Moderating Role of Life Cycle and Economic Conditions in Impact of Financial Reporting Quality Measuring Criteria on Firms Future Growth

Revista Publicando, 5 No 15. (2). 2018, 507-544. ISSN 1390-9304

Moderating Role of Life Cycle and Economic Conditions in Impact of Financial Reporting Quality Measuring Criteria on Firms Future Growth

Aydin Kiani[1*], Mohammad Ali Aghaee[1], Hossein Etemadi[1]

1 Tarbiat Modares University, aydinKiani2018@gmail.com

ABSTRACT

This study aimed to evaluate usefulness of financial reporting qualitative factors affecting firms' future growth considering various steps of life cycle and economic conditions. Financial reporting quality is a multidimensional implication so that there is not a unanimous definition of it. Authors have used various criteria to measure accounting information quality, but none of them evaluated usefulness of each metric considering moderating variable including life cycle and economic conditions when estimating future growth; moreover, sustainable usefulness is still an ambiguous issue. Financial data of 188 companies listed in Tehran Stock Exchange, 2007-2015 collected to model and evaluate usefulness of 16 criteria for financial reporting quality affecting future growth with regard to life cycle and economic conditions. The results obtained from Stepwise method indicated that using interactional effects of financial reporting quality variables and steps taken within life cycle and economic conditions led to increase in precise estimation of firms' future growth. Research findings showed that some criteria associated with accounting information quality had useful impacts on future growth considering moderating role of life cycle and economic conditions. Obtained results can be used by analysts and investors to estimate future components growth.

Keywords: Financial Reporting Quality Criteria, Life Cycle Steps, Economic Conditions, Future Growth

Moderating Role of Life Cycle and Economic Conditions in Impact of Financial Reporting Quality Measuring Criteria on Firms Future Growth

Revista Publicando, 5 No 15. (2). 2018, 507-544. ISSN 1390-9304

1. INTRODUCTION

Statement number 1 of the Financial Accounting Theory (SFAC No.1) expresses, "financial reporting should provide information about financial performance of business unit during a period". Therefore, financial reporting content will be qualified if it provides users with more information about financial performance of firms. Presented information should be related to users' decision making. In addition, theoretical implications of Iran's financial reporting indicate that financial statements aim to provide summarized and classified information about financial situation, performance and flexibility of business unit that is useful for a broad range of financial statements' users when making economic decisions. Therefore, provided information should be associated with users' decision-making process. The main objective is to provide useful information within decision-making process. Objectives of financial reporting originate form informational needs of extra-organizational users. The main goal is expressing economic effects of financial events on financial situation, performance and flexibility in order to help extra-organizational individuals such as investors, stakeholders, analysts and creditors. Since financial reports are used in making decision by accounting information users, appropriate level of financial reporting and disclosure quality should exist. High financial reporting quality can lead to better forecast of future performance and growth of company for financial statements' users.

Precious and undeniable role of information is economic development and efficient resources allocation has been confirmed by all of experts in economics and accounting. Financial reporting as an available information resource in capital markets plays a vital role in investment development and efficiency increase. In this sense, authors have been always tending to expand financial reporting quality as a tool regarding firms' accountability to the society needs (Mafi et al. 2012). Obviously, qualified financial information is useful for economic decisions. Since various specifications, particularly being relevance and reliable are in conflict so that strength of one leads to weakness of another, financial information cannot encompass all of qualifications simultaneously; hence, different decision makers should prefer a specific specification based on decision-making type (Aghaee et al., 2013). Moreover, comprehensive promotion of accounting information quality taking all of

508

Moderating Role of Life Cycle and Economic Conditions in Impact of Financial Reporting Quality Measuring Criteria on Firms Future Growth

Revista Publicando, 5 No 15. (2). 2018, 507-544. ISSN 1390-9304

specification into account leads to increased cost of information, an illogical and irrational action that is not cost-effective due to increasing level of benefits compared to costs.

Financial reporting quality is a multiple implication without a definite definition. Authors have employed different criteria to measure accounting information quality; various specifications such as earning quality, earning stability, accruals quality, earning transparency, conservation, smoothing etc. that are broadly used in different ways by accounting studies. However, financial reporting quality is an extensive concept that cannot be confined only to one criterion such as accruals quality, earning management or earning quality.

Companies follow a certain policy based on their economic status so such policies can affect their financial reporting and disclosure quality. In other words, firms have different conditions and specifications during life cycle steps that can affect their financial reporting behavior. Moradi and Eskandar (2014) state based on competitive advantage theory that companies at growth step tend to eliminate competitive advantage risk, provide low-quality information, and promote their financial information quality only when transiting from growth step to maturity stage. In competitor theory or signaling theory, firms require extra-organizational financial resources such as proceeds from the issuance of stocks and bonds in growth step; hence, they tend to promote financial reporting quality, to reduce information asymmetry, and to signal their future opportunities and performance. In this regard, these firms lose their tendency to provide high-quality financial information after transit from growth step and access to financial resources as well as increase in assets and collateral power to obtain financial facilities (Leuz, 2003; Piotroski, 2004).

Considering the limits of higher benefits than costs of information providing, it is essential to determine relative importance of each financial reporting measure in order to improve future growth of companies at every step of life cycle and economic condition. Holistic promotion of information quality is emphasized by auditors and supervisory institutes considering all dimensions such as audit quality, quality of internal controllers ruling financial reporting, providing corporate governance mechanisms to promote earning quality and information disclosure. However, determining relative priority and importance

Moderating Role of Life Cycle and Economic Conditions in Impact of Financial Reporting Quality Measuring Criteria on Firms Future Growth

Revista Publicando, 5 No 15. (2). 2018, 507-544. ISSN 1390-9304

coefficient considering various environmental conditions in terms of life cycle and economic conditions can help analysts, investors, and creditors to estimate future growth; On the other hand, investors and analysts experience fewer problems when estimating firms' future growth providing more beneficial analyses with less errors due to received high-quality information.

2. THEORETICAL LITERATURE

Financial reporting quality has been considered as an issue in accounting literature. Financial scandals, collapse of market value and lack of investors' trust in capital market can be mentioned as consequences of paying no attention to financial reporting quality. Action done by legislating institutes such as US Congress, Sarbanes–Oxley Act, regulations published by Stock Exchange Commission, and increasing requirements for accountability to stock market rules have led to expanded importance of financial reporting quality. Considerable increase in number of studies on financial reporting quality, factors affecting it and its usefulness imply its necessity for users. Financial reports is one significant product of accounting system that aims to provide information required for economic decision-making in case of performance appraisal and profitability. To achieve this goal, high-quality information should be measured and provided to appraisal previous performance affecting profitability assessment and firms' future activities forecast.

Quoted from Suberi et al. (2012), Zimmerman (2013) assumes that some authors consider extra-organizational financial reporting quality as the first-order factor of firm's economic implications such as capital costs and firm's value. In his opinion, obtained conclusions ignore the fact that performance are results of operational and investment activities. Zimmerman (2013) names first-order trigger factors as competitive advantages of provided products and services, introducing new products, capable and skilled labor force, patents, surrounding legal and tax environment, firm's value chain efficiency, strategic solidarity etc. the mentioned properties are disclosed through accounting measurement system that is exposure to risk of managers motivation, accounting standards failure, and economic-environmental uncertainty level. Suberi et al. (2012) used life cycle as a criterion for
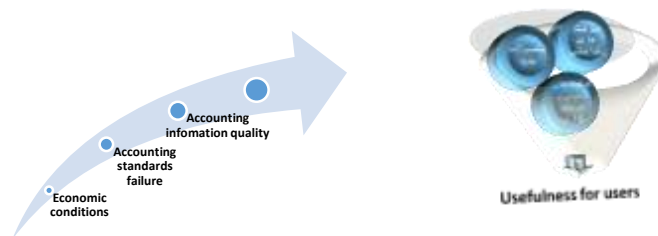
Moderating Role of Life Cycle and Economic Conditions in Impact of Financial Reporting Quality Measuring Criteria on Firms Future Growth

Revista Publicando, 5 No 15. (2). 2018, 507-544. ISSN 1390-9304

economic conditions in examining relation between earning quality measures and future growth.

