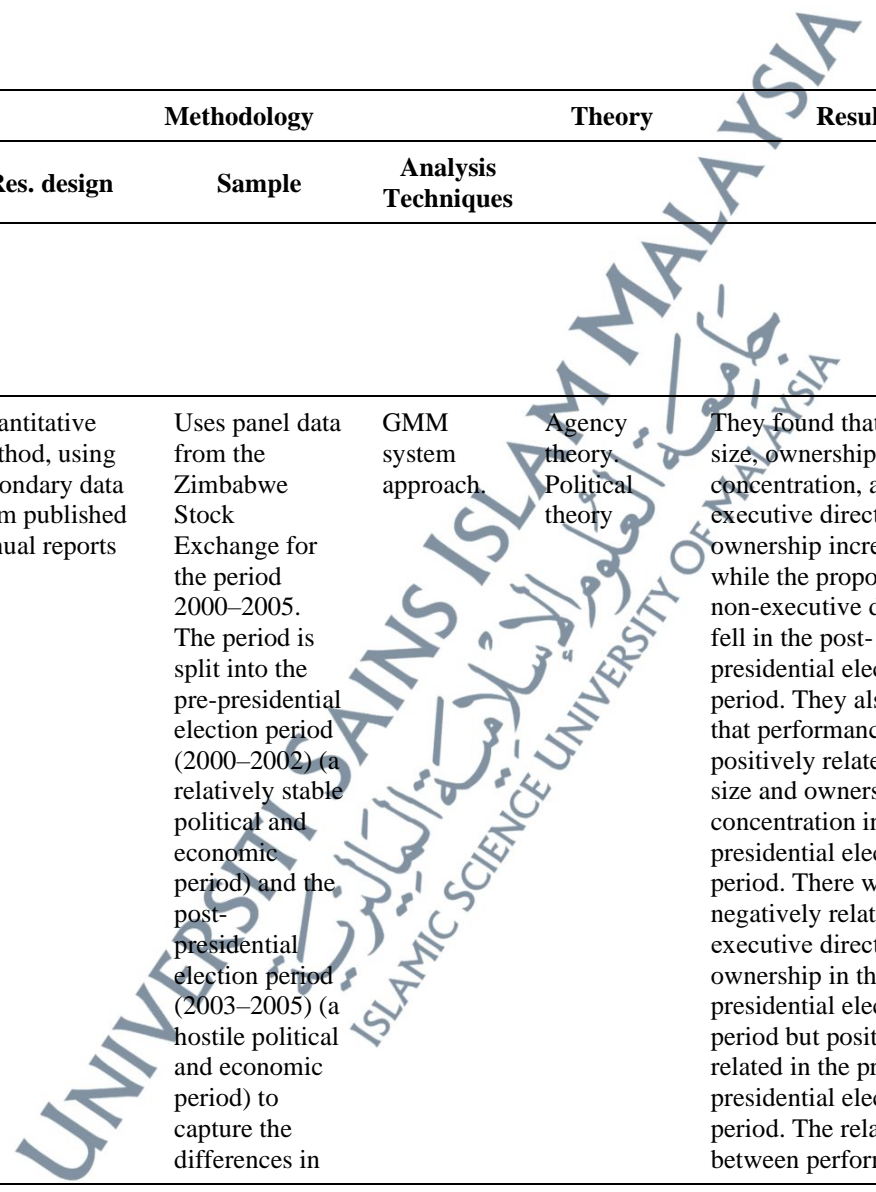


Appendix 1: Summary of selected prior literature on the influence of CG characteristics on EM and related fields

Authors	Objectives of the Study and the Related Variables	Methodology			Theory	Result	Comments / Gaps
		Res. design	Sample	Analysis Techniques			
Idris et al., 2018	<p>Objectives: To examine the moderating effect of family ownership over the relationship between BOD independence and EM.</p> <p>Variables: IV BOD independence Control Variables: Firm Size, Firm Leverage, Big4 Moderator Variable Family ownership control DV EM proxied By ABSDAC by Kothari et al. (2005) Model.</p>	Quantitative method, using secondary data from published annual reports	64 industrial firms listed on ASE from 2009 to 2013. Jordan	OLS regression model		A higher percentage of BOD independence was associated with reducing EM. Moreover, the relationship between BOD independence and EM becomes weak when there is an interaction with family ownership control.	First, this research focuses only on one type of family ownership and ignores other types of ownership, such as institutional and foreign ownership. Second, the sample is based only on the industrial firms listed on ASE. Thus, the generalizability of the findings might not hold for service and financial firms.
(Alia et al., 2020)	<p>Objectives: To examine the influence of audit quality, the existence of an AC, and accounting conservatism in depressing EM.</p> <p>Variables: IV Accounting conservatism, Big4 auditor tenure, BOD size, CEO duality and the existence of AC.</p>	Quantitative method, using secondary data from published annual reports	34 industrial firms listed on PEX from 2011 to 2016 Palestine	OLS regression model	Stewardship theory and agency theory	Accounting conservatism, audit firm size, auditor tenure, BOD size, CEO duality and the existence of AC is negatively associated to EM practices in Palestine.	This study only employed a small sample size that may affect its generalisability to a broader context. This study also lacks more robust proxies that were present in previous literature. Related parties are recommended to provide more disclosure and information to allow



Authors	Objectives of the Study and the Related Variables	Methodology			Theory	Result	Comments / Gaps
		Res. design	Sample	Analysis Techniques			
	<p>DV EM proxied By ABSDAC by Kothari et al. (2005) Model and the modified Jones model.</p>						more avenues for research in the future.
Mangena et al., 2012	<p>Objectives: To examine the relationship between BOD and OSs and firm performance in an environment of a severe political and economic crisis in Zimbabwe</p> <p>Variables: IV BOD size, ownership concentration, BOD non-executive directors, and bord ownership.</p> <p>DV Firm performance proxied by ROA.</p>	Quantitative method, using secondary data from published annual reports	Uses panel data from the Zimbabwe Stock Exchange for the period 2000–2005. The period is split into the pre-presidential election period (2000–2002) (a relatively stable political and economic period) and the post-presidential election period (2003–2005) (a hostile political and economic period) to capture the differences in	GMM system approach.	Agency theory, Political theory	They found that BOD size, ownership concentration, and executive directors' ownership increased, while the proportion of non-executive directors fell in the post-presidential election period. They also found that performance was positively related to BOD size and ownership concentration in the post-presidential election period. There was negatively related to executive directors' ownership in the post-presidential election period but positively related in the pre-presidential election period. The relationship between performance and	They examined only a limited number of CG variables. Other BOD structures such as the AC, remuneration committee and BOD meetings should be considered in future studies. These results have implications for both local and international investors. They are also relevant to policymakers and firms in other developing countries as they attempt to improve CG. The results suggest that CG regulations need to consider the nature of the environment. Future research could employ firms drawn from several emerging exchanges and examine different organizational outcomes, such as EM.

Authors	Objectives of the Study and the Related Variables	Methodology			Theory	Result	Comments / Gaps
		Res. design	Sample	Analysis Techniques			
			the political and economic landscape.			the proportion of non-executive directors was negative and significant in both periods.	
Hamdan et al., 2017	<p>Objectives: To investigate the relationship between AC characteristics and earnings quality (EQ).</p> <p>Variables:</p> <p>IV: AC size, AC independency AC meetings, AC financial expertise, AC ownerships</p> <p>Control Variables: Firm Size, Firm Leverage, Big5 BOD ownership, External auditor proficiency, External auditor tuner</p> <p>DV: Earnings quality measured by the Richardson et al. (2005) model, and the Modified Jones (1995)</p>	Quantitative method, using secondary data from published annual reports	Fifty industrial firms listed on ASE from 2004 to 2009. Jordan	Pooled OLS regression model	Agency theory	AC, size, and ownership were negatively associated with EQ. No relation existed between AC independency and EQ. An insignificant existed relationship between AC expertise and EQ. AC meetings were positively associated with EQ.	Because of the small sample size, caution must be applied, as the findings might not be generalizable. This research found many questions in need of further investigation and that further research should be undertaken with other CG factors that might affect the earnings quality of Jordanian corporations.
Abdelkarim & Zuriqi, 2020	<p>Objectives: To explore the relationship between CG characteristics and EM in the Palestinian</p>	Quantitative method, using secondary data	Thirty-three non-financial listed companies on	OLS regression model.	Agency theory	An insignificant relationship existed between CG	Future studies should be conducted on CG and EM that consider more than

