failure to take action or pursue an activity, will lead to a tax outcome that is different than initially expected. Tax risk is comprised of two components: an economic component and a regulatory component. The economic (regulatory) component arises from the decisions, actions, or inactions by taxpayers (tax authority) that result in unanticipated tax outcomes. As with other types of business risk, managing tax risk is a priority for firm managers (Neuman, S. S., et al, 2013, p: 2).

Tax risks are inevitable and easy to occur in the development of companies, whose manifestations mainly include: (1) companies do not pay taxes according to the requirements of the government, such as tax evasion. In this case, companies not only need to pay taxes in arrears, but also will be fined (2) The management behaviors of companies are not in accordance with the laws and regulations, and do not make use of the preferential policies issued by the state, leading to more taxes (Guo, Y., et al, 2020: p: 1). Also, Tax risk is the degree of risk or uncertainty of sustainability inherent in a firm's tax positions. The potential costs from tax authorities detection and reversal of uncertain and risky tax positions create incentives to curb excessive risk taking. However, investors prefer some degree of tax risk despite the potential costs, since riskier tax planning activities provide opportunities for higher cash tax savings and higher after-tax earnings (McCarty, R. D., 2012,p:2).

Tax risk is a financial risk suggesting possible unforeseen financial losses caused by the introduction of new tax types changes in tax rules and regulations, like cancelling tax breaks or "tax holidays", increasing

tax rates for current taxes, changing the procedure and deadlines for making tax payments and other norms of tax legislation Tax risks are also said to be linked with some uncertainty in achieving the objectives of the region, or the economic entity due to unforeseen negative factors in the taxation process(Artemenko, D. A., et al, 2017,p:3).Tax practitioners often define "tax risk" as involving transactional risk, operational risk, compliance risk, and financial reporting risk (Hutchens, M., & Rego, S, 2013,p:2).

2.4 measure of tax risk:

Tax risk. Debate over how to measure tax risks has always been controversial. In the tax research literature several different measures of tax risk have been developed and used. These measures differ with respect to the underlying rationale of measuring tax risk. In this study, we focused on Cash Effective Tax Rate (ETR), defined as (Gebhart, M. S, 2017, p: 2):

$$CashETR = \frac{cash - taxes - paid}{pre - tax - income}$$

Dyreng et al. (2008) describe a low Cash ETR as "the ability to pay a low amount of cash taxes per dollar of pre-tax earnings over long time periods." Tax policies that avoid more taxes, and lead to lower Cash ETRs, could increase the firm's risk if the underlying activities that allow the firm to lower tax rates are inherently risky, or if lower tax rates are less sustainable than higher tax rates (Guenther, D. A., et al, 2013,p:2).

We use the cash ETR as our measure of tax outcomes because it is a widely used measure of a firm's tax risk or outcomes and it is relatively free of management manipulation of accounting accruals, which may be more salient in tax outcome measures based on income statement amounts.

2.5 Relationship between accounting fraud and tax risk:

The studies on Relation between accounting fraud and tax risk; some of them are presented: According (Lennox, C., et al, 2013,p:739),

examined the Relationship between Tax aggressiveness and accounting fraud U.S. public firms and are less likely to commit accounting fraud. Also (Sukotjo, C., & Soenarno, Y. N, 2018, p: 38) researches the relation between tax aggressiveness, accounting fraud, and annual report readability, the result of this research tax aggressiveness reduces annual report readability. In addition (Chariri, A., et al, 2020,p:2) investigated the effect of aggressive financial reporting and independent boards of commissioners on tax aggressiveness, involved the possibility that financial reporting manipulation may be associated with taxation reporting manipulation. Research by (Tjondro, E., & Permata, A. A, 2019, p: 1) found Debt ratios have a significant effect on management decisions regarding aggressive accounting reporting or aggressive tax reporting. According (Oad Rajput, S. K., & Marwat, J, 2019, p: 2), the results of panel regression models show that managers manipulate the profitability signal via tax avoidance. (Blazek, R., 2021, p: 1) said Creative accounting as a global tool for tax optimization. (RADA, D, 2014, p:2) said an individual or legal person may resort to tax evasion for various reasons. Often accounting uses financial statements with the aim of creating a more favorable image for the company, image that is shown to the different categories of accounting information users that have certain interests inside the firm. (Harris, D., et al,2007,p:277) said As for tax purposes, the management would manipulate their financial statement either by underreporting revenues or overstating expenses to produce a lower overall tax liability. Thus, we hypothesis:

H1: ALI BABA group has practiced accounting fraud during the period from 2007 to 2020.