In this sense, Zimmerman (2013) believes that some authors tend to introduce financial reporting quality as first-order trigger of firm's value without any theoretical support, while he assumes that financial reporting quality is just second-order trigger for form's value. In other words, financial reporting quality measures can affect firm value if first-order economic measures are effective in firm. According to study conducted by Dechow et al. (2010), casual relations between financial reporting quality and firm's economic outcomes such as capital cost are ambiguous when eliminating some variables. Conceptual model below indicates Zimmerman's theoretical foundations (2013). According to conceptual model presented by Zimmerman (2013), financial reporting quality is a secondary factor that its impacts and consequences should be studied based on firms' economic conditions. In his opinion, some control factors such as competitive advantages, new products, operational and investment activities should be considered in forecasts in analyses related to forecasting firms' future growth and performance; in this case, all of factors are disclosed through accounting measurement system. This system is affected by managerial motivation risk leading to change in financial reporting behavior and bias in financial reporting. Following part present theoretical foundations of moderating variables affecting usefulness of financial reporting quality criteria and firms' future growth.

Moderating role of life cycle in relationship between financial reporting, performance and firms' future growth

Living creatures are born, grow up, get old, and finally die. According to life cycle theory, economic firms have life cycle like living creatures. Firms follow a specific policy based on

**Moderating Role of Life Cycle and Economic Conditions in Impact of
Financial Reporting Quality Measuring Criteria on Firms Future Growth**

Revista Publicando, 5 No 15. (2). 2018, 507-544. ISSN 1390-9304

their economic life stage so that these policies may affect accounting information quality and financial reporting of firms (Dehdar & Aghaee, 2012). In opinion of Leuz (2003) and Piotroski (2003), firms' life cycle has impact on financial reporting quality. Competitive viewpoint emphasizes that firms' financial reporting quality will increase by passing through life cycle stages; signaling viewpoint expresses that financial reporting quality will be decreased within life cycle stages. Suberi et al. (2012) believe that position of firm in each life cycle factors may affect financial reporting quality usefulness. They think that the relationship between financial reporting quality and firms' growth in maturity stage is due to increased capacity of accounting measurement system compared to other stages, because firms have been evolved in maturity stage with more suitable and stable conditions in terms of corporate governance and internal controllers ruling financial reporting. Therefore, life cycle can be named as a moderating criterion in relationship between financial reporting quality and firms' future growth.

Quoted from Moradi and Skandar (2014), companies follow a specific policy based on which stage of economic life they are, so such policies can affect their financial reporting and disclosure quality. According to competitive advantage theory, companies at growth step tend to eliminate competitive advantage risk, provide low-quality information, and promote their financial information quality only when transiting from growth step to maturity stage. In competitor theory or signaling theory, firms require extra-organizational financial resources such as proceeds from the issuance of stocks and bonds in growth step; hence, they tend to promote financial reporting quality, to reduce information asymmetry, and to signal their future opportunities and performance. In this regard, these firms lose their tendency to provide high-quality financial information after transit from growth step and access to financial resources as well as increase in assets and collateral power to obtain financial facilities (Leuz, 2003; Piotroski, 2004).

According to life cycle theory, companies have an inevitable evolution transferring from one stage to another (Porter, 2004). Accordingly, firms use a predictable pattern in different life cycle stages and this is an irreversible trend. According to studies conducted by Grullon etal. (2002), DeAngelo and DeAngelo (2006), dividend policies and according to findings

Moderating Role of Life Cycle and Economic Conditions in Impact of Financial Reporting Quality Measuring Criteria on Firms Future Growth

Revista Publicando, 5 No 15. (2). 2018, 507-544. ISSN 1390-9304

obtained by Dickinson (2011), cash flows' patterns of firms can be determined based on different life cycle stages. In other words, life cycle theory indicates that corporate financial policies depend on different life cycle stages. In maturity level, firms have lower investment, finance and cash holding.

New-emerging firms at transiting stage from introduction to growth and maturity highly require attracting external resources to finance business activities. Another example can be named for firms that are at maturity stage or transiting from maturity to decline stage. These firms have lower investment opportunities and finance due to reduced growth capacities; hence, they should use internal resources because of inability in foreign finance. To attract financial resources, resource suppliers look for information transparency among financial resources demanders; in this sense, financial reporting quality can be used as a tool to reduce informational asymmetry between contract parties.

Mediating role of economic condition in relationship between financial reporting quality, performance, and firm's future growth

One another problems associated with relationship between accounting information quality and performance is estimations' period. Severe financial and economic crisis experienced by international markets in 2008 led to depression, falling stock market value and dramatic decline in corporate financial performance so that many companies observed negative growth in their practical indicators. Hence, it is essential to consider economic conditions or factors related to economic cycle as moderating variable to explain relationship between financial reporting, performance and firms' future growth. Economically, financial and economic crisis leads to uncertainties in capital markets not only for investors but also for customers, financial resources suppliers and society.

It should be noted that accounting information quality provided by companies depends on economic and environmental conditions. Surrounding economic conditions may be accompanied with high growth rates and economic efficiency or there may be depression with reduced economic efficiency levels. According to Kelin and Reckward (2006), companies invest more during macroeconomic efficiency; hence, they look for qualified and transparent information based on signaling method to indicate investments' profitability.

Moderating Role of Life Cycle and Economic Conditions in Impact of Financial Reporting Quality Measuring Criteria on Firms Future Growth

Revista Publicando, 5 No 15. (2). 2018, 507-544. ISSN 1390-9304

Therefore, it is expected that companies with promising functional prospect that invest during economic boom have more motivation to promote financial information quality and financial performance; in contrary, there is tendency to propose low-quality financial reporting during stagnation leading to information asymmetry between information providers and users that itself is a factor to destroy future growth of companies (Martinez Ferrero, 2014). Therefore, theoretical foundations indicate that fluctuations in economic cycle can be considered as a moderator for relationship between financial reporting quality and firms' future performance. Figure below illustrates research conceptual model based on mentioned theoretical foundations.
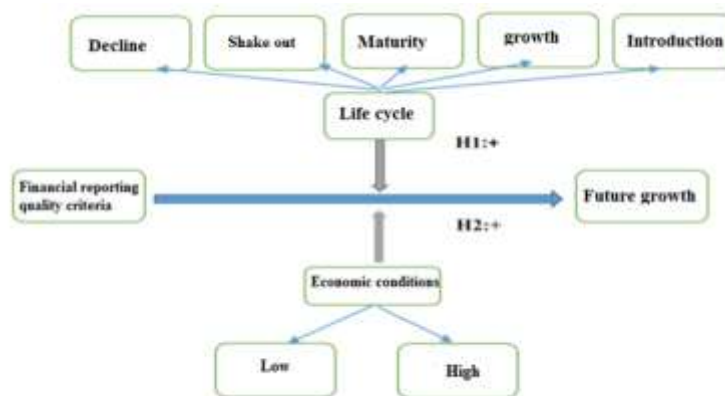
Hypothesis 1: life cycle variable plays the moderating role in relationship between financial reporting quality criteria and future growth.

Hypothesis 2: Economic conditions play moderating role in relationship between financial reporting quality criteria and future growth.

Experimental Background

Asnaasharai and Nooreini (2017) measured earning management pattern in life cycle; they examined earning management pattern within different life cycle stages considering future growth role in it. For this purpose, accruals and sticky behavior cost wee respectively used to assess earning management pattern through accruals and real activities. Results showed that firms employed earning management pattern through accruals during emergence and decline stages, while real activities have dominant role in earning management during growth and maturity stages. In addition, the more increase in firms' future growth during growth and

514

Moderating Role of Life Cycle and Economic Conditions in Impact of Financial Reporting Quality Measuring Criteria on Firms Future Growth

Revista Publicando, 5 No 15. (2). 2018, 507-544. ISSN 1390-9304

maturity stages, the more increase in contribution of accruals in earning management (Marcial Limache Sandoval, 2017). Behbahaninia (2017) studied financial reporting quality of companies listed in Tehran Stock Exchange during world financial crisis. The obtained results indicated that financial reporting quality of companies listed in Tehran Stock Exchange during world financial crisis was higher than other periods and companies with higher finance requirements had higher reporting quality during studied period.