Authors	Objectives of the Study and the Related Variables	Methodology			Theory	Result	Comments / Gaps
		Res. design	Sample	Analysis Techniques			
	<p>non-financial listed companies.</p> <p>Variables:</p> <p>IV:</p> <p>BOD size, BOD independence</p> <p>CEO-Duality, Big4</p> <p>Ownership concentration</p> <p>Control Variables:</p> <p>Firm Size, Firm Leverage, ROA</p> <p>DV:</p> <p>ABSDAC, as a proxy of EM, measured by the modified Jones model.</p>	from published annual reports	Palestine Exchange from 2015 to 2016.	The study met all the assumptions for conducting OLS regression except for normality distribution.		<p>characteristics (BOD size, BOD independence</p> <p>CEO-Duality Big4</p> <p>Ownership Concentration) and EM practices.</p>	<p>two years of historical information.</p> <p>The PCCG should be complied with by all companies listed to enhance transparency, trustworthiness, and actual financial performance and have a positive impact on PEX performance.</p>
Alkdai & Hanefah, 2012	<p>Objectives:</p> <p>To investigate the effect of AC characteristics on EM practice.</p> <p>Variables:</p> <p>IV:</p> <p>AC size, non-executive directors</p> <p>AC financial Expertise</p> <p>AC Muslims directors</p> <p>Control Variables:</p> <p>Firm Size, Firm Leverage, ROA, Big4.</p> <p>DV:</p>	Quantitative method, using secondary data from published annual reports	270 Shariah-compliant listed companies listed in Bursa Malaysia.	<p>Pooled OLS model.</p> <p>Fixed Effects model.</p> <p>Random Effects mode.</p>	<p>Agency theory.</p> <p>Stakeholder theory.</p>	<p>A positive and insignificant relationship between AC size and EM.</p> <p>A negative relationship existed between AC non-executive directors and EM. AC financial expertise had a negative and insignificant relationship with EM.</p> <p>AC Muslim directors had a positive and insignificant relation with EM.</p>	<p>The result of accounting expertise among the AC and EM may not be the actual situation in other developed countries.</p> <p>Thus, further research to investigate the relationship between the availability of the independent accounting expertise members in the AC and EM must be undertaken not only in Malaysia but in other developing countries.</p>

Authors	Objectives of the Study and the Related Variables	Methodology			Theory	Result	Comments / Gaps
		Res. design	Sample	Analysis Techniques			
	EM measured by Jones (1991) model and the modified						
Al-othman & Al-zoubi, 2019	<p>Objectives: To identify the impact of the BOD characteristics on the earnings quality of the Jordanian listed industrial companies, from 2011 to 2017.</p> <p>Variables: IV: BBOD size, duality, directors' ownership, independence directors, experience, qualification, and gender diversity.</p> <p>Control Variables: Firm Size, Firm Leverage, ROA, Big4.</p> <p>DV: Earnings quality measured by the Richardson et al. (2001) model,</p>	Quantitative method, using secondary data from published annual reports	Thirty-three industrial listed firms on ASE. From 2011 to 2017, Jordan.	OLS Regression Model.	Agency theory	BOD size and BOD expertise had a positive effect on the EQ. CEO duality had a negative effect on EQ. The other BOD characteristics (directors' ownership, BOD independence, qualification, and gender) were not statistically significant concerning EQ.	Future studies should be done to measure the EQ by using another model and use other BOD characteristics such as the number of BOD meetings, to enrich the topic. The scope of the study was limited to the listed industrial companies for a period of study of 7 years. Therefore, future research should examine another sector and a longer period. The study met all the assumptions for conducting OLS regression except the normality distribution.
Zgarni et al., 2016	<p>Objectives: To examine the role of AC effectiveness and audit quality on EM in the Tunisian companies.</p>	Quantitative method, using secondary data from published annual reports	29 non-financial listed Tunisian firms from 2001 to 2009	OLS Regression Model	Agency theory	The effectiveness of AC was negatively related to EM. It seems that this complementary	This study used a small sample size, although the size was large enough to perform regression analysis. Moreover, many

Authors	Objectives of the Study and the Related Variables	Methodology			Theory	Result	Comments / Gaps
		Res. design	Sample	Analysis Techniques			
	<p>Variables: IV: AC effectiveness (a composite measure was established by using the characteristics of AC). External Audit Quality. Control Variables: Firm Size, Firm Leverage, ROA, MTB. DV: ABSDAC, as a proxy of EM, measured the Jones (1991) model, as modified by Dechow et al. (1995).</p>					relationship between independence, expertise, and frequency of meetings were interesting characteristics in enhancing AC effectiveness.	researchers have characterised the Modified Jones Model (1995) as a weak model to capture the full magnitude of EM. Thereby, Future studies can include other models to measure EM to overcome the problem in the Modified Jones Model. Furthermore, addressing another proxy for CG quality. For example, the characteristics of BOD might have an important impact on the level of DAC.
Uwuigbe et al., 2014	<p>Objectives: To examine the effects of CG mechanism on EM in Nigeria. Variables: IV: BOD size. BOD independence CEO duality Control Variables: Firm Size DV:</p>	Quantitative method, using secondary data from published annual reports	40 listed firms in the Nigerian stock exchange market from 2007 to 2011	OLS regression model	Agency theory	BOD size and BOD independence have a significant negative influence on EM. In contrast, CEO duality had a significant positive impact on EM. The author concluded that larger BODs and diverse knowledge are more effective in reducing EM than smaller BODs since	This study was limited by the fact that the sample only covered five years of data. Also, only three CG variables were addressed. So, future research could consider other CG variables. Based on the shortcomings of the Modified Jones Model, which was adopted, future

Authors	Objectives of the Study and the Related Variables	Methodology			Theory	Result	Comments / Gaps
		Res. design	Sample	Analysis Techniques			
	DAC as a proxy of EM measured by the Modified Jones Model Dechow et al. (1995).					they are likely to have more independent directors.	research could examine other models relating to EM and CG.
Khalil & Ozkan, 2016	<p>Objectives: To investigate the association between BOD independence, audit quality, and EM in the Egyptian non-financial companies listed.</p> <p>Variables: IV: BOD size, BOD non-executive directors, CEO duality Managerial ownership Ownership concentration AC composition Control Variables: Firm Size, Firm leverage, Cashflow, net income scaled by lag total assets, gross fixed assets scaled by total market capitalization. DV: ABSDAC, as a proxy of EM, measured the model of Kothari et al. (2005).</p>	Quantitative method, using secondary data from published annual reports	125 non-financial firms listed in the Egyptian Stock Market from 2005 to 2012	Fixed Effect Model	Agency theory	They found an insignificant relationship between BOD non-executive directors and EM. BOD size, AC independence, ownership concentration, managerial ownership, and Big 4 were associated negatively and significantly with EM practices. A more significant proportion of non-executive directors on the BOD and greater representation of non-executive directors on AC increased EM activities during the global financial crisis.	The results of this study indicated that the weakness in CG systems in emerging countries might result from insufficient enforcement of the law and the weak legal protection of minority stockholders. In the Egyptian context, a need exists to put more emphasis on proper enforcement that protects minority stockholders' rights, such as adopting cumulative voting to allow them to choose their representative. Thus, each country should design its CG code in a way that meets its institutional, legal, and political features.

Authors	Objectives of the Study and the Related Variables	Methodology			Theory	Result	Comments / Gaps
		Res. design	Sample	Analysis Techniques			
Xie et al. (2003)	<p>Objectives To examine the role of the BOD, the AC, and the executive committee in preventing EM.</p> <p>Variables: IV: BOD composition, AC and the executive committee. DV: DAC measured by Modified Jones (1995).</p>	Quantitative method, using secondary data from published annual reports	A sample of 282 firms from the S&P 500 index for years 1992, 1994, and 1996	Simple and multiple OLS regression	Agency theory	EM was negatively related to BOD independence and BODs with corporate directors. AC comprising members with some corporate or investment banking background was associated with a reduced level of EM. No association was found between lower levels of EM and the meeting frequency of BOD and AC.	An active and financially oriented BOD and AC may influence the level of EM, but the level of EM might influence the subsequent selection of BOD and AC members. Nevertheless, the results imply an associative link between the BOD and EM.
Bajra & Cadez, 2017	<p>Objectives To examine the impact of two central CG mechanisms, namely, internal audit function quality (IAFQ) and BOD quality (BODQ) on the incidence of EM.</p> <p>IV: IAFQ (a composite measure established from some characteristics of IAF) BODQ (a composite measure established from some characteristics of BOD)</p>	Quantitative method, using secondary data from published annual reports	This study looks at European firms that are cross listed in the US and covers a long time	OLS Regression model	Agency theory	They found that IAFQ and BODQ were effective for deterring EM and, by implication, unrepresentative or even fraudulent financial claims. Second, counter to expectations, the interactive effect of the two mechanisms did not enhance but diminished the	A similar limitation pertains to the measurement of IAFQ and BODQ. This study included five dimensions for BODQ and IFAQ. While this increases the potential to capture CG quality more inclusively, it also increased the likelihood of measurement error. These limitations, also relevant to other studies, should,

