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The impact of sustainability disclosure Quality on earnings quality

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Abstract

The current study examines the influence of the quality of sustainability disclosure on earnings quality using a sample of Libyan industrial companies for the period 2016-2020. In order to investigate this relationship, both quantity and quality of sustainability disclosure is measured using a multidimensional method, whereas, earnings quality is measured by adopting two approaches which are accrual-basis and real activities approach. The main results of this study show that the quality of sustainability disclosure is positively and significantly related to earnings quality suggesting that companies with high level of sustainability disclosure quality report higher level of earnings quality.

Article Information

Keywords:.Sustainability.Disclosure;.Earnings.Quality; Libyan Industrial Companies.

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تأثير الإفصاح عن الاستدامة على جودة الأرباح

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الملخص:

تتناول الدراسة الحالية تأثير جودة الإفصاح عن الاستدامة على جودة الأرباح باستخدام عينة من الشركات الصناعية الليبية للفترة 2016-2020، ومن أجل التحقق من هذه العلاقة تم قياس كمية ونوعية الإفصاح عن التنمية المستدامة باستخدام نموذج متعددة الأبعاد، في حين تم قياس جودة الأرباح من خلال اعتماد منهجين هما منهج أساس الاستحقاق ومنهج الأنشطة الحقيقية. هذا وأظهرت النتائج الرئيسية لهذه الدراسة أن جودة الإفصاح عن التنمية المستدامة ترتبط بشكل إيجابي وكبير بجودة الأرباح مما يشير إلى أن الشركات التي تتمتع بمستوى عالي من جودة الإفصاح عن التنمية المستدامة تبلغ عن مستوى أعلى من جودة الأرباح.

الكلمات المفتاحية: الكشف عن الاستدامة؛ جودة الأرباح؛ الشركات الصناعية الليبية

1.Introduction.

Earning.Quality.(EQ).is.an.essential.element.of.the.financial.reporting.system,.which.is.vital.for.the.operation.of.capital.markets.(Saleh.et.al.,.2020)..Several.studies.suggest.that.EQ.may.be.affected.by.the.directives.of.the.executive.departments.and.their.ability.to.address.problems.in.the.short.term..In.order.to.enhance.the.outlook.of.the.company's.financial.situation,.many.companies.have.resorted.to.manipulation.of.their.financial.statements..For.instance,.it.is.believed.that.managers.are.prepared.to.provide.misleading.results.to.show.interi

sustainable.development.policies.and.companies.that.do.not.promote.sustainable.development.(Koh.et.al.,.2023)..Companies.may.show.SD.through.charitable.contributions.and.the.use.of.resources.and.expertise.to.serve.the.community,.for.example.by.reducing.waste,.employing.minorities,.and.caring.for.the.environment.(Mazereeuw-van.et.al.,.2014)...

Based.on.the.moral.perspective,.it.is.assumed.that.companies,.that.are.socially.responsible.and.publish.disclosures.about.the.sustainability,.are.less.likely.to.manipulate.earnings.(Yip.et.al.,.2011)..Kim.et.al.(2012)..argue.that.firms.that.spend.their.resources.in.the.activities.of.corporate.social.responsibility.and.conduct.such.programs.from.a.moral.perspective.for.the.interest.of.stakeholders.are.expected.to.be.less.engaged.in.earnings.manipulation.and.prepare.more.reliable.and.trm.gains.or.to.avoid.potential.problems.(Omar.et.al.,.2014),.which.eventually.undermines.the.credibility.of.financial.statements.(Ghosh.&.Olsen,.2009)..Thus,.shareholders.and.stakeholders.seek.to.fight.against.earnings.manipulation.practices,.which.are.incompatible.with.the.fairness.of.financial.statements.presented.with.the.intention.of.serving.all.beneficiaries.(Amasiatu.et.al.,.2023)..Nevertheless,.Sun.et.al.(2010).argue.that.some.managers,.who.use.earnings.manipulation,.may.attempt.to.distract.stakeholders.by.exploiting.the.use.of.Sustainability.Disclosure.(SD).