Khajavi and Salehinia (2017) examined the relationship between financial restatements and growth of companies listed in Tehran Stock Exchange. For this purpose, they studied 70 companies listed in Tehran Stock Exchange, 2005-2013. Multivariate linear regression was used for hypothesis testing. According to the results obtained from hypothesis testing, there was a negative and significant relationship between financial restatements and sale growth in companies listed in Tehran Stock Exchange; however, there was not any relationship between financial restatements and net earnings growth as well as assets growth and tolerable growth. In addition, results indicated a direct relation between firm size and profitability and growth indicators, while a reverse relationship between dividend and majority growth indicators.

Kardan et al. (2016) examined effect of financial restatements on firms' growth. Growth pattern of Demerogock and Maximovich was used to work on the topic using internal growth rate, short-term growth rate, and maximum growth rate to measure firms' growth. Statistical population of study comprised 66 companies listed in Tehran Stock Exchange during 14-year period 1999-2012. Results showed that financial restatements lack effective information in Iran without any impact on firms' growth.

Moradi and Eskandar (2014) examined earning quality within life cycle of companies listed in Tehran Stock Exchange; they concluded that earning predicting and sustainability criteria are different within various life cycle stages. According to the results obtained from decline stage, earning's predictability and sustainability was weaker compared to other stages. In addition, earning quality criteria of companies including conservation and value relevance were not significant within different life cycle stages.

Moderating Role of Life Cycle and Economic Conditions in Impact of Financial Reporting Quality Measuring Criteria on Firms Future Growth

Revista Publicando, 5 No 15. (2). 2018, 507-544. ISSN 1390-9304

Some studies used accounting quality criteria as a collection to estimate major accounting consequences. For instance, Asnaashari et al. (2014) designed a model to assess accounting information quality. For this purpose, information quality assessment's criteria are the most common measurement models because of their precision and robust research literature. In this regard, data of 67 companies listed in Tehran Stock Exchange during 1996-2011 were collected considering some specifications. To examine, independent variables, Least Square regression and correlation methods were used and to test hypotheses, hedging portfolio method, Paired comparison test, exploratory factor analysis and genetic evolution algorithm were employed. Results showed that using 5 criteria including notification (first and second criteria), remaining smoothing (first criterion), remaining accruals' quality (second criteria) and remaining conservation could obtain a combined criterion that is more capable of assessing information quality more precisely compared to other criteria.

Hesarzadeh et al. (2016) modeled information uncertainty management using fuzzy decision tree methodology. Results of their research indicated that it was possible to model balanced quality management and a combination of quality criteria that minimizes uncertainty using fuzzy decision tree methodology. The findings obtained from decision tree after sensitivity analysis in various aspects indicated three interactional paths between quality criteria to minimize uncertainty.

Aghaee and Rahmani (2013) developed a model to evaluate effect of qualitative specifications on financial reporting usefulness. Results obtained from their study showed insignificant impact of conservation and understandability on usefulness. In addition, there was a mutual relationship between qualitative specifications including conservation, honest expression, impartiality, relevance, reliability, forecast value and confirmation value. Therefore, it is recommended to eliminate qualitative specifications. Since relevance has higher effect on usefulness compared to reliability, it is concluded that financial statements users look for relevant data and reliability is their second priority.

Martinez and Ferrero (2014) examined consequences of financial reporting quality on financial performance. Results obtained from this study indicated positive and significant impact of financial reporting quality on firms' financial performance. Moreover, results

Moderating Role of Life Cycle and Economic Conditions in Impact of Financial Reporting Quality Measuring Criteria on Firms Future Growth

Revista Publicando, 5 No 15. (2). 2018, 507-544. ISSN 1390-9304

showed that factors such as economic cycle. IFRS, applied accounting system had impact on the relationship between financial reporting quality and future growth (Zareinejad et al., 2014). Suberi et al. (2012) proved that accounting information quality in maturity stage had higher positive and significant effect on adjusted future growth based on industry compared to other stages. In addition, life cycle had impact on financial reporting quality behavior.

Hope et al. (2017) examined the relationship between stakeholder demand for accounting information and economic usefulness of accounting. Results obtained from their study indicated a strong relationship between accruals quality and stakeholders' demand and supervision; in addition, accounting information in studied companies had higher usefulness when estimating future cash flows (Foroughi and Esfahani, 2012). Furthermore, Zhai and Wang (2016) conducted a study on accounting information quality and capital investment choice and concluded that increase in financial reporting quality led to improved capital investment choice.

Results obtained by Chen et al. (2016) indicate positive and significant relationship between internal control and earnings quality in maturity stage, while this relationship is not significant in decline and growth stages.

Therefore, evidences obtained from experimental studies on financial reporting quality and its major consequences on capital market indicated different effective criteria. In other words, various criteria have been presented in studies to assess accounting quality; for example, Dechow and Dichev (2002) pointed to accruals quality, Francis et al. (2008) mentioned earning changeability and Francis et al. (2004) mentioned earning smoothing. According to Hesarzadeh et al. (2016), most criteria are limited to a part of financial statements; in other words, they are qualitative so they cannot measure total quality of accounting precisely. Considering the issue considered in research literature, the question raised here is that which of criteria has higher importance and effect on predicting future financial performance of companies considering their major consequences; the other question is whether these effects are stable within different life cycle stages or are effective only in one stage; so, which criteria are preferred by analysis, users, stakeholders, and investors to estimate future financial

517

Moderating Role of Life Cycle and Economic Conditions in Impact of Financial Reporting Quality Measuring Criteria on Firms Future Growth

Revista Publicando, 5 No 15. (2). 2018, 507-544. ISSN 1390-9304

performance of companies in each life cycle stage and which criteria are used to model or estimate firms' future growth.

3. METHODOLOGY

This study aimed at developing experimental knowledge in a specific field. In this research, different criteria for financial reporting quality measurement were extracted from research literature and impacts of them on firms' future growth within life cycle are modeled considering economic conditions. Variables used in this research were collected from Rahavard Novin Software and Tehran Stock Exchange Website. This was an applied research in terms of objective, a quasi-experimental study in terms of methodology and cross-sectional study in terms of time interval (company-year). Stepwise regression method was used for data analysis.

Statistical population and sample

Statistical population of study included companies in Tehran Stock exchange and statistical sample comprised companies listed in Tehran Stock Exchange during 2007-2015. Sampling with removal was used applying the following restrictions.

A) Companies as members of financial intermediation industries (investments, banks, holdings, insurance companies) were excluded.

B) Companies that changed their financial year during research period were removed from statistical sample.

C) Companies that existed from stock exchange list were removed from sample.

Research model

The applied model in this research was designed using variables adopted from theoretical literature about financial reporting quality; this model is written as:

$$Growth_{it+1} = \theta_0 + \theta_1 Growth_{it} + \theta_2 MtB_{it} + \theta_3 ROA_{it} + \theta_4 ROE_{it} + \theta_5 Leverage_{it}$$
$$+ \theta_6 AgencyCost_{it} + \theta_7 FirmSize(Sales)_{it} + \theta_8 FirmSize(Assets)_{it}$$
$$+ \theta_9 ZScore_{it} + \theta_{10} LifeCycle_{it} + \theta_{11} EconomicCycle_{it}$$
$$+ \theta_{12} Inflation_{it} + \theta_9 \Delta Debt_{it} + \theta_{10} \Delta CFO_{it} + \theta_k AQ_{kit}$$
$$+ \theta_k \sum LifeCycle * AQ_{kit} + \theta_k \sum Economic * AQ_{kit} + \varepsilon_{it}$$

518

Moderating Role of Life Cycle and Economic Conditions in Impact of Financial Reporting Quality Measuring Criteria on Firms Future Growth

Revista Publicando, 5 No 15. (2). 2018, 507-544. ISSN 1390-9304

Research variables measurement

Table below indicates measurement method for variables and their role.