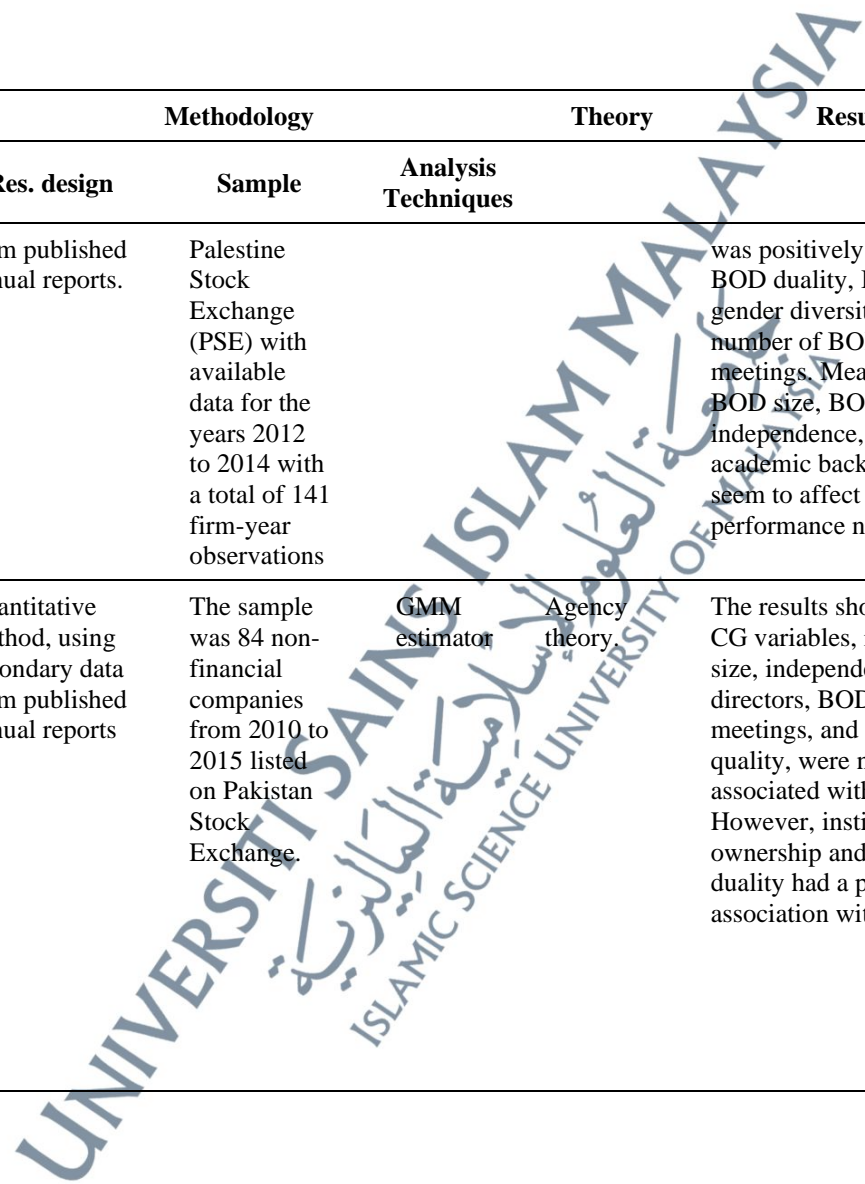
Authors	Objectives of the Study and the Related Variables	Methodology			Theory	Result	Comments / Gaps
		Res. design	Sample	Analysis Techniques			
	<p>DV: DAC measured by Modified Jones (1995). DAC as a proxy of EM measured by the model of Kothari et al. (2005).</p>					<p>favourable direct effects of both individual mechanisms. Third, the quality of both the IAF and the BOD increased over time following the implementation of the Sarbanes-Oxley Act in the United States and the 8th Company Law Directive in the EU.</p>	<p>however, not stop further research concerning CG quality and EM. In particular, this study suggested it is worthwhile to investigate the effects of several CG mechanisms simultaneously due to their potential interactive effects.</p>
Gonzalez & Garcia-Meca, 2014	<p>Objectives: To examine the relation between the internal mechanisms of CG and EM measured by DAC. They use a sample of listed Latin American non-financial companies from the period 2006–2009.</p> <p>IVs: BOD independency, Ownership concentration, BOD meetings Institutional ownership, Insider ownership CEO duality, Family ownership BOD size, Governance</p>	Quantitative method, using secondary data from published annual reports	435 Latin American non-financial companies listed from the period 2006–2009	Random effects model	Agency theory	<p>BODs that meet more frequently take a more active position in the monitoring of insiders, so showing a lower use of EM practices. Findings pointed to the fact that ownership concentration might be a manipulative practice constrictor mechanism only when the ownership of main shareholders is moderate.</p>	<p>Further research might examine if the relations found in this study can be extended to other Latin American countries and periods. This could provide increased robustness of the results. A further refinement of the variables used (e.g., if in the future regulators forced companies to disclose whether the independent directors have any conflict of interest that would alter the degree of BOD independence).</p>

Authors	Objectives of the Study and the Related Variables	Methodology			Theory	Result	Comments / Gaps
		Res. design	Sample	Analysis Techniques			
	index DV: DAC measured by Modified Jones (1995).						
Astami & Rusmin, 2020	Objectives: To investigate the association between CG and EM practices of Australian's financially distressed firms. Variables: IV: BOD independent, AC independent, meetings, size, CEO duality and AC size DV: The Modified Jones (1991) model is used to measure DAC	Quantitative method, using secondary data from published annual reports	A sample of 164 firm-year incorporating non-financial firms experiencing financial distress	Multiple regression OLS model	Agency theory Organizational theory PAT	They found that the managers were seeking to minimize their reported earnings to inflate profits in the following years of crisis to avoid bankruptcy. The AC played a positive role in detecting and reducing EM.	Future research can also be carried out for a comparative study Between firms with financial distress status across jurisdictions. A comparative study in this area of research between firms with financial distress and healthy firms can also be an interesting future investigation.
Chung et al., 2019	Objectives: To examine whether the effectiveness of institutional monitoring depends on the economic conditions of emerging capital markets. Variables: IV: Institutional investors (local and foreign) DV:	Quantitative method, using secondary data from published annual reports	A sample of the comprises the KOSPI-listed and KOSDAQ-listed firms, and the sample period begins in	Multiple regression OLS model	Positive accounting theory	The findings show that INST was positively correlated with EM. The institutional monitoring effect would be weaker in periods of low growth (after the 2008 crisis) than in periods of high growth (before the crisis). They verified that in the	They expect that their results will contribute to the understanding of institutional investor behaviour in other emerging capital markets.

Authors	Objectives of the Study and the Related Variables	Methodology			Theory	Result	Comments / Gaps
		Res. design	Sample	Analysis Techniques			
	ABSDAC as a proxy of EM measured by the model of Kothari et al. (2005).		2003 and ends in 2014 in South Korea.			post-crisis period, EM increased as the INST increased.	
Saona et al., 2020	<p>Objectives: To examine how the OS and BOD' features determine the opportunistic managerial behavior exemplified in the management of accounting earnings.</p> <p>Variables:</p> <p>IV: Institutional investors, ownership concentration, BIND, BOD size, BOD duality, AC, family control, BBOD gender, governance index.</p> <p>DV: ABSDAC as a proxy of EM measured by Kasznik (1999)</p>	Quantitative method, using secondary data from published annual reports	The sample comprised 120 non-financial Spanish listed firms from the years 2006 to 2014, with a total of 877 observations.	Multiple regression OLS model, fixed-effects model. GMM method	Agency theory. Organizational theory.	<p>They found more concentrated ownership enhanced CG systems which constrain EM.</p> <p>They also found that institutional investors constrain the EM.</p> <p>The results show that larger BODs are better at preventing EM and that a larger proportion of female members reduces EM.</p> <p>CEO duality increases the likelihood of EM.</p>	They suggested that work was to be done concerning reinforcing regulation and control of corruption that will have a positive impact on decreasing the ability of managers to manipulate earnings.
Chatterjee & Rakshit, 2020	<p>Objectives: To investigate the linkage between various CG mechanisms and EM.</p> <p>Variables:</p> <p>IV: BOD size, meetings,</p>	Quantitative method, using secondary data from published annual reports	The sample is the Indian manufacturing firms listed on BSE 500 index as on	Pooled OLS regression was found to be appropriate	Agency theory	<p>The results revealed a strong and negative association of EM with BOD independence.</p> <p>There was a negative association between AC size and EM.</p>	Applied to a broader sample that may help in drafting policies to protect stakeholders' interests, assure that they are not misguided, and the capital market reflects integrity.