The.concept.of.sustainability.has.become.a.global.tool.to.evaluate.the.performance.of.companies.and.their.boards'.directors.It.has.become.an.important.factor.in.the.economic.classification.of.companies.in.order.to.differentiate.between.companies.with.

d.that.when.agency.conflicts.exist,.managers.manipulate.earnings.opportunistically.to.their.favour..Thus,.SD.may.be.used.to.distract.the.attention.of.the.shareholders.and.other.stakeholders.from.discovering.earnings.manipulation.(Khan.&.Azim,.2015)..Consequently,.this.study.seeks.to.measure.the.level.of.EQ,.SD.and.to.investigate.the.relationship.between.them.among.Libyan.industrial.companies..

Previous.empirical.studies.have.produced.contradictory.results.on.the.relationship.between.SD.and.EQ..For.instance,.while.Laksmana.and.Yang.(2009).and.Kim.et.al..(2012).found.a.negative.relationship.between.SD.and.EQ,.Prior.et.al..(2008),.Salewski.et.al..(2012).and.Grougiou.et.al..(2014).report.a.positive.relative.relationship.between.them..These.puzzling.results.may.be.due.to.variations.in.their.measurement.ansparent.financial.reporting..Choi.et.al..(2013).point.out.that.since.earnings.manipulation.is.inconsistent.with.corporate.social.responsibility.principles,.companies.with.higher.commitment.to.corporate.social.responsibility.are.seemingly.acting.in.a.responsible.way.when.they.prepare.financial.statements..Owing.to.this,.many.empirical.studies.(Laksmana.&.Yang,.2009;.Kim.et.al.,.2012).have.shown.evidence.of.a.positive.relationship.between.SD.and.EQ..However,.the.opportunistic.perspective.suggests.that.managers.who.engage.in.earnings.manipulation.are.more.likely.to.use.SD.to.mask.their.opportunistic.behavior.(sun.et.al.,.2010)..Based.on.this.perspective,.SD.has.become.an.important.incentive.for.boards.of.directors.and.executive.managers.to.achieve.financial.gain.and.personal.rewards.at.the.same.time..Sun.et.al..(2010).argue

09;.Kim.et.al.,.2012).have.used.more.than.one.attributes..This.limitation.in.measurement.caused.by.absence.of.a.broader.framework.and.omission.of.certain.important.variables.may.make.the.findings.of.these.empirical.studies.inappropriate.in.establishing.the.relationship.between.SD.and.EQ.

Since.the.majority.of.research.is.conducted.in.western.countries.(e.g..Sun.et.al.,.2010;.Yip.et.al.,.2011),.not.much.is.known.about.the.relationship.between.SD.and.EQ.in.developing.countries..Only.few.empirical.studies.in.developing.countries.and.no.of.them.have.conducted.in.Libya..For.example,.Belgacem.&.Omri.(2015).in.Tunisia.and.Khan.&.Azim.(2015).in.Bangladesh..In.addition,.evidences.found.by.previous.literature.in.the.developed.countries,.may.not.be.helpful.in.understanding.the.relationship.in.d of.SD.and.EQ..Previous.studies.(e.g..Kansal.et.al.,.2014;.Oikonomou.et.al.,.2015).have.measured.SD.by.using.quantity.as.a.proxy.for.quality..However,.Botosan.(2004).argued.that.although.quantity.and.quality.of.information.are.inseparable.and.difficult.to.measure,.information.quantity.disclosed.does.not.necessarily.imply.quality..Furthermore,.since.it.is.difficult.to.measure.disclosure.quality.due.to.issues.of.objectivity,.measuring.SD.quantity.needs.to.be.paralleled.by.quality.measurement.in.order.to.understand.clearly.the.level.of.SD.

Another.important.gap.observed.from.previous.literature.is.on.the.measurement.of.relationship.between.SD.and.EQ..While.many.previous.studies.(e.g.Yip.et.al.,.2011;.Muttakin.et.al.,.2015).have.used.one.earnings.attribute.in.their.measurement,.few.researches.(Laksmana.and.Yang,.20

nagement.is.broadly.interpreted.as.a.strategy.used.by.managers.to.mislead.some.stakeholders.about.the.underlying.economic.performance.of.the.company.or.to.influence.contractual.outcomes.that.depend.on.reported.accounting.numbers.(Christensen,.2022)