Table 1. Research variables measurement

Description	Symbol	Measurement method
Future growth	$G\text{-}Sales_{it}$ $G\text{-}Assets_{it}$ $G\text{-}MVE_{it}$ $G\text{-}BVE_{it}$	Growth in year t divided to growth in year t-1. Using components including sale income, total assets, market value of equity, and book value of equity
Ratio of market value to book value	MTB_{it}	Market value of equity to its book value
Return on total assets	ROA_{it}	Net profit in period t divided to total assets in period t-1
Return of equity	ROE_{it}	Net profit of period t divided to equity in period t-1
Leverage	$Leverage_{it}$	Financial leverage obtained from total debts divided to total assets in period t
Agency cost	$AgencyCost_{it}$	Firm's agency cost in year t
Size	$FirmSize_{it}$	Two natural logarithms of sale income and total assets
Bankruptcy risk	$ZScorei_t$	Bankruptcy risk is obtained from Altman Z-score
Inflation	$Inflation_{it}$	Annual inflation rate extracted from central bank site (www.cbi.ir)
Change in debt	$\Delta Debt_{it}$	Chang in debt ratio in year t to year t-1
Change in cash flows	ΔCFO_{it}	Change in operational cash flows in year t to year t-1
Financial reporting quality	AQ_{it}	Financial reporting quality criteria of company in year t. 13 criteria for financial reporting quality were used in this research.

519

Moderating Role of Life Cycle and Economic Conditions in Impact of Financial Reporting Quality Measuring Criteria on Firms Future Growth

Revista Publicando, 5 No 15. (2). 2018, 507-544. ISSN 1390-9304

Economic conditions	*Economic$_{it}$* 1)*High$_{it}$* 2) *Low$_{it}$*	If adjusted GDP in each year during research period was higher than average GDP, variable was given 1 (High$_{it}$=1) and if adjusted GDP was lower than mean, variable was given 1 (Low$_{it}$=1).
Life cycle	*LifeCycle$_{it}$*	Dummy variable life cycle that its stages introduction (I), growth (G), maturity (M), shake out (S) and decline (D) are given 1 value.

Firm's life cycle

To measure various stages of firm's life cycle, Dickinson' methodology (2011) was applied; he introduced firm's cash flow patterns as a proxy for life cycle that are determined based on operational cash flows, investment and financial patterns. According to the pattern designed by Dickinson (2011), a combination of 8 cash flows can present firm's life cycle:

Table 2. Measurement criterion and life cycle based on Dickinson' methodology (2011)

Description	Emergence	Growth	Maturity	Shake out	Shake out	Shake out	Decline	Decline
Operational cash flow	-	+	+	-	+	+	-	-
Investment cash flow	-	-	-	-	+	**+**	+	+
Financing cash flow	+	+	-	-	+	**-**	+	-

Financial reporting quality criteria

AQ$_{it}$: is accounting information quality's criterion. In this research, 16 common criteria in theoretical literature were used. In some analyses, quality will be higher even if criteria or more or less; in terms of simplification, those criteria with small sizes that indicate higher quality are multiplied by -1 and their symmetry amount is considered. In this regard, the higher the symmetry values, the higher the quality will be in analyses.

Moderating Role of Life Cycle and Economic Conditions in Impact of Financial Reporting Quality Measuring Criteria on Firms Future Growth

Revista Publicando, 5 No 15. (2). 2018, 507-544. ISSN 1390-9304

Symmetry fluctuation of operating profit (AQ1$_{it}$): it is operating profit fluctuation ($\delta_{t-3}^{t}E$) measured by standard deviation of operating profits similar to what is done by Francis et al. (2006), Dechow and Dichev (2002), and Francis et al. (2004). Therefore, 4-year standard deviation is led to year t that is homogenized based on total assets. The lower the operating profit fluctuation, the higher the quality will be.

Symmetry absolute of total accruals (AQ2$_{it}$): since some business units have large and some other small and instable accruals, some authors such as Dechow at al. (2003) and Hesarzadeh et al. (2016) used absolute value of business accruals to measure quality criterion. In this research, symmetry absolute of total accruals was calculated based on following formula the homogenized based on total assets and used as one quality criterion.

$$-\left|\mathrm{TACC_{jt}}\right| = -\left|\mathrm{E_{jt}} - \mathrm{CFO_{jt}}\right|$$

ymmetry correlation between cash flows' change and accruals (AQ3$_{it}$):

correlation between operating cash flows' change and accruals has been always considered as one smoothing indicator in quality studies (e.i Francis et al. 2005). Since negative correlation between cash flows and accruals is expected, correlation that is more negative indicates distorted image of fluctuation in economic performance leading to lower quality. Symmetric correlation between cash flows and accruals during 4 years was used as quality criterion in this research.

Symmetry ratio of standard deviations (profit smoothing) (AQ4$_{it}$): smoothing criterion is obtained from profit's standard deviation ratio to standard deviation of operating cash flows.

Eckel Index (AQ5$_{it}$): this index was first used by Eemhof (1981) through profit changes ratio to sale changes coefficient (formula presented below). If Eckel Index was lower than 1, it would be used as smoothing company and if not it would be considered as non-smoothing company.

$$\frac{CV\Delta I}{CV\Delta S}$$

Annual adjustment (AQ6$_{it}$): since major part of adjustments of years indicate error correction in previous periods, symmetry absolute of annual adjustments of year t+1

Moderating Role of Life Cycle and Economic Conditions in Impact of Financial Reporting Quality Measuring Criteria on Firms Future Growth

Revista Publicando, 5 No 15. (2). 2018, 507-544. ISSN 1390-9304

homogenized based on total assets was used to measure quality in year t. Annual adjustments are usually along with financial restatements. Annual adjustments have been used in numerous studies such as Kravet and Shevlin (2010) and Albring et al. (2013).

$$-\left|PPA_{jt+1}\right|$$

Symmetry absolute of abnormal production cost (AQ7$_{it}$): abnormal production cost as one earning management index has been used as quality measurement metric in some studies such as Roychowdhury (2006). In abnormal production costs model, production is calculated as follows: estimating coefficients obtained from fitting three variables including total assets, sale, and sale changes based on changes in inventories, the difference between production and three mentioned variables is considered as abnormal production costs. In this research, symmetry absolute amount of abnormal production cost (error of model below) was used as quality criterion.

$$PROD_{jt} = \alpha_0 + \beta_1(1/A_{jt}) + \beta_2\left(S_{jt}/A_{jt}\right) + \beta_3\left(\Delta S_{jt}/A_{jt}\right) + \varepsilon_{jt}$$

Symmetry value of total accruals (AQ8$_{it}$): in some studies (e.i Bhattacharya et al. 2003), total accruals is used as a criterion indicting conservatism of business units. The lower (negative) the accruals, the more rapid of loss detection and the more delayed accounting earning interpretation. Hence, symmetry value of total accruals homogenized by total assets was used as quality measurer in this research.

$$-TACC_{jt} = -(E_{jt} - CFO_{jt})$$

Symmetry absolute of receivables fitting error on sale income (AQ9$_{it}$): some authors (Dechow et al. 2004), considered absolute vale of a part of receivable accounts that are not justifiable by change fitting on sale income is used as quality measurer. This absolute value was used in this research as information quality measurer.

$$REC_{jt} = \alpha_0 + \beta_1 S_{jt} + \varepsilon_{jt}$$

Symmetry absolute value of abnormal accruals (AQ10$_{it}$): some researchers such as Kim et al. (2012) used absolute value of abnormal accruals obtained from fitting sale and fixed assets on total accruals as quality criterion. Symmetry absolute value of follow model's error was used in this research.

Moderating Role of Life Cycle and Economic Conditions in Impact of Financial Reporting Quality Measuring Criteria on Firms Future Growth

Revista Publicando, 5 No 15. (2). 2018, 507-544. ISSN 1390-9304

$$\frac{TA_{jt}}{A_{jt-1}} = \alpha_0 + \beta_1 \frac{1}{A_{jt-1}} + \beta_2 \left(\frac{S_{jt}}{A_{jt-1}}\right) + \beta_3 \left(\frac{FA_{jt}}{A_{jt-1}}\right) + \varepsilon_{jt}$$

Earning predictability (AQ11$_{it}$): this value is obtained by dividing operational earning fit's standard deviation in current period to next one. Some authors (Barth et al., 2001) used this variable as earning predictability criterion and operational definition quality. We used this variables followed by 4-year error standard deviation led to year t to measure quality in year t. Total assets were used regarding homogenization.

Symmetry absolute value of earning forecast (AQ12$_{it}$): symmetry absolute value of following regression model's error (residual) is obtained:

$$E_{t+1} = \alpha_0 + \beta_1 E_t + \varepsilon_t$$

Earnings stability factor (AQ13$_{it}$): β_1 coefficient of regression below calculating by rolling method for each firm:

$$E_{t+1} = \alpha_0 + \beta_1 E_t + \varepsilon_t$$

Type of audit opinion (AQ14$_{it}$): if type of audit opinion is unqualified (acceptable), its value will be 1; otherwise, it gets 0. Type of audit opinion has been used by some authors such as Cullinanet al. (2012).