Authors	Objectives of the Study and the Related Variables	Methodology			Theory	Result	Comments / Gaps
		Res. design	Sample	Analysis Techniques			
	independence, CEO duality, AC size, AC meetings, AC independence. DV: EM measured by the Modified Jones Model and the Kasznik (1999) model.		31 March 2015 belonging to select five industrial sectors This study covers a period of 5 years from 2010–2015	te.		Furthermore, an insignificant relationship existed between EM and BOD Size, frequency of BOD Meetings, CEO duality, AC independence.	
Wan et al., 2016	Objectives: To examine the implications of the Revised Malaysian Code on CG (2007) towards the effectiveness of the BOD and AC in Malaysian manufacturing companies. Variables: IV: Bod size, BOD independent, AC independence, BOD ethnicity, AC qualification. DV: EM measured by the Modified Jones Model.	Quantitative method, using secondary data from published annual reports	Using a sample of 201 firms from the fiscal years from 2004–2009	Multiple and logistic regression analyses	Agency theory, Managerial hegemony theory	The findings revealed that BOD and AC effectiveness was positively associated with EM pre- and post-Revised Malaysian Code of CG (2007). A higher number of ethnic members on the BOD are also positively associated with EM.	This study was limited to some industries in the manufacturing sector due to the special characteristics of this sector and covered mostly large firms. The results may not, therefore, apply to small firms. Finally, the study does not consider possible interaction between the BOD and audit characteristics, which may be significant in influencing EM.
Saleh et al., 2020	Objectives: To investigate the impact of BOD characteristics and	Quantitative method, using secondary data	Non-financial listed	The random-effects	Agency theory.	The results showed that BOD gender diversity and institutional	This result provides strong evidence for policymakers and

Authors	Objectives of the Study and the Related Variables	Methodology			Theory	Result	Comments / Gaps
		Res. design	Sample	Analysis Techniques			
	OS among non-financial firms listed on PEX. Palestine. Variables: IV: BOD size, BOD meetings, BOD multiple directorships, institutional ownership, and BOD gender diversity. DV: Firm performance (ROA)	from published annual reports	companies in Palestine during the period from 2009 to 2016. Based on panel data of 200 observations	model was the most appropriate model.		ownership improved corporate performance. Moreover, this study found that larger BODs are associated with lower performance.	regulatory bodies that more attention should be paid to the issue of BOD-size appointments. This study recommended that policymakers should ensure that Palestinian companies limit the involvement of their directors in other directorships, to allow them to engage in their BOD duties properly.
Saleh & Islam, 2020	Objectives: To examine the effects of BOD characteristics and firm performance. Variables: IV: BOD gender diversity, the BOD size, frequency of meetings, BOD financial knowledge. DV: Firm performance (ROA)	Quantitative method, using secondary data from published annual reports	Based on panel data of 150 observations from non-financial firms listed on PEX during the period from 2011 to 2016	Random-effect Fixed-effect analysis	Agency theory. Resource dependent theory.	The results showed that the larger the BOD size, the more frequency of meetings, and more existence of financial knowledge, the better firm's performance. However, no relationship existed between BOD gender and firm performance.	It, therefore, becomes a necessity to examine the influence of BOD diversity on the financial performance of listed firms in Palestine. It is possible that other CG mechanisms could be addressed that are not considered in this study influence the performance of Palestinian firms.
Abdeljawad & Masri, (2020)	Objectives: To investigate the relationship between BOD characteristics	Quantitative method, using secondary data	The sample encompassed all firms listed in the	GLS estimator	Agency theory. Stewardship theory	The results indicated that the corporate performance of Palestinian listed firms	These results might have implications for any future CG code setting. The stewardship theory,

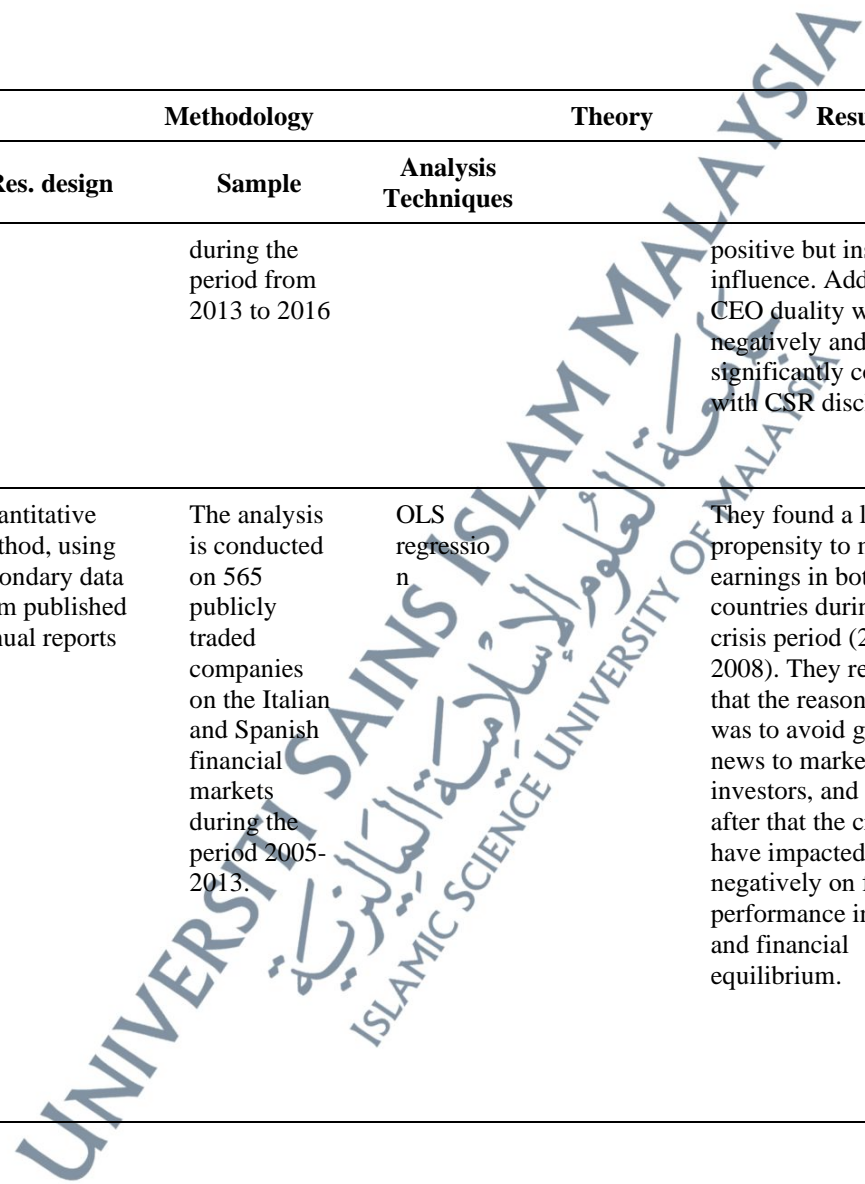


Authors	Objectives of the Study and the Related Variables	Methodology		Theory	Result	Comments / Gaps
		Res. design	Sample			
	and corporate performance of firms in Palestine. Variables: IV: CEO duality, BOD size, BOD independence, BOD gender diversity, BOD academic background, and frequency of BOD meetings. DV: Firm performance (ROA)	from published annual reports.	Palestine Stock Exchange (PSE) with available data for the years 2012 to 2014 with a total of 141 firm-year observations		was positively related to BOD duality, BOD gender diversity, and the number of BOD meetings. Meanwhile, BOD size, BOD independence, and BOD academic background seem to affect performance negatively.	not the agency theory, should guide the lawmakers in constructing any new legislation related to CG.
Sajjad, Abbas, Hussain, & Waheed, 2019	Objectives: To inspect the influence of CG on EM practices in the emerging Pakistani economy. Variables: IV: CEO duality, BOD size, BOD independence, BOD frequency of meetings, audit quality, and institutional ownership. DV: EM measured by Modified Jones Model and Kothari Model.	Quantitative method, using secondary data from published annual reports	The sample was 84 non-financial companies from 2010 to 2015 listed on Pakistan Stock Exchange.	GMM estimator Agency theory	The results showed that CG variables, i.e., BOD size, independent directors, BOD meetings, and audit quality, were negatively associated with EM. However, institutional ownership and CEO duality had a positive association with EM.	This research work may help the practitioners, regulators, and government to boost the compliance of financial reports with better CG mechanisms, which may improve the consistency of financial reports.