In.this.context,.earnings.manipulation.is.considered.a.type.of.agency.cost.because.managers.look.after.their.own.interests.by.providing.financial.reports.that.do.not.reflect.an.accurate.economic.picture.of.the.company...On.the.other.hand,.the.sustainability.is.commonly.defined.as.the.type.and.scope.of.social.obligations,.which.should.be.considered.by.firms.in.the.course.of.their.routine.business.activities.(Shamir,.2005)..QSD,.which.is.the.focus.of.this.research,.includes.financial.and.non-financial.information.relating.to.the.company's.interaction.with.the.eveloping.countries.due.to.differences.in.environment.and.standards.between.these.countries.(Anglin.et.al.,.2013)..Prior.research.has.also.argued.that.several.factors.such.as.culture,.religion.and.other.societal.norms.may.influence.SD.and.EQ.(Gautam.&.Singh,.2010)..Therefore,.this.study.seeks.to.examine.the.relationship.between.the.Quality.of.sustainability.disclosure.(QSD).and.EQ.in.Libya.using.a.broader.measurement.framework.of.earnings.attribute.and.multidimensional.proxy.of.SD.

2. Literature.Review.

The.literature.review.indicates.that.earnings.management.which.used.to.measure.EQ.in.this.study).is.an.accounting.techniques.used.by.managers.to.manipulate.earnings.through.the.flexibility.in.the.accounting.options.or.real.transactions.decisions.(Zgarni.&.Fedhila,.2022)..Earnings.ma

Q.have.established.themselves.separately.as.well-researched.areas,.comparatively.less.attention.has.been.paid.to.establishing.a.link.between.QSD.and.EQ..Since.earnings.manipulation.is.perceived.in.previous.literature.as.an.ethical.problem,.prior.research.has.suggested.SD.as.determinant.of.EQ.(Laksmana.and.Yang,.2009;.Grougiou.et.al.,.2014)...EQ.is.also.affected.through.the.incentives.and.choices.of.the.manager,.who.is.involved.in.formulating.and.making.decisions.in.the.organization..Thus,.consideration.of.SD.could.be.important.determinants.(Choi.et.al.,.2013)..Much.research.has.been.conducted.on.the.link.between.sustainability.practice.and.EQ.(e.g..Prior.et.al,.2008;.Chih.et.al.,.2008;.Kim.et.al.,.2012;.Choi.et.al.,.2013;.Scholtens.and..Kang,.2013;.Gao.&.Zhang,.2015;.Shafer,.2015)..However,.only.a.few.empiric he.social.environment,.which.is.presented.in.their.annual.reports..Moreover,.QSD.is.a.primary.tool.to.communicate.with.stakeholders.about.the.social.activities.of.the.company..In.this.regard,.Pereira.et.al.(2023).suggest.that.companies.that.provide.high.quality.sustainability.disclosure.reports.tend.to.engage.in.less.earnings.management.activities.such.as.earnings.smoothing.and.loss.recognition,.and.then.they.act.in.a.more.transparent.manner..Therefore,.it.is.a.key.tool.in.building.strong.relationships.and.creating.mutual.understanding.as.well.as.to.manage.the.potential.conflicts.(Hess,.2008)..A.large.number.of.previous.empirical.studies.have.focused.on.the.factors.impacting.earnings.quality..Primarily,.there.is.more.attention.being.giving.to.the.managerial.activities.which.can.influence.the.manipulation.of.earnings..Although.SD.and.E

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mploying.discretionary.accruals.as.proxy.of.EQ..They.use.companies'.websites.and.annual.reports.to.measure.SD.through.a.sample.of.120.US.listed.companies.for.the.period.2005-2006..They.found.a.positive.association.in.the.food.industry.and.a.negative.relationship.in.the.oil.and.gas.industry.between.SD.and.earnings.quality..They.suggested.that.the.relationship.between.SD.and.EQ.is.context-specific.and.is.likely.to.be.affected.by.the.political.environment.of.a.company.more.than.by.moral.considerations..Wang.et.al..(2016).examined.the.impact.of.mandatory.SD.on.EQ.using.a.subset.of.companies.that,.starting.in.2008,.have.to.report.their.corporate.social.responsibility.activities..They.found.that.mandatory.SD.companies.are.less.likely.to.engage.in.earnings.management.after.2008...This.result.suggested.that.the.studies.have.examined.the.association.between.sustainability.disclosure.and.EQ.(Sun.et.al.,.2010;.Yip.et.al.,.2011;.Belgacem.&.Omri,.2015;.Muttakin.et.al.,.2015;.Liu&.Lee,2019;.Gaio.et.al.,.2022)..Furthermore,.the.empirical.evidence.that.was.provided.by.those.prior.studies.pointed.out.mixed.results.with.respect.to.the.relationship.between.SD.and.EQ..For.instance,.Sun.et.al..(2010),.analysed.the.relationship.between.corporate.environmental.disclosure.and.discretionary.accruals.as.proxy.of.EQ.using.a.sample.of.245.non-financial.companies..They.found.that.the.discretionary.accruals.have.an.insignificant.impact.on.environmental.disclosures.among.the.UK.companies.for.fiscal.year.between.the.first.of.April.2006.and.the.end.of.March.2007..Yip.et.al.(2011).investigated.the.relationship.between.SD.and.EQ,.e