H2: ALI BABA group tax risk is not associated with their probability of accounting fraud behavior in long run.

H3: There is feedback long run and relationship between accounting fraud and tax risk.

3. Data and methodology

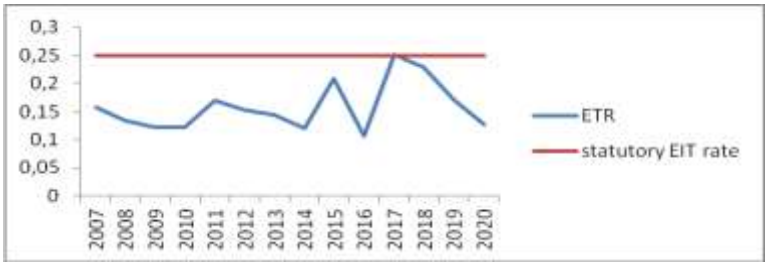
3.1 Research Method:

This paper is based on applied research using a quantitative method approach .In this section, we tried studied applied a well-known approach by Pesaran et al. (2001) called the autoregressive distributed lag (ARDL) that examines the long-run and short-run effects between financial fraud and tax risk in the Alibaba Group during the period from 2007 to 2020.

3.2 A case study- ALI BABA group: Jack Ma, our lead founder and chairman, and 18 other founders launched Alibaba.com in his Hangzhou apartment in 1999. Originally, Alibaba.com operated as a bulletin board service for businesses to post buy and sell trade leads, and later became a vibrant marketplace for small and medium enterprises around the world to identify potential trading partners and interact with each other to conduct business online. Alibaba.com was listed on the Main Board of the Hong Kong Stock Exchange on November 6, 2007 and is the flagship business of Alibaba Group (www.alibaba.com).

The total assets of the Corporation increased during the period (2007 – 2020) from about: 6.053 to 1312,985 million RMB, with an estimated growth rate of 21591%. Likewise, the volume of sales increased during the same period from about: 2,162 to 509,711 million RMB, an estimated growth rate of 23469.9%. Figure (01) display also Income tax computed at statutory (EIT) that the company pays during the period from (2007-2020) is 25% annually. The effective tax rate witnessed the lowest rate in 2016 at 10.59%, while the highest rate in 2017 was 25.04% and 17.10, 12.7%, for the years 2019 and 2020 respectively. Figure (01) show that effective tax rate was almost less than Income tax computed at statutory (EIT), Except for the year 2017. Considered a negative signal about tax compliance and social responsibility.

Figure 1. : ALI BABA (ETR) and (SEIT) during the period (2007-2020)



Source : https://www.alibaba.com/ 29/07/2021

3.3Study Models: To estimate the study model

Equation (1) can be written in ARDL form as follows:

$$CashETR_t = \infty_0 + \sum_{i=1}^{p} a_1 CashETR_{t-1} + \sum_{i=1}^{p} a_2 TATA_{t-1} + \sum_{i=1}^{p} a_3 DEPI_{t-1} + \sum_{i=1}^{p} a_4 DSRI_{t-1} + \sum_{i=1}^{p} a_5 SGI_{t-1} + \sum_{i=1}^{p} a_6 AQI_{t-1}$$
$$+ \sum_{i=1}^{p} a_7 GMI_{t-1} + \sum_{i=1}^{p} a_8 SGAI_{t-1} + \sum_{i=1}^{p} a_9 \Delta LVGI_{t-1} + \lambda_1 CashETR_{t-1} + \lambda_2 TATA_{t-1} + \lambda_3 DEPI_{t-1} + \lambda_4 DSRI_{t-1} + \lambda_5 SGI_{t-1}$$
$$+ \lambda_6 AQI_{t-1} + \lambda_7 GMI_{t-1} + \lambda_8 SGAI_{t-1} + \lambda_9 LVGI_{t-1} + \varepsilon_t$$

Where ∞_0 represents drift component while Δ shows the first difference ε_t shows the white noise. The study uses the Akaike information criterion (AIC) for choosing the lag length. After finding the long-run association existing between variables, the study uses the error correction model (ECM) to find the short-run dynamics.