Authors	Objectives of the Study and the Related Variables	Methodology			Theory	Result	Comments / Gaps
		Res. design	Sample	Analysis Techniques			
Ayedh et al., 2019	<p>Objectives: To examine EM practices during the 2008 financial crisis in Malaysia. Both the magnitude and direction of EM are studied and compared with EM during the pre-crisis period.</p> <p>Variables: IV: Pre and during the 2008 crisis IFRS DV: EM measured by the Modified Jones Model and Kothari et al. (2005) Model.</p>	Quantitative method, using secondary data from published annual reports	The final sample was 1,170 firm-years from six sectors. The sample was equivalent to 234 listed companies' data for five years.	Simple multivariate regressions	The big bath theory	The empirical findings revealed that EM practices in the Malaysian companies were income decreasing during the crisis period (2008 and 2009), compared to the pre-crisis period (2005 and 2006) when the practices were income-increasing. The findings of this study were consistent with the big bath theory.	The findings of this study should inspire more research on EM during abnormal periods, such as a financial crisis period, while considering accounting regulations, particularly in Asian countries. Also, policymakers might give more attention to ensure the enhancement of adherence to IFRS adoption.
Anwar & Buvanendra, 2019	<p>Objectives: To examine the impact of OS on EM considering listed firms at the Colombo Stock Exchange – Sri Lanka during the period from 2013/14 to 2017/18.</p> <p>Variables: IV: Institutional ownership Managerial ownership Ownership concentration</p>	Quantitative method, using secondary data from published annual reports	The population of the study consists of all non-financial listed companies in CSE from financial year 2012/13 to 2017/18.	The study employed pooled OLS regression	Agency theory.	Managerial and institutional OSs are effective in constraining EM. Conversely, foreign ownership was found to have a significant and positive association with EM.	This study only focused on OS in Sri Lanka. Future researches should focus on other emerging markets, especially Southeast Asia stock markets.

Authors	Objectives of the Study and the Related Variables	Methodology			Theory	Result	Comments / Gaps
		Res. design	Sample	Analysis Techniques			
	Foreign ownership DV: EM measured by Kothari et al. (2005) Model.						
Chatterjee, 2019	Objectives: To examine whether BOD qualities influence the EM of firms in a large emerging market set-up by using panel data of 783 Indian private manufacturing firms for seven years (2009–2016). Variables: IV: Institutional ownership (domestic and foreign) BOD independence BOD multidirector ship, BOD diligence, CEO duality DV: EM measured by the Modified Jones Model	Quantitative method, using secondary data from published annual reports.	Using panel data of 783 Indian private manufacturing firms for seven years (2009–2016).	Fixed effect model	Agency theory.	The study finds that it is BOD quality that helps in curbing EM and not just BOD independence. Results reveal that diligent and busy BOD help in reducing EM, CEO duality affects the quality of reported earnings, and promoters' influence on BODs increases EM. Domestic institutional ownership reduces EM.	Finally, from the findings of this study, investors can gain meaningful insights about the quality of reported earnings by looking at the BOD compositions of the companies operating in a large emerging economy.
Alexander, 2019	Objectives: To analyze the effect of OS on EM. Variables: IV: Institutional ownership	Quantitative method, using secondary data from published annual reports	The population was manufacturing companies	OLS regression Model	Agency theory.	The results showed that institutional ownership was associated positively with EM while controlling ownership and foreign ownership	The inconclusive results of the OS and its impact on EM is a sufficient motive to investigate this issue in other emerging markets such as MENA

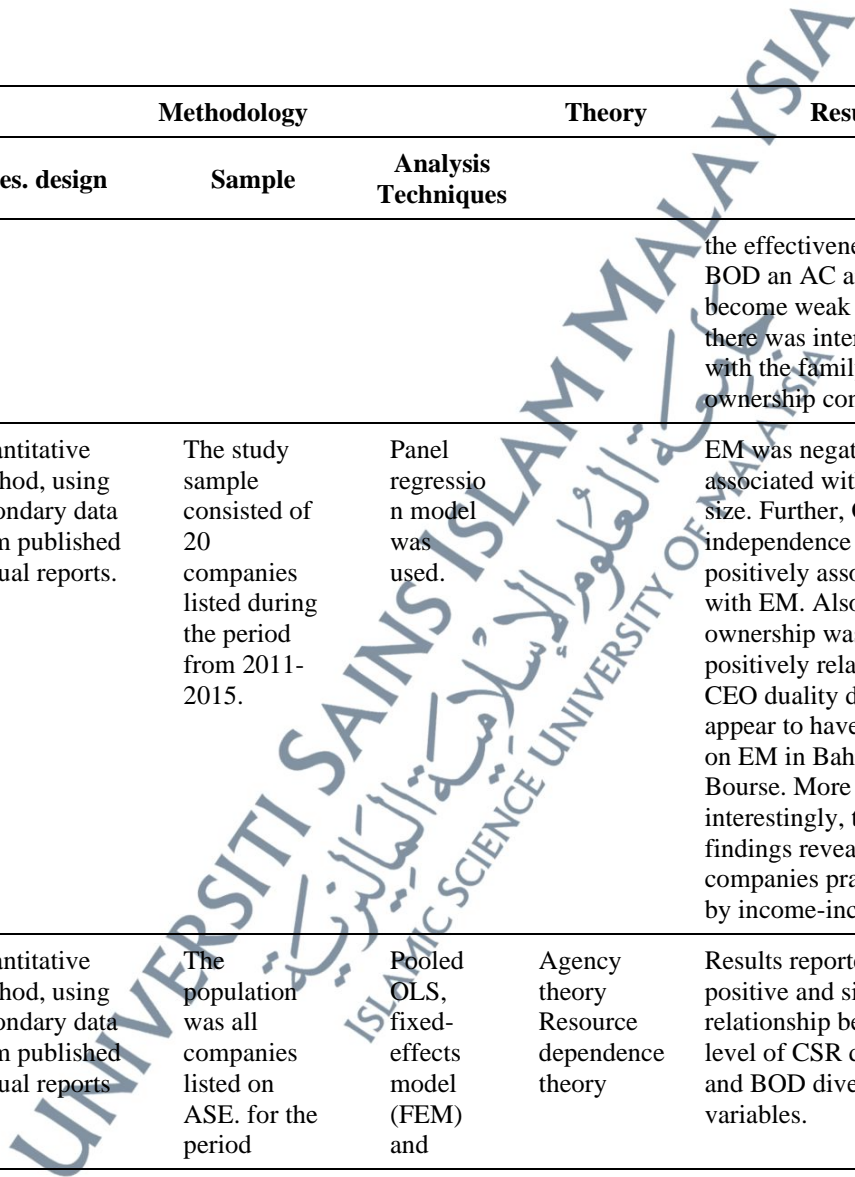
Authors	Objectives of the Study and the Related Variables	Methodology			Theory	Result	Comments / Gaps
		Res. design	Sample	Analysis Techniques			
	Managerial ownership Ownership concentration Foreign ownership DV: EM measured by Modified Jones Model		listed on the Indonesian Stock Exchange (IDX) from 2014 to 2016.			affected EM negatively. On the other hand, managerial ownership did not affect EM.	countries and South-Eastern Asia markets.
Asmar et al., 2018	Objectives: To examine the relationship between CG mechanisms and disclosure quality for the companies listed on PEX. Variables: IV: BOD size, ownership, compensations, role duality, number of meetings, AC size, and auditor type. DV: Disclosure quality	Quantitative method, using secondary data from published annual reports	Panel data was collected from the annual reports of the Palestinian companies listed in the PEX covering the period from 2005 to 2016.	Generalized method of moment (GMM)	Agency theory	The results indicated that while BOD size, BOD ownership, and auditor type, affect disclosure quality positively, role duality, BOD compensations, and AC size have a negative impact on disclosure quality.	This study is important for the Palestinian context because it improves the disclosure quality of the companies.
Zaid et al., 2019	Objectives: To examine the relationships between CG and corporate CSR Variables: IV: BOD size, CEO duality,	Quantitative method, using secondary data from published annual reports	A panel data set from the Palestinian non-financial-listed companies	OLS regression	Agency theory	The results showed that the level of CSR disclosure was positively and significantly affected by BOD size and independence, while gender diversity had a	Limited sample size because there are few listed firms in Palestine as a small country with an unstable political situation. Prior research regarding this topic is



Authors	Objectives of the Study and the Related Variables	Methodology			Theory	Result	Comments / Gaps
		Res. design	Sample	Analysis Techniques			
	BOD independence, BOD gender diversity. DV: CSR disclosure		during the period from 2013 to 2016			positive but insignificant influence. Additionally, CEO duality was negatively and significantly correlated with CSR disclosures.	scarce in the Arab world, particularly in Palestine. This study excluded many CG characteristics, such as OS, government ownership, managerial ownership, and institutional ownership.
De Luca & Paolone, 2019	Objectives: To detect accounts manipulation to assess the impact of the financial crisis on Italian and Spanish listed companies' propensity to manage their earnings. Variables: IV: Pre and during a crisis. DV: The manipulation score (Beneish, 1997, 1999, 2001; Beneish et al., 2013) is a mathematical model based on eight financial ratios used to identify whether a company has a significant likelihood of managing and manipulating its earnings.	Quantitative method, using secondary data from published annual reports	The analysis is conducted on 565 publicly traded companies on the Italian and Spanish financial markets during the period 2005-2013.	OLS regression		They found a lower propensity to manipulate earnings in both countries during the pre-crisis period (2005-2008). They reported that the reason for this was to avoid giving bad news to markets, investors, and lenders after that the crisis may have impacted too negatively on firms' performance indicators and financial equilibrium.	The empirical results provided various implications for further studies related to managements' incentives concurrently with security offerings.