n.accruals.earnings.management ...Belgacem.&.Omri.(2015).investigate.whether.voluntary.SD.is.related.to.EQ..Their.study.is.conducted.on.a.sample.of.Tunisian.listed.companies.from.2002.to.2011..Content.analysis.was.used.to.determine.the.level.of.SD,.whereas,.four.earning.attributes.(discretionary.accruals,.conservatism,.value-relevance.of.earnings.and.accruals.quality).were.used.to.measure.EQ..They.provide.evidence.that.SD.is.positively.related.to.the.degree.of.discretionary.accruals.and.negatively.related.to.the.degree.of.conservatism..

Based.on.above,.it.is.clear.that.prior.empirical.studies.are.few.and.have.provided.contradictory.results.on.the.relationship.between.SD.and.EQ.by.using.different.proxies.of.EQ..Moreover,.previous.studies.(e.g..Kansal.et.al.,.2014;.Oikonomou.et.al.,.2015).at.mandatory.SD.mitigates.information.asymmetry.through.improving.the.quality.of.financial.reporting..Similarly,.Martinez.et.al..(2015).examined.the.link.between.the.quality.of.financial.reporting.and.the.QSD..To.do.so,.they.examine.a.sample.of.747.international.non-financial.firms.from.2002.to.2010..Their.findings.show.that.conservative.companies,.with.a.low.level.of.earnings.management.practices,.report.high.QSD..By.contrast,.Muttakin.&.Azim.(2015).investigated.the.relationship.between.SD.and.accruals.quality.as.proxy.of.EQ,.using.a.sample.of.135.companies.listed.on.the.Dhaka.Stock.Exchange.from.2005.to.2009...A.checklist.of.20.items.was.constructed.in.order.to.measure.SD.in.annual.reports..Their.findings.indicate.that.managers.in.emerging.markets.provide.more.SD.when.they.engage.i

ng..Libyan.industrial.companies. .To.achieve.the.aim.of.this.paper ,.the.study.hypotheses.are.built.a s.follows..

SD.is.an.issue.of.growing.i nterest.for.academics,.businesse s,.and.stakeholders..In.practice,.t hose.companies.who.implement. and.report.corporate.social.respo nsibility.activities.are.bound.to.p rovide.reliable.and.transparent.fi nancial.information.(Kim.et.al.,. 2012).and.demonstrate.a.commit ment.to.ethical.and.accountable. behaviour.to.stakeholders..Neve rtheless,.there.is.an.argument.tha t.SD.can.be.used.as.an.entrench ment.mechanism.to.achieve.man agers'.self-interest.objectives.by.distorting. earnings.information.(McWillia ms.et.al.,.2006;.Choi.et.al.,.2013)..Since.EQ.is.influenced.by.the. choices.and.incentive.of.those.w ho.are.involved.in.formulating.a nd.making.decisions.in.the.orga .have.also.used.different.quantit ative.measurements.as.proxy.of. QSD..Most.notably,.it.is.clear.al so.from.the.above.previous.studi es.that.no.study.has.examined.th e.link.between.SD.and.real.activ ities.earnings.management..Fina lly,.the.majority.of.the.prior.stud ies.have.applied.in.western.coun tries,.just.few.studies.have.cond ucted.in.developing.countries.an d.no.of.them.have.conducted.in. Libyan.context..

Thus,.this.study.will.enhance.the .understanding.of.this.relationshi p.by.using.AEM.and.REM.to.m easure.earnings.management.pra ctices.as.proxy.of.EQ.and.multid imensional.proxy.of.sustainabilit y.disclosure.to.measure.both.the. quality.and.quantity.of.SD.in.the .Libyan.context..