The ECM general form of Equation (1) is formulated below in Equation (2):

$$CashETR_t = \infty_0 + \sum_{k=1}^{n} a_1 CashETR_{t-k} + \sum_{k=1}^{n} a_2 TATA_{t-k} + \sum_{k=1}^{n} a_3 DEPI_{t-k} + \sum_{k=1}^{n} a_4 DSRI_{t-k}$$
$$+ \sum_{k=1}^{n} a_5 SGI_{t-k} + \sum_{k=1}^{n} a_6 \Delta AQI_{t-k} + \sum_{k=1}^{n} a_7 GMI + \sum_{k=1}^{n} a_8 SGAI + \sum_{k=1}^{n} a_9 LVGI_{t-k} + \phi ECM_{t-1} + \varepsilon_t$$

$CashETR$: *cash effective tax rate* (*proxy of tax risk*)

ε_t : represents the error term

Where Δ represents the first difference while ∅ is the coefficients of ECM for short-run dynamics. ECM shows the speed of adjustment in long-run equilibrium after a shock in the short run. After analyzing data through Equation (2), the long-run association among all variables is verified by using the Wald test. The Null hypothesis of the Wald test

suggests the existence of no cointegration, while the alternative hypothesis shows the existence of cointegration. The calculated F-statistics are compared to lower and upper bound values (Pesaran & Shin, 1999). If the estimated F-statistic value is larger than the lower and upper bound then there will be cointegration.

4. Result and discussion: The following section, presents the results of this study. The results are presented according to the research questions asked in this study.

4.1 descriptive statistics: The descriptive statistical calculations result of Determinants financial fraud and tax risk (CashETR) in ALI BABA Company are shown in table 1:

Table1. Descriptive statistic each variable

Observations=14	CashETR	TATA	SGI	SGAI	LVGI	GMI	DSRI	DEPI	AQI
Mean	5,66	0.37	1,5	1,10	1,05	0,5	1,45	1,17	1,3
Maximum	20.56	0.66	2.1	2.51	3.04	1.9	6.06	2.33	5.4
Minimum	0.03	0.06	1.2	0.00	0.43	0.0	0.00	0.36	0.50
Source: Processed by Author on the program eviews10									

Total accruals to total assets index (TATA) is used as a proxy to evaluate the extent to which cash underlies reported earnings. A significant positive TATA coefficient is consistent with manipulators who have less cash behind their incomes. High increases in non-cash working capital may reflect possible manipulation. In 2009-2011, Ali Baba group exhibited a rise from a value that was positive (0.59-0.56) suggesting that earnings manipulation exists. Also Sales growth Index (SGI) an average value of 1.539 greater than 1 should be noted that a growth tendency in Sales Growth index does not imply manipulation, but nevertheless, some companies might feel pressured by the market to present some specific values of their earnings.

Analysts interpret a noticeable increase in the Sales, general and administrative expenses index (SGAI) as a negative signal about company's future prospects. Increases suggest a loss of managerial control

of costs or unusual sales efforts. Ali Baba group shows a negative signal about the future prospects of the company in 2007-2020 an average value greater than 1. Also, Leverage index (LVGI) an average value of 1.052 greater than 1 indicates an increase in debt. Higher values might identify companies whose managers have incentives to manipulate earnings and avoid violations of debt covenants. In addition, Gross Margin Index (GMI) an average value of 0.510 less than 1. Thus, a deteriorating gross margin sends a negative signal about a firm's prospects and creates an incentive to inflate profits.

The Day's sales in receivables index (DSRI) of Ali Baba group increased its value during the analyzed period, reaching values higher than 1, 01, till 1.960. Such increase might suggest that Ali Baba group carried out revenue inflation p A Depreciation Index's value greater than 1 means that. The depreciation rate has decreased and, consequently earnings have increased. Ali Baba group has the highest value of DEPI in 2011(2.33). An increase in this index suggests efforts of the company to achieve a lower depreciation and thus increase earnings. The Asset Quality Index (AQI) offers an average value of 1.397 positive and greater than 1. So, this result indicates much of a cost deferral by the company.

4.2 Unit root analysis: Also, Test for Stationary result it has been well documented that time series data is generally related to spurious regression issues that can lead to very poor results. Therefore, this is verified by testing the unit root for each variable that is included in our analysis. This study uses the Augmented PP Phillips- Perron (PP) tests, because these are the most commonly used test. Result shows all variables are stable from the first differences I (1) (Table 2).