Audit opinion improvement (AQ15$_{it}$): if audit report in current period has been improved compared to previous period, it will get 1; otherwise, 0 will be assigned. Audit opinion improvement has been employed by Cullinanet al. (2012).

Audit Quality (AQ16$_{it}$): if audit organization plays the auditor role, value 1 is assigned and if not 0.

4. FINDINGS

To statistically analyze the collected data, descriptive statistics of data reported in table 3. As it is seen, three variables including assets future growth, sale income and equity market value were employed to measure future growth. Some variables associated with audit information quality's measurement are symmetry values regarding simpler analysis; in this sense, the higher the variables, the higher the quality will be. According to table 3, future growth variables comprise sale income, total assets, and market value of equity that are dependent variables and future growth components. Minimum, maximum and growth rate mean of sales

**Moderating Role of Life Cycle and Economic Conditions in Impact of
Financial Reporting Quality Measuring Criteria on Firms Future Growth**

Revista Publicando, 5 No 15. (2). 2018, 507-544. ISSN 1390-9304

income variable obtained to -0.591, 2.201 and 20%, respectively. The growth rate obtained to 19.5% and 34% for total assets and market value of equity, respectively.

Table 3. Descriptive statistics of research variables

Description	Symbol	Min	Max	Mean	Sd.	SKEWNESS	KURTUSIS
Sale income growth	$GSales_{it+1}$	-0.591	2.201	0.200	0.352	1.438	4.750
Total assets growth	$GAssets_{it+1}$	-0.254	1.275	0.195	0.240	1.363	2.656
Market value of equity growth	$GMVE_{it+1}$	-0.656	4.964	0.340	0.831	2.311	6.638
Book value of equity growth	$GBVE_{it+1}$	-2.223	4.180	0.234	0.580	2.003	10.492
Symmetry fluctuation of operating profit	$AQ1it$	-0.491	-0.009	-0.082	0.068	-2.282	7.407
Symmetry absolute of total accruals	$AQ2it$	-0.422	-0.001	-0.092	0.079	-1.335	1.660

Moderating Role of Life Cycle and Economic Conditions in Impact of Financial Reporting Quality Measuring Criteria on Firms Future Growth

Revista Publicando, 5 No 15. (2). 2018, 507-544. ISSN 1390-9304

Symmetry correlation between cash flows and accruals (profit smoothing)	*AQ3it*	-1.000	0.842	-0.735	0.392	2.019	3.550
Symmetry ratio of standard deviations (symmetry value of profit smoothing)	*AQ4it*	-6.901	-0.067	-0.945	0.859	-2.499	8.911
Eckel Index (Eemhof)	*AQ5it*	-59.830	38.860	1.676	7.001	-1.993	22.265
Symmetry absolute value of annual adjustment	*AQ6it*	-0.163	0.000	-0.019	0.026	-2.683	8.109

Moderating Role of Life Cycle and Economic Conditions in Impact of Financial Reporting Quality Measuring Criteria on Firms Future Growth

Revista Publicando, 5 No 15. (2). 2018, 507-544. ISSN 1390-9304

Symmetry absolute of real earnings managements (abnormal production cost)	*AQ7it*	-0.481	-0.001	-0.092	0.081	-1.661	3.494
Symmetry value of total accruals	*AQ8it*	-0.330	0.616	0.042	0.144	0.730	1.422
Symmetry absolute of receivables fitting error on sale income	*AQ9it*	-0.357	0.000	-0.054	0.056	-1.912	4.378
Symmetry absolute value of abnormal accruals	*AQ10it*	-0.680	-0.002	-0.120	0.109	-1.824	4.400

Moderating Role of Life Cycle and Economic Conditions in Impact of Financial Reporting Quality Measuring Criteria on Firms Future Growth

Revista Publicando, 5 No 15. (2). 2018, 507-544. ISSN 1390-9304

Earning predictability	*AQ11it*	0.007	0.257	0.059	0.041	1.434	2.188
Symmetry absolute value of earning forecast error	*AQ12it*	-0.736	0.000	-0.058	0.073	-3.282	15.549
Earnings stability factor	*AQ13it*	-4.356	11.825	0.245	0.665	4.201	66.732
Type of audit opinion	*AQ14it*	0.000	1.000	0.345	0.475	0.653	-1.574
Audit opinion improvement	*AQ15it*	0.000	1.000	0.032	0.176	5.327	26.398
Audit Quality	*AQ16it*	0.000	1.000	0.260	0.439	1.092	-0.807
Introduction stage	*I(Introduction$_{it}$)*	0.000	1.000	0.092	0.289	2.821	5.960
Growth stage	*G(Growth$_{it}$)*	0.000	1.000	0.450	0.498	0.200	-1.962
Maturity stage	*M(Mature$_{it}$)*	0.000	1.000	0.319	0.466	0.776	-1.398

Moderating Role of Life Cycle and Economic Conditions in Impact of Financial Reporting Quality Measuring Criteria on Firms Future Growth

Revista Publicando, 5 No 15. (2). 2018, 507-544. ISSN 1390-9304

Shake-out stage	$S(Shake\text{-}Out_{it})$	0.000	1.000	0.094	0.292	2.785	5.758
Decline	$D(Decline_{it})$	0.000	1.000	0.044	0.206	4.430	17.640
High economic conditions	$High_{it}$	0.000	1.000	0.333	0.471	0.707	-1.501
Low economic conditions	Low_{it}	0.000	1.000	0.667	0.471	-0.707	-1.501
Market value to book value	MTB_{it}	-0.429	12.515	2.409	1.997	1.773	4.155
Bankruptcy risk	$Z\text{-}Score_{it}$	-0.453	9.189	2.302	1.502	1.493	3.126
Size (sale income)	$FirmSize1(Sales)$	9.625	17.424	12.791	1.417	0.448	0.011
Size (total assets)	$FirmSize2(TotalAssets)$	10.131	17.787	13.118	1.406	0.545	0.172
Return on total assets	ROA_{it}	-0.223	0.776	0.144	0.155	0.982	1.394
Return on equity	ROE_{it}	-2.004	3.641	0.429	0.550	1.749	7.671

Moderating Role of Life Cycle and Economic Conditions in Impact of Financial Reporting Quality Measuring Criteria on Firms Future Growth

Revista Publicando, 5 No 15. (2). 2018, 507-544. ISSN 1390-9304

Leverage	$Leverage_{it}$	0.155	1.609	0.648	0.197	0.368	1.665
Agency cost	$AgencyCost_{it}$	0.066	2.592	0.834	0.416	1.040	1.749
Operating cycle	$OperatingCycle_{it}$	33.244	829.822	256.780	140.660	1.024	1.433
Change in cash flow operating	ΔCFO_{it}	-23.254	32.006	0.089	3.559	1.602	19.570
Change in debt ratio	$\Delta Debt_{it}$	-4.782	5.779	0.378	0.915	0.790	6.786
Inflation	$Inflation_{it}$	10.400	34.700	17.433	7.215	1.172	0.218

This section presents 4 modeling steps through stepwise regression method. At first step, each dependent variable (sales income, total assets and equity market value) is modeled using predictor variable extracted from theoretical literature. Then, the mentioned variables are entered into the model and model is rerun at second step to measure effects of financial reporting quality variables. At next step, the model is rerun to evaluate interactional effects of audit information quality, life cycle, economic conditions and financial reporting quality on dependent variable to reveal relevant effects.

According to stepwise regression, independent variables entered to regression model individually then removed in case of insignificance role. In other words, the variables entered to the regression model are evaluated by their F value and will be remained if partial F value of variable is high when entering to the model; otherwise, it will be removed. In case of stepwise regression, researcher uses several independent variables tending to assess their impacts on dependent variable in order to find which one of independent variables can

Moderating Role of Life Cycle and Economic Conditions in Impact of Financial Reporting Quality Measuring Criteria on Firms Future Growth

Revista Publicando, 5 No 15. (2). 2018, 507-544. ISSN 1390-9304

explain changes in dependent variable better; in other words, predictability of independent variables is explaining or estimating dependent variable is the case.