Hypothesis.Development....

The.main.purpose.of.this.s tudy.is.to.understand.the.relation ship.between.EQ.and.QSD.amo

tunistic.behaviour..Those.managers.voluntarily.issue.SD.to.promote.an.impression.of.their.corporate.social.responsibility.values,.which.may.or.may.not.be.substantiated.(Mahoney.et.al,.2013)..Following.this.argument,.the.relationship.between.EQ.and.SD.indicates.that.SD.is.used.by.companies.with.poor.financial.reporting.quality.as.a.mechanism.to.gain.legitimacy.for.substitution.of.their.low.quality.financial.reporting.(Martinez-Ferrero,.et.al,.2015)..SD,.in.this.sense,.is.used.as.window-dressing.to.distract.the.attention.of.the.firms'.stakeholders.from.their.questionable.and.poor.financial.reporting.practice..Nevertheless,.according.to.the.moral.perspective,.it.is.assumed.that.companies,.which.are.socially.responsible.and.disclose.quality.information.of.their.corporate.social.responsibility,.are.less.likely.to.manisations,.consideration.of.SD.could.be.important.determinants.(Choi.et.al.,.2013;.Wang.et.al.,.2015)..In.order.to.explain.the.link.between.QSD.and.EQ,.previous.studies.have.suggested.two.perspectives,.namely,.the.opportunistic.perspective.and.the.moral.perspective.(Kim.et.al.,.2012)..The.opportunistic.perspective.suggests.that.managers.who.engage.in.earnings.management.are.more.likely.to.use.SD.to.mask.their.opportunistic.behaviour.(Khan.and.Azim,.2015)..According.to.this.perspective,.SD.has.become.an.important.incentive.for.managers.to.achieve.financial.gain.and.personal.rewards.at.the.same.time..Sun.et.al..(2010).argued.that.when.agency.conflicts.exist,.managers.might.manipulate.earnings.opportunistically.in.their.favour..Managers,.who.use.earnings.management,.may.attempt.to.distract.stakeholders.about.their.oppor

wing.to.this,.many.empirical.studies.have.shown.evidence.of.a.positive..relationship.between.corporate.social.responsibility.practise.and.EQ.(Laksmana.&.Yang,.2009;.Kim.et.al.,.2012)..

The.above.two.theoretical.perspectives.pose.an.important.research.question..A.closer.look.at.the.arguments.behind.these.two.perspectives,.however,.reveals.that.they.can.be.reconciled.if.one.can.evaluate.the.informational.content.(i.e..quality).of.corporate.social.responsibility.

The.prior.research.in.this.area.has.substantiated.that.SD.is.associated.with.EQ..Empirical.findings,.however,.remain.inconclusive.with.regard.to.whether.commitment.to.SD.has.a.positive.or.negative.impact.on.EQ.and.vice.versa.(e.g..Sun.et.al.,.2010;.Yip.et.al.,.2011;.Muttakin.&.Azim,.2015;.Wang.et.al.,.2015;.Belgacem.&.Omri,.2015)..One.possible.nipulate.earnings.(Yip.et.al.,.2011)..Kim.et.al..(2012),.argue.that.firms.that.spend.their.resources.in.the.activities.of.sustainability.and.conduct.programs.in.moral.perspective.for.the.interest.of.stakeholders.are.expected.to.engage.in.less.earnings.management.and.prepare.more.reliable.and.transparent.financial.reporting..Choi.et.al..(2013).point.out.that.since.EQ.is.consistent.with.sustainability.principles,.companies.with.a.higher.commitment.to.corporate.social.responsibility.are.seemingly.acting.in.a.responsible.way.when.they.prepare.the.financial.statements..Given.that.managers.are.more.likely.to.engage.in.earnings.manipulation.when.there.is.high.information.asymmetry,.sustainability.reporting.is.assumed.by.signalling.theory.to.be.a.means.of.mitigating.the.information.symmetry.between.management.personnel.and.stakeholders..O

lders.will.be.reduced..Since.the.reduction.in.information.asymmetry.tends.to.constrain.earnings.management.(Wang.et.al,.2015),.the.current.study.expects.a.positive.relationship.between.QSD.and.EQ.and.thus.supports.the.hypothesis:

H1:.there.is.a.negative.relationship.between.accruals.earnings.management.and.QSD.