Table 2. Unit root analysis model

Variables	P–P test (at level)		P–P test (at first difference)	
	Intercept	Intercept and trend	Intercept	Intercept and trend
CashETR	1.58	-0.83	-2.67	-3.99**
AQI	-4.61***	-4.49**	-14.91***	-19.77***
SGI	-2.91*	-2.85	-4.11***	-23.84***
SGAI	-4.84***	-5.04***	-7.17***	-11.60***
GMI	-5.60***	-4.89***	-11.33***	10.36***
LVGI	-8.06***	-7.56***	-11.78***	-11.78***
TATA	-0.80	-2.85	-4.28***	-9.97***
DEPI	-6.82**	-8.49***	-20.43***	-3.90***
DSRI	-3.57**	-3.38*	-9.32***	-4.37***
Notes: **,***Mean the rejection of null hypothesis at 5 and 1 percent levels of significance.				
Source: Processed by Author on the program eviews10				

4.3 Detect financial fraud behaviour in ALI BABA group:

Table 3 presents the results of testing the first hypothesis; we found that all years of study, the condition was met. Thus, it can be said that the ALI BABA group has practiced accounting fraud during all the period from 2007 to 2020, because Coefficient M-score > -2.22. Table (3) shows that in appendices.

4.3 effect between financial fraud and tax risk in ALI BABA group:

4.3.1 Lag length criteria:

After checking the unit root test, the next stage is to use the ARDL approach to check the long-term relationship between the variables. Where only three independent variables (TATA, SGI, DEPI) were chosen because of their ability to explain the relationship. Also, it is necessary to choose the appropriate lag length before applying the ARDL bounds test. In addition, the choice of lag length should be exercised with caution, as inappropriate lag length can lead to biased results and cannot be accepted for policy analysis. Consequently, to confirm that the lag length is chosen appropriately, we use the AIC to illustrate the relative lag length. The AIC criterion gives robust results and has excellent performance compared to the SC and HQ. The results are presented in Table (4). We determined that the lag 2 fits our sample size in the model.

Table 4.Model Selection Criteria Table
Dependent Variable: CashETR
Date: 09/20/21 Time: 21:52
Sample: 2007 2020
Included observations: 14

Model	LogL	AIC*	BIC	HQ	Adj. R-sq	Specification
7	-12.36	3.19	3.65	3.15	0.97	ARDL(2, 2, 0, 2)
4	-12.08	3.29	3.80	3.25	0.97	ARDL(2, 2, 1, 2)
1	-11.16	3.3	3.85	3.25	0.96	ARDL(2, 2, 2, 2)

Source: Processed by Authors on the program eviews10

4.3.2 Bound test approach:

In model our findings of the cointegration test based on the ARDL bounds testing approach are detailed in table (5). Results reveal that the calculated F-statistics are 7.995 which are greater than Wupper critical bound (UCB) at 1, 2.5, 5 and 10 percent of significance levels when TATA, SGI, DEPI used as independent variables, cointegration relationship exist.

Table 5.Results of ARDL cointegration test

Variable	CashETR	TATA	SGI	DEPI	Diagnostic tests	Value
Optimal lag structure	ARDL (2, 2, 0, 2)				R2	0.993
F-statistics (Bounds Test)	7.995				Adj-R2	0.979
Critical values (%)	1	2.5	5	10	χ2 NORMAL	0.698
Lower bounds I(0)	4.29	3.69	3.23	2.72	χ2 SERIAL	0.205
Upper bounds I(1)	5.61	4.89	4.35	3.77	Heteroskedasticity. T	0.333

Source: Processed by Authors on the program eviews10

4.3.3 Long-run and short-run analysis model:

In model the error correction term ECT_{t-1} is negative and statistically significant with a high coefficient (-1.55), which reveal that the

disequilibrium can be adjusted to the long-run with higher speed, having any prior-year shock in the explanatory variables.

Table 6.ARDL Long Run Form and Bounds Test.