Authors	Objectives of the Study and the Related Variables	Methodology		Analysis Techniques	Theory	Result	Comments / Gaps
		Res. design	Sample				
Hooghiemstra et al., 2019	<p>Objectives: To investigate the consequences of BOD internationalization on EM.</p> <p>Variables:</p> <p>IV: BOD Nationality diversity, BOD size, AC existence, CEO duality, and BOD gender diversity.</p> <p>DV: EM measured by Modified Jones Model</p>	Quantitative method, using secondary data from published annual reports.	Using a sample of 3249 firm-year observations representing 586 non-financial listed Nordic firms during 2001–2008,	OLS regression	Agency theory	They found that the presence of foreign directors on the BOD was associated with significantly higher levels of EM. The analysis indicated that this effect was driven by language-related factors, as well as by the level of foreign BOD members' accounting knowledge	They focused only in the Nordic countries. Hence, a generalization of their findings to countries with different regulatory institutions and different linguistic features should be undertaken with caution. Any proxy of EM is subject to potential measurement errors (Dechow et al., 2010). So, an alternative proxy for EM should be tried.
Hashim et al., 2019	<p>Objectives: To explore the relationship between BOD diversity and the earnings quality in the firms listed in Bursa Malaysia.</p> <p>Variables:</p> <p>IV: female director foreign director Chinese director Young director</p> <p>DV: EM measured by Modified</p>	Quantitative method, using secondary data from published annual reports	The 745 companies listed in the Main Market of Bursa Malaysia, excluding the financial and real estate investment companies.	Multiple Regression Analysis. Hierarchical Multiple Regression	Resource dependence theory. Agency theory.	Nationality diversity and ethnicity diversity were found to have a significant impact on earning quality, while gender diversity and Age diversity does not show any significant impact on earnings quality.	This study offers a significant contribution to existing earning quality literature. The participation of more different races on the BOD will be able to increase the quality of earning of the companies.

Authors	Objectives of the Study and the Related Variables	Methodology			Theory	Result	Comments / Gaps
		Res. design	Sample	Analysis Techniques			
	Jones Model						
Mosleman y & Nathan, 2019	<p>Objectives: To investigate the relationships between OS and Earnings (EM) of Egyptian companies.</p> <p>Variables: IV: Block ownership, managerial ownership, and public ownership DV: EM measured by Modified Jones Model</p>	Quantitative method, using secondary data from published annual reports	A sample of 50 companies listed on the Egyptian stock market for twelve years was used in the study.	OLS regression	Resource dependence theory Stakeholder theory Agency theory.	The results indicated a positive relationship between Block holder ownership and EM. However, no relationship was found between the Managerial Ownership and the Public Ownership on EM.	In emerging economies, there are crucial factors that should be taken into consideration, like the political situation of the country, the degree of economic development, and the cultural issues related to this country.
AbuSiam, 2015	<p>Objectives: To investigate the association between CG mechanisms and EM.</p> <p>Variables: IV: BOD characteristics, AC characteristics, AC effectiveness, BOD effectiveness, Family ownership as the moderating variable.</p>	Quantitative method, using secondary data from published annual reports	A panel data consisting of 64 industrial firms listed on ASE was used during 2009 and 2013	Panel data regression models. Random Effects Model.	Agency theory	The findings reported that BOD independence, AC independence, and AC financial expertise were negatively related to EM. Additionally, the effectiveness of the BOD and AC had a significant and negative impact on E M. The results also showed that the relationship between	The results of this study could be useful to regulators in their attempts to constrain the incidence of EM and enhance the quality of monitoring mechanisms, especially in an environment where the capital market is still evolving, and the legal protection and law



Authors	Objectives of the Study and the Related Variables	Methodology			Theory	Result	Comments / Gaps
		Res. design	Sample	Analysis Techniques			
	<p>DV: The DAC estimated by the Kothari et al. (2005) model.</p>					the effectiveness of BOD an AC and EM become weak when there was interaction with the family ownership control.	enforcement is weak.
Alareeni, 2018	<p>Objectives: To consider data for listed companies in Bahrain Bourse to determine whether companies practice EM. Further, the effect of a set of CG characteristics on EM is examined.</p> <p>Variables:</p> <p>IV: BOD size, independent, CEO duality, internal ownership.</p> <p>DV: EM measured by Modified Jones Model</p>	Quantitative method, using secondary data from published annual reports.	The study sample consisted of 20 companies listed during the period from 2011-2015.	Panel regression model was used.		EM was negatively associated with BOD size. Further, OD independence was positively associated with EM. Also, internal ownership was positively related to EM. CEO duality did not appear to have any effect on EM in Bahrain Bourse. More interestingly, the findings revealed that companies practice EM by income-increasing.	Further research could also encompass a set of company characteristics that may be relevant to the incidence of EM, such as firm age and governance index. Also, this research could be extended to a larger number of companies.
Ibrahim & Hanefah, 2016	<p>Objectives: To investigate the impact of BOD diversity characteristics on the level of CSR disclosures.</p> <p>Variables:</p> <p>IV:</p>	Quantitative method, using secondary data from published annual reports	The population was all companies listed on ASE. for the period	Pooled OLS, fixed-effects model (FEM) and	Agency theory Resource dependence theory	Results reported a positive and significant relationship between the level of CSR disclosure and BOD diversity variables.	The study only investigated a few BOD diversity variables. Future studies may include other variables such as OS and cultural factors.

Authors	Objectives of the Study and the Related Variables	Methodology			Theory	Result	Comments / Gaps
		Res. design	Sample	Analysis Techniques			
	Independence, gender, age, and nationality DV: CSR disclosures		between 2007 and 2011.	random-effects model (REM)			
AbuSiam et al., 2014b	Objectives: To conceptualize the relation between BOD characteristics and EM. Variables: IV: BOD independence, size, CEO duality, meetings, and financial expertise DV: EM measured by Kothari et al. (2005) Model.	Conceptual framework	Industrial companies listed on the Amman Stock Exchange (ASE)	Panel data regression models.	Agency theory	Evidence from prior studies suggested that BOD is an important part of the firm's structure and responsible for monitoring the quality of the information contained in financial reports.	It is argued that an effective BOD can reduce EM.
Abu Siam et al., 2018	Objectives: To offer empirical evidence on the way the family ownership moderates the association that exists between the financial experience of AC and EM. Variables: IV: AC financial expertise The moderating effects of family ownership. DV:	Quantitative method, using secondary data from published annual reports.	The sample is of 44 manufacturing firms that are listed on ASE from 2012 to 2016.	Panel data regression models.	Agency theory	There was a significant and negative association between the AC financial expertise and EM. Also found a positive interaction of the AC financial expertise and the family ownership on EM.	This research focused only on industrial listed firms on ASE and ignored any other types of listed firms. Thus, the findings of the study may not apply to other sectors. Furthermore, other variables that may affect EM were not examined in this study, such as AC independence or other

Authors	Objectives of the Study and the Related Variables	Methodology			Theory	Result	Comments / Gaps
		Res. design	Sample	Analysis Techniques			
	The DAC estimated by the Kothari et al. (2005) model.						types of ownership, such as foreign and institutional ownerships.
Idris et al. (2018)	<p>Objectives: To explore the relationship between the effectiveness of AC and EM.</p> <p>Variables:</p> <p>IV: An index consisting of four characteristics is developed to measure the effectiveness of AC, namely AC independence, size, meetings, and financial expertise.</p> <p>DV: The DAC estimated by the Kothari et al. (2005) model.</p>	Quantitative method, using secondary data from published annual reports	A panel data consisting of 64 industrial firms listed on ASE is used during 2009 and 2014.	Panel data regression models.	Agency theory	The results showed that AC effectiveness had a significant and negative impact on EM.	The first limitation was that the study used only Jordanian data. The results were recommended to be cautiously generalized to other contexts. Another limitation was that this study only considered listed industrial companies. Thus, the generalization of the results to other sectors, such as the service and financial sectors, may be constrained.
AbuSiam et al. (2014)	<p>Objectives: To propose a conceptual framework of the role of AC characteristics EM.</p> <p>Variables:</p> <p>IV: AC independence, size, meetings, and financial expertise and Big4.</p> <p>DV:</p>	Conceptual framework	Using a sample of industrial companies listed on the Amman Stock Exchange (ASE).	Panel data regression models.	Agency theory	Prior literature proposed that AC characteristics would play a focal role in ensuring the integrity of the financial reporting process by mitigating EM activities.	This paper investigated the relationship between the AC and EM among industrial companies listed on ASE. Further studies should be considered in another context.