First, the initial predictor variables of the firms' future growth (return on total assets (ROA), return on equity (ROE), agency cost, Leverage, firm size, bankruptcy (Z-Score), market value to book value (MTB), growth, inflation, change in debt ratios (ΔDebt), and change in operating cash flows (ΔCFO)) were entered to stepwise regression modeling process. As it was explained, variable are individually entered into the model through stepwise regression then removed in case of insignificance. In this regard, the first stage is formed to model firm's future growth. At second step, 16 financial reporting quality measures are entered into the model in order to evaluate usefulness of financial reporting quality criterion for future growth; in this stage, input variables form modeling process besides variables related to first step. To assess effects of financial reporting quality criteria on future growth within life cycle at third step, life cycle variables with values 0 and 1 including introduction, growth, maturity, shake-out and decline stages besides *Interaction* variables or multiplication (*AQ*LC-Dummy*) are entered into modeling process adding to input variables in first and second stages. Besides mentioned variables in previous steps, economic conditions and interaction variables (*AQ*GdpDummy*) are entered to modeling process at fourth step. The important point is significance of quality interaction variables with life cycle and economic conditions besides determination coefficients of modeling within 4 steps indicating model validity.

Table 4. Results of dependent variable modeling: sales income growth

Variable	Non-standard coefficient	Standard error	Standard coefficient	t value	Sig.	Co-linearity values	
						Tolerance	VIF
(Constant)	0.376	0.146		2.568	0.011		
Inflation	0.012	0.002	0.332	6.333	0.000	0.650	1.538

Moderating Role of Life Cycle and Economic Conditions in Impact of Financial Reporting Quality Measuring Criteria on Firms Future Growth

Revista Publicando, 5 No 15. (2). 2018, 507-544. ISSN 1390-9304

*M*AQ12*	-1.538	0.298	-0.243	-5.166	0.000	0.809	1.235
FirmSize1(Sales)	-0.035	0.011	-0.142	-3.289	0.001	0.964	1.037
*LowGDP*AQ12*	3.410	0.784	0.279	4.348	0.000	0.433	2.308
*HighGDP*AQ2*	0.894	0.258	0.200	3.463	0.001	0.537	1.862
*G*AQ2*	-1.115	0.308	-0.215	-3.619	0.000	0.506	1.976
AQ4	0.050	0.017	0.136	3.040	0.003	0.898	1.114
*HighGDP*AQ13*	0.062	0.024	0.110	2.537	0.012	0.947	1.055
*G*AQ10*	-0.426	0.198	-0.107	-2.145	0.032	0.719	1.392
*S*AQ12*	-2.392	0.830	-0.155	-2.883	0.004	0.617	1.621
*LowGDP*AQ11*	3.111	0.849	0.258	3.666	0.000	0.360	2.777
*S*AQ7*	1.204	0.578	0.115	2.082	0.038	0.590	1.695
R^2				0.208			

Moderating Role of Life Cycle and Economic Conditions in Impact of Financial Reporting Quality Measuring Criteria on Firms Future Growth

Revista Publicando, 5 No 15. (2). 2018, 507-544. ISSN 1390-9304

Adjusted R²	**0.190**
F-Statistics	**11.351**
F-Statistics Sig.	**0.000**
Durbin-Watson Statistics	**1.990**

Hypothesis 2 was confirmed considering AQ2 and AQ13 criteria that both had positive relationship with sales income' growth rate within appropriate economic conditions.

Table 4 indicates results obtained from regression model fit for future growth estimation. After 4 modeling steps, variable asymmetry value of earnings smoothing (standard deviations ratio) (AQ4) had direct and significant relationship with firm's future growth obtaining coefficient 0.050 and significance 0.003. According to the obtained results, other financial reporting quality criteria had no significance role in estimating future growth. However, results showed a negative relationship between symmetry absolute value of earning prediction error and future growth within maturity and shakeout stages; while there was a positive relationship between mentioned variable and future growth under low economic conditions. Moreover, there was a direct and significant relationship between variables including symmetry absolute error of real earnings management model (unreal production cost) and future growth in shakeout stage. There was a positive significant relationship between symmetry error standard deviation of earnings forecast and future growth under high economic conditions. There was a negative significant relationship between symmetry absolute value of total accruals and future growth in growth stage. There was not any significant relationship between other quality variables and future growth.

Adjusted determination coefficient of model indicated that 20.9% of dependent variable changes were explained by variables mentioned in table 4. F value with 10.727 and 0.000 significance level indicated significance and linearity of whole model. D-W value equal to 1.990 (between 1.5 and 2.5) showed lack of autocorrelation between model residuals.

The obtained results showed that only some information quality measures have useful effects on estimation of future growth and other variables have negative and significant relationship

Moderating Role of Life Cycle and Economic Conditions in Impact of Financial Reporting Quality Measuring Criteria on Firms Future Growth

Revista Publicando, 5 No 15. (2). 2018, 507-544. ISSN 1390-9304

with future growth despite the justification in theoretical literature. The obtained co-linearity values showed lack of correlation between independent variables.

Generally, adding moderator and interaction variables related to financial reporting quality, life cycle and economic conditions led to increased model's determination coefficient so that moderating effects can be seen in table above in terms of mentioned variables.

Table 5. Results of dependent variable modeling: total assets growth

Variable	Non-standard coefficient	Standard error	Standard coefficient	t value	Sig.	Co-linearity values	
						Tolerance	VIF
(Constant)	0.594	0.127		4.684	0.000		
AQ12	-1.099	0.196	-0.253	-5.600	0.000	0.912	1.097
AQ8	0.300	0.085	0.161	3.534	0.000	0.905	1.105
D*AQ12	3.564	1.167	0.135	3.053	0.002	0.957	1.045
FirmSize2(TotalAssets)	-0.029	0.009	-0.142	-3.235	0.001	0.966	1.035
HighGDP*AQ13	0.059	0.020	0.130	2.969	0.003	0.973	1.028
AQ5	-0.004	0.002	-0.101	-2.279	0.023	0.960	1.041

Moderating Role of Life Cycle and Economic Conditions in Impact of Financial Reporting Quality Measuring Criteria on Firms Future Growth

Revista Publicando, 5 No 15. (2). 2018, 507-544. ISSN 1390-9304

S*AQ3	0.206	0.054	0.204	3.789	0.000	0.646	1.548
S*AQ4	-0.090	0.033	-0.143	-2.704	0.007	0.665	1.505
M*AQ4	0.045	0.017	0.120	2.627	0.009	0.897	1.115
OperatingCycle	0.000	0.000	-0.096	-2.122	0.034	0.918	1.090

R^2	**0.288**
Adjusted R^2	**0.266**
F-Statistics	**13.093**
F-Statistics Sig.	**0.000**
Durbin-Watson Statistics	**1.883**

Table 5 reports results obtained from regression model fit to estimate future growth of total assets. Results showed positive and significant relationship between AQ13 criterion and assets future growth under high economic conditions. Therefore, coefficient with positive value 0.059 and 0.003 significance indicated acceptance of hypothesis 2 in case of AQ13 criterion. In other words, there was a positive and significant relationship between earnings stability coefficient and future growth of total assets in maturity stage.

Adjusted R^2 of model indicated that 26.6% of dependent variable changes were explained by variables mentioned in table 5. F value with 0.000 significance level indicated significance and linearity of whole model. D-W value equal to 1.883 (between 1.5 and 2.5) showed lack of autocorrelation between model residuals.

The obtained results showed that only some information quality measures have useful effects on estimation of future growth and other variables have negative and significant relationship

Moderating Role of Life Cycle and Economic Conditions in Impact of Financial Reporting Quality Measuring Criteria on Firms Future Growth

Revista Publicando, 5 No 15. (2). 2018, 507-544. ISSN 1390-9304

with future growth despite the justification in theoretical literature. The obtained co-linearity values showed lack of correlation between independent variables. Asymmetry value of total accruals had positive and significant effect on future growth of assets. Symmetry absolute value of earnings prediction error in decline stage and correlation between cash flow and accruals in shakeout stage as well as symmetry value of earning smoothing (standard deviations ratio) in maturity stage had significant and direct relationship with assets future growth. In addition, there was a direct and significant relationship between earnings stability coefficient and future growth. Other variables had no direct and significant effect on assets future assets individually or in interactional way.