Dependent Variable: D(CashETR)
Selected Model: ARDL(2, 2, 0, 2)
Case 3: Unrestricted Constant and No Trend
Date: 09/20/21 Time: 21:53
Sample: 2007 2020
Included observations: 14

Conditional Error Correction Regression

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	32.50761	6.917154	4.699564	0.0093
CashETR (-1)*	-1.550	0.489825	-3.1653	0.0340
TATA(-1)	-67.409	19.48102	-3.4602	0.0258
SGI	-9.5043	2.805867	-3.3873	0.0276
DEPI(-1)	15.689	6.430806	2.4397	0.0712
D(CASHETR(-1))	-0.9474	0.306278	-3.0932	0.0365
D(TATA)	-27.013	8.857364	-3.0498	0.0380
D(TATA(-1))	14.9315	8.297206	1.7995	0.1463
D(DEPI)	6.80423	2.222531	3.0614	0.0376
D(DEPI(-1))	-3.2944	1.994309	-1.6519	0.1739

* P-value incompatible with t-Bounds distribution.
Source: Processed by Authors on the program eviews10

This study confirmed the long-run cointegration among cashETR dependent variable and accounting fraud determinants in the model. Table (7) demonstrates the long-run results, explanatory variables DEPI positively and significantly affected Cash ETR. Also variables TATA and SGI negatively and significantly affected CashETR.

Table 7.Levels Equation

Variable	Coefficient	Std. Error	t-Statistic	Prob.
TATA	-47.6674	5.061209	-9.418185	0.0002
DEPI	7.94447	2.131662	3.726893	0.0136
SGI	-7.55258	2.862933	-2.638058	0.0461

EC = CashETR - (-47.6674*TATA + 7.9445*DEPI -7.5526*SGI)
Source: Processed by Authors on the program eviews10

Focusing on the model, observed that the estimated coefficients of the long-run relationship show the significant impact of three independent variables on tax risk (cashETR), during the period of the study. Moreover, the variable namely Depreciation Index's value (DEPI), (Coefficient=7.94, Prob=0.0136) means that an increase in depreciation leads to an increase in tax risk by an amount (7.94). ALI BABA Group Company has the highest value of DEPI In 2011 estimated 2.33 to settle at average 1.11 in the last five years.

Many researchers highlighted the depreciation as one of the accounting fraud mechanisms among them (Cernuşca, L., 2009) studied methods, techniques and practice of accounting fraud for depreciation. Also (Ali Shah, S. Z., Butt, S. A., & Bin Tariq, D. ,2011) see that companies can Change the rate of depreciation method or change the method itself to increase or decrease the depreciation expense and effect on taxable income. So, it can be said that depreciation is considered a variable that may lead in the long run to tax risk.

Second, total accrual on total assets index (TATA), (Coefficient=-47.66, Prob=0.0002) means decrease total accrual leads to an increase tax risk by an amount (47.66). As this approach sees that managers use total accrual, especially discretionary (extraordinary) in order to manipulate income for the benefit of owners and shareholders. This is consistent with the findings of researchers about the behaviour of earning management by using tax, including: Scholes, M. S., Wilson, G. P., & Wolfson, M. A (1992) provided evidence that companies attempt to change income by deferring revenue recognition or speeding up expense recognition to reduce tax expenses. Also MA Desai, D Dharmapala find that the financial and taxable income reporting system allows for "the province of much

creative decision-making", arguing that aggressive tax management is the main source of the differences. (Benjamin C. Ayers, et al, 2008).

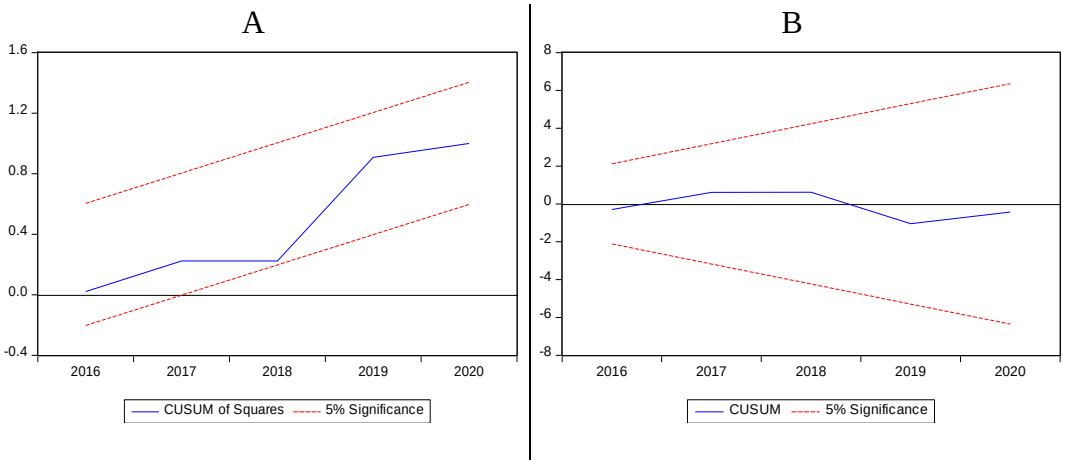
Furthermore, Sales growth Index (SGI), negatively affected (Coefficient= -7.55, Prob=0.0461) because earning management affected. Thus, lower sales growth lead to higher tax risks. (Puspita, E. R., et al, 2018) indicated that sales growth affect tax avoidance.