Authors	Objectives of the Study and the Related Variables	Methodology			Theory	Result	Comments / Gaps
		Res. design	Sample	Analysis Techniques			
	The DAC estimated by the Kothari et al. (2005) model.						
Obaidat, 2017	<p>Objectives: To investigate the effect of political crises on income smoothing behavior.</p> <p>Variables:</p> <p>IV: Crisis Sector Size ROA Financial Leverage</p> <p>DV: Income measures that are possible objects of smoothing.</p>	Quantitative method, using secondary data from published annual reports.	The sample was the non-financial firms listed on the Amman Stock Exchange (ASE) during the period 2006-2015.	Chi-Square, Correlation and Logistic Regression tests	-	The results indicated that income smoothing practice is more likely to increase during periods of political crises. Results also showed no effects of the firm size, ROA and financial leverage on income smoothing	There is a lack of previous studies concerning factors affecting income smoothing especially political instability.
Hassan et al., 2016	<p>Objectives: To explore the relationship between firms' performance and CG by companies listed on PEX. Variables:</p> <p>IV: BOD size, meetings, the existence of AC, institutional ownership, and foreign ownership.</p> <p>DV: Accounting and market-based performance measures were used to proxy</p>	Quantitative method, using secondary data from published annual reports	The sample is all non-financial companies listed on PEX during the period between 2010 and 2012	The fixed effect and the random effect models	Agency theory	The result of the analysis revealed that corporate performance was negatively associated with CG. This implies that the result was inconsistent with agency theory. This might be because corporate governance in Palestine is still at its infancy stage.	This study covered only three years (2010–2012). Compliance with the code of CG is expected to enhance over time. CG proxies employed in the model may not accurately capture factors that would influence the financial performance of non-financial companies listed on PEX. These limitations leave room

Authors	Objectives of the Study and the Related Variables	Methodology			Theory	Result	Comments / Gaps
		Res. design	Sample	Analysis Techniques			
	companies' performance.						for further research.
Rahman & Mohamed Ali, 2006	<p>Objectives: To investigate the extent of the effectiveness of monitoring functions of BOD, AC, and concentrated ownership in reducing EM.</p> <p>Variables: IV: BOD size, independence, CEO duality, AC independence, AC qualification, AC meetings, ownership concentration. DV: EM measured by Modified-Jones Model (1995)</p>	Quantitative method, using secondary data from published annual reports	The sample was 97 firms listed on the Main BOD of Bursa Malaysia over the period 2002-2003.	OLS regression model.	Agency theory. Resource dependence theory.	EM was positively related to the size of the BOD. A possible explanation for the insignificant relationship between other CG mechanisms (independence of BOD & AC) and EM was that the BOD is seen as ineffective in discharging their monitoring duties due to management dominance over BOD matters.	Future research needs to examine in-depth the extent to which DAC is harmful or beneficial to the shareholders. By distinguishing and focusing only on the DAC that is costly to shareholders, a more accurate picture can be obtained in examining the effectiveness of BOD in constraining EM.
Aybars & Ataunal, 2018	<p>Objectives: To evaluate the role of institutional investors on EM. Variables: IV: Institutional ownership, Cash flow, Leverage, Firm size, DV: The DAC estimated by the</p>	Quantitative method, using secondary data from published annual reports.	Data of firms listed on the Borsa Istanbul between 2005 and 2011	OLS regression model	Agency theory.	There was a significant and negative relation between institutional ownership level and EM and confirmed the substantial role played by institutional investors in monitoring and disciplining corporate managers.	The concentration of shares in the hands of institutional owners was considered to mitigate agency costs stemming from EM practices.

Authors	Objectives of the Study and the Related Variables	Methodology			Theory	Result	Comments / Gaps
		Res. design	Sample	Analysis Techniques			
Kothari et al. (2005) model.							
Laallam et al., 2017	<p>Objectives: To investigate the impact of CG attributes and code amendments of 2012 on the performance.</p> <p>Variables:</p> <p>IV: CG index CG amendments</p> <p>DV: (ROA), (ROE) (Tobin's Q).</p>	Quantitative method, using secondary data from published annual reports	162 trading and services listed firms in the Bursa Malaysia	Pooled OLS regression and the random-effects model.	Agency theory	The results showed a positive and significant association between CG attributes and firm performance. While the association between the CG amendment (CGA) and firm performance proxies ROA and ROE was negatively significantly associated with firm performance (TQ)	The results of this study are expected to extend the understanding of the relationship between CG attributes and firm performance, particularly from the perspective of Malaysia based on the latest data from trading and services listed companies.

IV = independent variables. DV = dependent variables. BOD = board of directors. AC = audit committee. EM = earnings management. OS = ownership structure. ABSDAC = absolute value of discretionary accruals. DAC = discretionary accruals.

Appendix 2: Descriptive statistics of earnings management based on firms

Firm code	N	Mean	Std. Deviation	Minimum	Maximum
ABRAJ	8	0.0412	0.0345	0.0015	0.1172
AHC	8	0.0293	0.0316	0.0065	0.1057
APC	8	0.1242	0.0794	0.0327	0.2663
APIC	8	0.0959	0.0237	0.0623	0.1316
AQARIYA	8	0.1012	0.0620	0.0026	0.1911
ARAB	8	0.0405	0.0131	0.0235	0.0603
AZIZA	8	0.0271	0.0223	0.0011	0.0697
BPC	8	0.0353	0.0299	0.0021	0.0779
ELECTRODE	8	0.0457	0.0238	0.0167	0.0750
GMC	8	0.0561	0.0501	0.0038	0.1559
JCC	8	0.0666	0.0356	0.0208	0.1214
JPH	8	0.0241	0.0180	0.0000	0.0504
JREI	8	0.0466	0.0600	0.0041	0.1863
LADAEN	8	0.0470	0.0408	0.0129	0.1279
NAPCO	8	0.0424	0.0281	0.0092	0.0948
NCI	8	0.0269	0.0183	0.0006	0.0506
NSC	8	0.0437	0.0332	0.0042	0.0997
OOREDOO	8	0.0376	0.0253	0.0103	0.0879
PADICO	8	0.0650	0.0105	0.0484	0.0833
PALAQAR	8	0.0686	0.0321	0.0047	0.1056
PALTEL	8	0.0690	0.0530	0.0037	0.1392
PEC	8	0.0623	0.0371	0.0098	0.1181
PID	8	0.1643	0.2550	0.0012	0.7639
PIIC	8	0.0454	0.0235	0.0119	0.0872
PRICO	8	0.0173	0.0154	0.0032	0.0408
RSR	8	0.0376	0.0204	0.0162	0.0775
UCI	8	0.0743	0.0539	0.0126	0.1514
VOIC	8	0.1141	0.0525	0.0422	0.1901
WASSEL	8	0.1391	0.1740	0.0121	0.5326
Total	232	0.0617	0.0734	0.0000	0.7639

Appendix 3: Pooled OLS regressions for the main model

```
. reg absdacc agrowth cashflow firmage, robust
```

```
Linear regression                               Number of obs   =       232
                                                F(3, 228)       =         3.48
                                                Prob > F         =       0.0167
                                                R-squared        =       0.3652
                                                Root MSE        =       .05883
```

absdacc	Coef.	Robust Std. Err.	t	P> t	[95% Conf. Interval]	
agrowth	.2404017	.0827305	2.91	0.004	.0773876	.4034159
cashflow	-.2279361	.1061854	-2.15	0.033	-.4371662	-.018706
firmage	-.0145434	.0066288	-2.19	0.029	-.0276049	-.001482
_cons	.1064311	.0220054	4.84	0.000	.0630711	.1497911

```
. reg absdacc agrowth cashflow firmage bodsize bodmeet bodindep bodnd bodre_govc CEODUAL >, robust
```

```
Linear regression                               Number of obs   =       232
                                                F(9, 222)       =         2.86
                                                Prob > F         =       0.0033
                                                R-squared        =       0.4141
                                                Root MSE        =       .05728
```