Table 6. Results of dependent variable modeling: market value growth of equity

Variable	Non-standard coefficient	Standard error	Standard coefficient	t value	Sig.	Co-linearity values	
						Tolerance	VIF
(Constant)	0.794	0.428		1.854	0.064		
*HighGDP*AQ13*	0.458	0.091	0.272	5.029	0.000	0.556	1.797
G_MVE	-0.334	0.049	-0.321	-6.850	0.000	0.744	1.344
Inflation	0.049	0.006	0.450	8.357	0.000	0.563	1.776
MTB	-0.145	0.030	-0.221	-4.808	0.000	0.775	1.290

Moderating Role of Life Cycle and Economic Conditions in Impact of Financial Reporting Quality Measuring Criteria on Firms Future Growth

Revista Publicando, 5 No 15. (2). 2018, 507-544. ISSN 1390-9304

*M*AQ12*	-3.018	0.784	-0.165	-3.849	0.000	0.894	1.119
*LowGDP*AQ11*	6.674	1.791	0.188	3.727	0.000	0.640	1.563
Ddebt	0.202	0.060	0.146	3.382	0.001	0.881	1.135
*G*AQ5*	0.040	0.013	0.128	3.118	0.002	0.964	1.037
FirmSize2(TotalAssets)	-0.085	0.030	-0.116	-2.811	0.005	0.961	1.041
*G*AQ13*	-0.277	0.117	-0.127	-2.374	0.018	0.572	1.749
*D*AQ7*	-4.384	1.454	-0.144	-3.015	0.003	0.714	1.401
*D*AQ10*	3.964	1.638	0.117	2.420	0.016	0.699	1.430

R²	**0.336**
Adjusted R²	**0.316**
F-Statistics	**17.141**
F-Statistics Sig.	**0.000**
Durbin-Watson Statistics	**1.750**

Moderating Role of Life Cycle and Economic Conditions in Impact of Financial Reporting Quality Measuring Criteria on Firms Future Growth

Revista Publicando, 5 No 15. (2). 2018, 507-544. ISSN 1390-9304

Table 6 reports results obtained from regression model fit to market value growth of equity. Results showed that other financial reporting quality criteria played no significant role in estimating future growth.

Adjusted R^2 of model indicated that 31.6% of dependent variable changes were explained by variables mentioned in table 6. F value with 0.000 significance level indicated significance and linearity of whole model. D-W value equal to 1.750 (between 1.5 and 2.5) showed lack of autocorrelation between model residuals.

The obtained results showed that only some information quality measures have useful effects on estimation of future growth and other variables have negative and significant relationship with future growth despite the justification in theoretical literature. The obtained co-linearity values showed lack of correlation between independent variables. The obtained results showed positive and significant effect of Eckel Index (Eemhof) in growth stage and absolute value of abnormal accruals in decline stage on future market value of equity.

Table 7. Results of dependent variable modeling: book value growth of equity

Variable	Non-standard coefficient	Standard error	Standard coefficient	t value	Sig.	Co-linearity values	
						Tolerance	VIF
(Constant)	1.128	0.276		4.088	0.000		
HighGDP*AQ12	-1.473	0.408	-0.162	-3.613	0.000	0.904	1.106
M*AQ5	0.018	0.005	0.151	3.332	0.001	0.894	1.119
I*AQ5	-0.030	0.008	-0.165	-3.854	0.000	0.993	1.007

Moderating Role of Life Cycle and Economic Conditions in Impact of Financial Reporting Quality Measuring Criteria on Firms Future Growth

Revista Publicando, 5 No 15. (2). 2018, 507-544. ISSN 1390-9304

FirmSize2(TotalAssets)	-0.067	0.019	-0.151	-3.462	0.001	0.963	1.038
D*AQ5	-0.021	0.011	-0.082	-1.882	0.060	0.964	1.037
HighGDP*AQ13	0.124	0.043	0.125	2.849	0.005	0.953	1.049
G-EQUITYit	-0.151	0.046	-0.148	-3.297	0.001	0.902	1.109
OperatingCycle	-0.001	0.000	-0.128	-2.856	0.005	0.913	1.096
AQ8	0.420	0.188	0.103	2.233	0.026	0.852	1.173
M*AQ6	-4.573	1.685	-0.125	-2.714	0.007	0.867	1.153
G*AQ9	-1.500	0.676	-0.098	-2.220	0.027	0.939	1.065

R^2	0.213
Adjusted R^2	0.193
F-Statistics	10.601
F-Statistics Sig.	0.000
Durbin-Watson Statistics	1.818

Moderating Role of Life Cycle and Economic Conditions in Impact of Financial Reporting Quality Measuring Criteria on Firms Future Growth

Revista Publicando, 5 No 15. (2). 2018, 507-544. ISSN 1390-9304

Table 7 indicates results of hypothesis testing for dependent variable of book value growth of equity. According to results, there was a positive and significant relationship between future growth and variable of AQ5 in maturity stage with coefficient and significance level of 0.018 and 0.001, respectively. In addition, there was a positive and significant relationship between future growth of and variable book value growth of equity and AQ13 under high economic conditions.

Table 8. Dependent variable modeling: growth of equity book value

Future growth variables	Sales income growth				Total assets growth				Market value growth of equity				Book value growth of equity			
Modeling values	Modeling without considering	Modeling after entering	Modeling after entering	Modeling considering	Modeling without considering	Modeling entering quality	Modeling entering quality	Modeling considering	Modeling without considering	Modeling after entering	Modeling after entering	Modeling considering	Modeling without considering	Modeling after entering	Modeling after entering	Modeling considering
R^2	0.023	0.116	0.153	0.208	0.116	0.180	0.205	0.288	0.087	0.252	0.327	0.336	0.081	0.1114	0.2110	0.213

Moderating Role of Life Cycle and Economic Conditions in Impact of Financial Reporting Quality Measuring Criteria on Firms Future Growth

Revista Publicando, 5 No 15. (2). 2018, 507-544. ISSN 1390-9304

Adjusted R^2	0.021	0.106	0.139	0.190	0.113	0.168	0.192	0.266	0.084	0.239	0.304	0.316	0.079	0.102	0.188	0.193
F value	10.854	11.477	11.207	11.351	39.365	15.604	15.734	13.093	30.900	19.830	14.083	17.141	40.567	9.379	9.529	10.601
Sig level of F value	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.0000	0.0000	0.000
DW value	1.980	1.952	1.985	1.990	1.982	1.896	1.905	1.883	2.041	1.823	1.734	1.750	2.027	1.8880	1.9887	1.818

5. CONCLUSIONS

This study aimed to provide a model to assess usefulness of financial reporting quality criteria and their effects on future growth within life cycle of firms considering economic conditions. Financial reporting quality has been defined as a multidimensional implication in theoretical literature so that this term has no operating definition and is evaluated by a wide range of variables including earnings smoothing, earnings management, earnings predictability, earnings quality, annual adjustments etc. however, validity and reliability or usefulness stability of these criteria under different firms' economic conditions have been less studied. Therefore, the question raised here was whether all of financial reporting quality criteria under different economic conditions and life cycle stages have stable effects or not. The obtained results indicated that all of financial reporting quality criteria under different economic conditions and life cycle stages have no stable and significant effects on firms'

540

Moderating Role of Life Cycle and Economic Conditions in Impact of Financial Reporting Quality Measuring Criteria on Firms Future Growth

Revista Publicando, 5 No 15. (2). 2018, 507-544. ISSN 1390-9304

performance and future growth so that mentioned variables play a moderating role in relationship between financial reporting quality and future growth.

6. RECOMMENDATIONS

According to the obtained results and precision of future growth prediction modeling using financial reporting quality criteria within firms' life cycle, it is recommended to test this modeling process for data mining approaches to examine effect of these factors on estimation of future growth and performance of firms. In this research, variables including sale income growth, total assets growth, and market value growth of equity were examined; hence, it is suggested to apply other target variables such as capital cost, return on stock, profitability and investment efficiency.

REFERNCES

Aghaee, M. A., Anvari Rostami, A. A., Ahmadian, V., Manzari Tavakoli, Gh. (2013). Ranking the qualitative characteristics of accounting information based on the views of suppliers, Auditors and Users of Financial Statements: Application of Analytical Hierarchy Process, Journal of Empirical Financial Accounting Studies, Issue 38, Pp. 1-27.