We performed a two models stability test through several diagnostic tests including Jarque–Bera normality test, LM serial correlation test, heteroskedasticity test, respectively. The empirical findings of this study reveal that the ARDL model has passed all the diagnostic tests successfully.

4.3.4 Structural Stability Diagnostics:

Figure (2) shows the structural stability test for the model parameters according to the two CUSUM TEST tests and CUSUM of Squares TEST, as Part A shows that the sum of the residual accumulation falls within the column of critical values, that the estimated parameters are stable at a level of significance of 5%. Also part B of the graph shows that the sum of the accumulation of squares of the residuals falls within the column of critical values, meaning that the variables included in the model are stable at the level of significance of 5%.

Figure2. Structural stability test of model parameters model



Source: Processed by Authors on the program eviews10

5. Conclusion and Discussion, Implication and Limitation:

5.1 Conclusion and Discussion:

The urgency need to study the long run relationship between fraud behaviour and tax evasion is due to the attempt to encourage companies to create a vigilant system for the tax risks that institutions may be exposed to and may distortion their reputation in the market.

This study presented an experimental evaluation of fraud behaviour in an international company ALI BABA group. The fraud behaviour indexs were calculated using the Beneish model. Our findings revealed that ALI BABA group practiced fraud behavior during all the period from 2007 to 2020 because Coefficient M-score $\succ$ -2.22. Also, there is feedback long run and relationship between accounting fraud and tax risk through about three variables Depreciation Index (DEPI) a positive effect on tax risk, while the negative effect of Total Accruals to Total Assets (TATA)and Sales growth Index (SGI).

5.2. Implication and Limitation

This research has implications as a strategy to accelerate the adoption of the tax risk management system, especially in big size companies. By analyzing the long run relationship between fraud behaviour practices and tax risk, the companies will try to control harmful accounting behaviour that does not serve the interests of shareholders and owners. This study also suggests directions for future research can be further elaborated by expanding unit samples and using sectoral study.

Despite the interesting results that can be derived from our study, we nevertheless must note a few shortcomings of this article. First, expanding the number of companies may provide better results, but we wanted to try to know the peculiarity of the ALI BABA group under study. Second, this study requires interviews with the company’s auditors or financial managers in order to investigate the subject of the study.

In spite of the abovementioned limitations, the research findings demonstrate accounting fraud behaviour practices may be harmful to the company and lead to tax risk, which is an act punishable by law and tarnishes the company's reputation in the market, and therefore companies must build a system to manage the risks of this type of practices.

Appendices:

Table 3.The results Beneish model outputs ALI BABA group during the period from (2007-2020)

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
DSRI	1,314	1,960	1,190	0,754	0,838	0,637	0,652	6,068	1,737	1,018	1,030	1,184	0,828	1,214
GMI	0,272	0,087	0,652	1,996	0,103	0,242	0,401	0,363	0,326	0,550	0,486	0,488	0,626	0,549
AQI	0,502	0,960	1,096	5,435	0,566	2,070	0,545	1,779	1,179	1,458	1,011	0,913	1,137	0,910
SGI	1,586	1,389	1,290	1,434	2,142	1,682	1,724	1,521	1,451	1,327	1,565	1,581	1,506	1,353
DEPI	1,324	1,608	1,470	0,636	2,336	0,361	1,344	0,881	0,943	0,920	1,058	1,978	0,813	0,819
SGAI	0,786	1,172	1,392	1,052	1,659	0,835	0,752	0,892	1,445	0,402	0,640	2,519	1,093	0,851
TATA	0,647	0,661	0,594	0,443	0,568	0,449	0,482	0,324	0,353	0,170	0,140	0,127	0,068	0,167
LVGI	0,434	0,951	1,224	1,604	0,683	0,527	3,046	0,768	0,601	0,825	1,147	1,074	0,936	0,911
M score	1,03	1,39	0,50	1,82	0,54	0,03	-0,98	4,22	0,01	-1,00	-1,54	-1,67	-2,02	-1,42

Source: Processed by Authors on the program excel

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