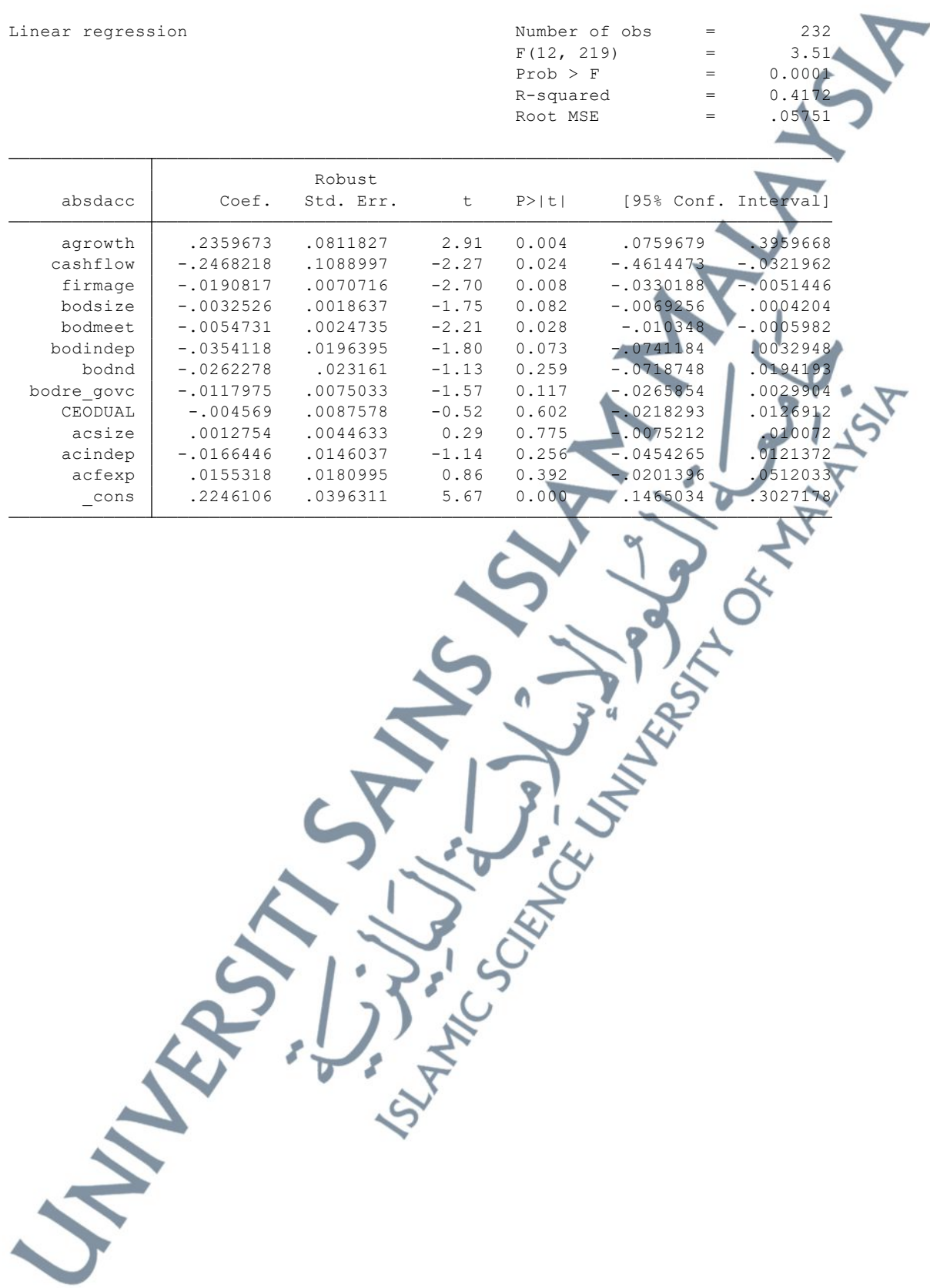
absdacc	Coef.	Robust Std. Err.	t	P> t	[95% Conf. Interval]	
agrowth	.234585	.0786836	2.98	0.003	.0795227	.3896472
cashflow	-.2528828	.1069577	-2.36	0.019	-.4636651	-.0421004
firmage	-.0184348	.0070538	-2.61	0.010	-.0323359	-.0045338
bodsize	-.0034858	.001762	-1.98	0.049	-.0069581	-.0000135
bodmeet	-.0055392	.0023196	-2.39	0.018	-.0101105	-.0009679
bodindep	-.0358122	.0188222	-1.90	0.058	-.0729051	.0012808
bodnd	-.032354	.0223976	-1.44	0.150	-.0764931	.0117851
bodre_govc	-.0145449	.0072319	-2.01	0.046	-.0287969	-.0002928
CEODUAL	-.0075512	.0081249	-0.93	0.354	-.023563	.0084606
_cons	.2255504	.0401149	5.62	0.000	.1464956	.3046052

```
. reg absdacc agrowth cashflow firmage bodsize bodmeet bodindep bodnd bodre_govc CEODUAL
> acsize acindep acfexp, robust
```

Linear regression

```
Number of obs   =      232
F(12, 219)      =       3.51
Prob > F        =     0.0001
R-squared       =     0.4172
Root MSE       =     .05751
```

absdacc	Coef.	Robust Std. Err.	t	P> t	[95% Conf. Interval]	
agrowth	.2359673	.0811827	2.91	0.004	.0759679	.3959668
cashflow	-.2468218	.1088997	-2.27	0.024	-.4614473	-.0321962
firmage	-.0190817	.0070716	-2.70	0.008	-.0330188	-.0051446
bodsize	-.0032526	.0018637	-1.75	0.082	-.0069256	.0004204
bodmeet	-.0054731	.0024735	-2.21	0.028	-.010348	-.0005982
bodindep	-.0354118	.0196395	-1.80	0.073	-.0741184	.0032948
bodnd	-.0262278	.023161	-1.13	0.259	-.0718748	.0194193
bodre_govc	-.0117975	.0075033	-1.57	0.117	-.0265854	.0029904
CEODUAL	-.004569	.0087578	-0.52	0.602	-.0218293	.0126912
acsize	.0012754	.0044633	0.29	0.775	-.0075212	.010072
acindep	-.0166446	.0146037	-1.14	0.256	-.0454265	.0121372
acfexp	.0155318	.0180995	0.86	0.392	-.0201396	.0512033
_cons	.2246106	.0396311	5.67	0.000	.1465034	.3027178



```
. reg absdacc agrowth cashflow firmage bodsize bodmeet bodindep bodnd bodre_govc CEODUAL
> acsize acindep acfexp ownerconc instiowner foreowner, robust
```

```
Linear regression                               Number of obs   =       232
                                                F(15, 216)     =         3.47
                                                Prob > F       =       0.0000
                                                R-squared      =       0.4782
                                                Root MSE      =       .0548
```

absdacc	Coef.	Robust Std. Err.	t	P> t	[95% Conf. Interval]	
agrowth	.2184907	.0766574	2.85	0.005	.0673984	.3695829
cashflow	-.2651672	.0969015	-2.74	0.007	-.4561607	-.0741737
firmage	-.0344552	.0088791	-3.88	0.000	-.0519559	-.0169544
bodsize	-.0012615	.0015646	-0.81	0.421	-.0043453	.0018223
bodmeet	-.0054906	.0024589	-2.23	0.027	-.0103371	-.0006442
bodindep	-.0427043	.0198963	-2.15	0.033	-.0819201	-.0034884
bodnd	-.0441644	.0260002	-1.70	0.091	-.0954109	.0070821
bodre_govc	-.018852	.0075756	-2.49	0.014	-.0337836	-.0039205
CEODUAL	-.012875	.0091957	-1.40	0.163	-.0309999	.0052498
acsize	-.0008164	.0048214	-0.17	0.866	-.0103194	.0086866
acindep	-.0120876	.0151879	-0.80	0.427	-.042023	.0178478
acfexp	.013265	.0185468	0.72	0.475	-.023291	.0498209
ownerconc	.0283024	.0398071	0.71	0.478	-.0501576	.1067624
instiowner	-.0795417	.0368336	-2.16	0.032	-.152141	-.0069423
foreowner	.0504924	.0201992	2.50	0.013	.0106796	.0903052
_cons	.285983	.047752	5.99	0.000	.1918635	.3801026

Appendix 4: Random effects regression for the moderating model

```
. xtreg absdacc agrowth cashflow firmage bodquali acquali polins bodquali_polins acquali
> _polins , re cluster (id)
```

Random-effects GLS regression
Group variable: id

Number of obs = 232
Number of groups = 29

R-sq:

within = 0.4337
between = 0.2242
overall = 0.3780

Obs per group:

min = 8
avg = 8.0
max = 8

corr(u_i, X) = 0 (assumed)

Wald chi2(8) = 21.46
Prob > chi2 = 0.0060

(Std. Err. adjusted for 29 clusters in id)

	Coef.	Robust Std. Err.	z	P> z	[95% Conf. Interval]	
absdacc						
agrowth	.2279352	.0781814	2.92	0.004	.0747025	.3811679
cashflow	-.2837442	.1432973	-1.98	0.048	-.5646017	-.0028867
firmage	-.0138449	.0093502	-1.48	0.139	-.0321709	.0044811
bodquali	.0454984	.0262418	1.73	0.083	-.0059346	.0969315
acquali	-.0259333	.0147407	-1.76	0.079	-.0548245	.0029579
polins	.0257679	.0116766	2.21	0.027	.0028821	.0486536
bodquali_polins	-.0696472	.0264899	-2.63	0.009	-.1215664	-.0177279
acquali_polins	.0070076	.0193506	0.36	0.717	-.0309189	.0449341
_cons	.097809	.0363852	2.69	0.007	.0264953	.1691227
sigma_u	.02805659					
sigma_e	.05188801					
rho	.226229	(fraction of variance due to u_i)				