Aghaee, M. A., Rahmani, H. (2013). Providing a Model to evaluate effect of qualitative characteristics on the effectiveness of financial reporting, Journal of Accounting and Auditing, issue 20, Pp. 4-17.

Albring, S.M., Huang, S.X., Pereira,R.; and X. Xu. (2013). The Effects of Accounting Restatements on Firm Growth. Journal of Accounting and Public Policy, Vol. 32, No. 5, Pp. 357– 376.

Asna Ashari, H., Naderi Nooraini, M. (2017). Earnings management model in company life cycle, Journal of Financial Accounting Knowledge, year 4, Issue 1, Pp. 1-22

Barth, M. E. Cram, D. Nelson, K. (2001). Accruals and the Prediction of Future Cash Flows. The Accounting Review, 76, pp. 27-58.

Behbahani Nia, P. S. (2017). Financial reporting quality of companies listed in Tehran Stock Exchange during the Global Financial Crisis, Journal of Management Strategic Management, Vol. 5, Issue 18, Pp.75-98.

Moderating Role of Life Cycle and Economic Conditions in Impact of Financial Reporting Quality Measuring Criteria on Firms Future Growth

Revista Publicando, 5 No 15. (2). 2018, 507-544. ISSN 1390-9304

Bhattacharya, U., Daouk, H., Welker M., (2003). The World Price of Earnings Opacity. The Accounting Review, 78(3), pp. 641-678.

Chen, T. (2016). Internal Control, Life Cycle and Earnings Quality. The Open Journal of Business and Management, 4, 301-311.

Cullinan, C. P. & Wang, F. & Yang, B. & Zhang, J. (2012). "Audit opinion improvement and the timing of disclosure", Advances in Accounting, 28(12), 333-343.

DeAngelo, H. and DeAngelo, L. (2006). The irrelevance of the MM dividend irrelevance theorem, Journal of Financial Economics, 79, pp. 293-315.

Dechow, P., & Dichev, I. (2002). The quality of accruals and earnings: the role of accruals in estimation errors, The Accounting Review, 77, pp. 35-59.

Dechow, P., Ge, W., & Schrand, C. (2010). Understanding Earnings Quality: A review of the proxies, their determinants and their consequences. Journal of Accounting and Economics, 50, pp. 35–59.

Dehdar, F., Aghaei, M. A. (2012). Designing and explaining the best models of accounting and cash flow management based on the company's life cycle process, Business Strategies, Issue 2, Pp. 1-24.

Dickinson, V. (2011). Cash flow patterns as a proxy for firm life-cycle, Accounting Review, 86, pp. 1969-1994.

Ferrero, J.M., Consequences of financial reporting quality on corporate performance. Evidence at the international level. (2014). Estudios Economia, 41, Pp. 49-88.

Foroughi, A & Esfahani, M. (2012). A robust AHP-DEA method for measuring the relative efficiency: An application of airport industry.Management Science Letters , 2(1), 93-100.

Francis, J., D.J.Nanda and P. Olsson. 2008. Voluntary disclosure, earnings quality and cost of capital. Journal of Accounting Research 46, 53-99.

Francis, J., LaFond, R., Olsson, P. M., & Schipper, K. (2004). Cost of equity and earnings attributes. The Accounting Review, 79, pp. 967-1010.

Francis, J., LaFond, R., Olsson, P., Schipper, K. (2005). "The market pricing of accruals quality". Journal of Accounting and Economics. Vol 39: 295–327.

Moderating Role of Life Cycle and Economic Conditions in Impact of Financial Reporting Quality Measuring Criteria on Firms Future Growth

Revista Publicando, 5 No 15. (2). 2018, 507-544. ISSN 1390-9304

Francis, J., Olsson, P., & Schipper, K. (2006). Earnings Quality. Foundations and Trends in Accounting, 4, 259-340.

Grullon, G., Michaely, R. & Swaminathan, B. (2002). Are dividend changes a sign of firm maturity?, Journal of Business, 75, 387-423.

Hassarzadeh, R., Rajabalizadeh, J., Arefi, F., Alizadeh, N., Alikhani, S. (2016). Quantitative and empirical assessment of the new standard of accounting quality, Journal of Empirical Accounting ResearchIssue 21, Autumn, Pp. 91-114.

Hesarzadeh, R., Etemadi, H., Azar, A., Rahmani, A. (2016). Design of uncertainty minimization model based on accounting data quality criteria, Empirical Financial Accounting Studies, Issue 50, Pp. 89-136.

Hope, O.K.,Thomas, W.B. & Vyas, D. (2017). Stakeholder demand for accounting quality and economic usefulness of accounting in U.S. private firms. Journal of Accounting and Public Policy, 36, pp. 1-25.

Kardan, B., Lari Dasht Beyaz, M., Mansouri, M. (2016). Investigating the effect of renewal of provision of financial statements on the growth of companies, Journal of Accounting Knowledge, Issue 24, Pp. 91-111.

Khojavi, Sh., Salehinia, M. (2017). Investigating the relationship between revision of presentation of financial statements and growth of companies admitted in Tehran Stock Exchange, Journal of Financial Accounting Research, Issue 31, Pp. 1-20.

Kiani, A., Aghaee, M. A. (2016). Evaluating usefulness of financial reporting quality measures on future growth in the corporate life cycle process, Journal of Applied Research in Financial Reporting, Issue 9, Autumn and Winter, Pp. 143-172.

Kim, D., and Qi, Y. (2010). Accruals quality, stock returns, and macroeconomic conditions. The Accounting Review, 85, pp. 937-978.

Kravet, T., Shevlin, T. (2010). Accounting restatements and information risk.

Leuz, C. (2004). Proprietary versus nonproprietary disclosures: evidence from Germany. The Economics and Politics of Accounting, 15, pp. 10-24.

Marcial Limache Sandoval, E (2017). Capital intelectual en la competitividad de las MIPYMES en Tacna-Perú. Opción, Año 33, No. 84 (2017): 504-535

Moderating Role of Life Cycle and Economic Conditions in Impact of Financial Reporting Quality Measuring Criteria on Firms Future Growth

Revista Publicando, 5 No 15. (2). 2018, 507-544. ISSN 1390-9304

McNichols, M. F., & Stubben, S. R. (2008). Does earnings management affect firms' investment decisions? The Accounting Review, 83(6), pp. 1571-1603.

Mehdi Mafi, "A Hierarchical Model of ICT in Digital Society to Access Information," Canadian Journal on Electrical and Electronics Engineering, vol. 3, issue 7, 2012, pp. 366-374.

Mehdi Mafi, "Integration of Mobile Ad hoc and WIMAX Networks with Approach of Admission Control and Hand off Combination Applied in Telemedicine Services," American Journal of Scientific Research, vol. 83, 2012, pp. 14-24.

Moradi, M., Eskandar, H. (2014). Evaluating the earnings quality through the firm's life cyclen in listed in Tehran Stock Exchange, Journal of Accounting Knowledge, Issue 19, Pp. 121-139.

Piotroski, J. (2003). Discretionary segment reporting decisions and the precision of investor beliefs. Working Paper, University of Chicago.

Porter, M. (2004). Competitive strategy: Techniques for analyzing industries and competitors, First Free Press Export Edition.

Review of Accounting Studies, 15(2), 264–294.

Roychowdhury, S. (2006). Earnings management through real activities manipulation. Journal of Accounting and Economics, 42, pp. 335-370.

Suberi, AZM., Hsu, G., Wyatt, A. (2012). The relation between firm growth and accounting quality: A test of the life cycle hypothesis. Working Paper. University of Queensland.

Zareinejad, M., Kaviani, M., Esfahani, M & Masoule, F. (2014). Performance evaluation of services quality in higher education institutions using modified SERVQUAL approach with grey analytic hierarchy process (G-AHP) and multilevel grey evaluation.Decision Science Letters , 3(2), 143-156.

Zhai, J., & Wang, Y. (2016). Accounting information quality, governance efficiency and capital investment choice. China Journal of Accounting Research, 9, pp. 251-266.

Zimmerman, J.L. (2013). Myth: External Financial Reporting Quality Has a First-Order Effect on Firm Value. Accounting Horizons, 27, pp. 887-894.