H2:.there.is.a.negative.relationship.between.real.earnings.management.and.QSD.

Research.Method

Sample.of.the.Study

Our.initial.sample.for.this.study.is.Libyan.industrial.companies.from.2016.to.2020...Firms.with.missing.data.have.been.removed.from.the.initial.sample..The.final.sample.consists.of.55.firm-year.observations.during.the.study.period..

reason.for.this.could.be.due.to.the.biased.measurement.of.SD..Given.the.conflicting.results.of.prior.studies.on.this.relationship.and.its.usefulness.for.market.participants.and.academics,.there.is.a.need.to.explain.the.relationship.(Kim.et.al.,.2012)..It.is.not.possible.to.conclude.the.possible.effects.of.SD.on.EQ.without.knowing.whether.sustainability.disclosure.conveys.a.true.(as.in.the.stakeholder.and.ethical.perspective).or.a.false.information.(as.in.the.managerial.opportunism.or.legitimacy.perspective)..Chih.et.al.,.(2008).argue.that.it.will.be.unlikely.that.managers.will.engage.in.earnings.management.in.companies.that.provide.high.quality.disclosure.of.their.social.activities.that.targets.all.stakeholders.because,.when.the.transparency.of.information.is.increased,.the.expectation.of.the.information.asymmetry.among.management.and.stakeho

.Where:

TAit.=.total.accruals

$A._{it.-1}$.=..the.book.value.of.total.assets.of.company.i.at.the.end.of.year.t-1

ΔREVit..=..revenues.of.company.i.in.year.t.deducted.revenues.in.year.t-1.

ΔREC.=.change.in.accounts.receivables.

PPEit.=.gross.property,.plant.and.equipment.of.company.i.at.the.end.of.year.t.

α,.β1,.β2.=.estimated.parameters

εit.=.the.residual..

We.then.employed.the.coefficient.estimates.from.equation.(1).to.calculate.normal.accruals (NAit).for.every.firm-year.observations.in.the.sample:

$NA._{it}.=.\alpha.(1./.TA._{it.-1}).+.\beta1.(\Delta.REV._{it}.-.\Delta REC_{it}).//.A._{it-1}).+.\beta2.(PPE._{it}./.A._{it.-1})..(2)$

Measuring.EQ.(dependent.variable)..

To.measure.EQ.this.study.uses.AEM.and.REM.as.proxy.for.the.dependent.variable.of.this.study.as.following:

Measuring.AEM..

Following.prior.studies,.the.existence.of.AEM.was.tested.by.examining.discretionary.accruals.through.differentiating.them.from.non-discretionary.accruals..We.employed.Modified.Jones.model.(Dechow.et.al.,.1995).to.estimate.current.Discretionary.Accruals..The.following.cross-sectional.regression.equation.is.used.to.estimate.current.accruals,.The.cross-sectional.Modified.Jones.Model.(1995):

$TA._{it}./.A._{it-1}.=.\alpha.(1./.A._{it.-1}).+.\beta1.(\Delta.REV._{it}.-.\Delta REC_{it}).//.A._{it-1}).+.\beta2.(PPE._{it}./.A._{it.-1}).+.\varepsilon._{it}(1)$

ectional.regression.for.every.industry.and.year:

$CFO_{it}/A_{it-1} = \alpha + \alpha(1/A_{it-1}) + \beta 1(Sales_{it})/A_{it-1} + \beta 2(\Delta Sales_{it}/A_{it-1}) + \varepsilon_{it}$ (3)

..Where.

CFO_{it}=.cash.flow.from.operation.for.the.company.i.in.the.current.year,

A_{it-1}=.the.total.assets.in.the.previous.year,

$Sales_{it}$...=.the.company's.sales.in.a.current.year,

Δsales..=.changes.in.the.company's.sales.in.the.current.year..

ε_{it}.=.the.residual..

We.then.employed.the.coefficient.estimates.from.equation.(3).to.calculate.normal.CFO..For.every.firm-year,.abnormal.cash.flow.from.operations.(ACFO).is.the.actual.CFO.minus.the."normal".CFO.calculated.using.estimated.coefficients.from.the.corresponding.industry.and.year.

AEM.measured.by.the.difference.between.TA.and.the.fitted.NA.

The.lower.level.of.AEM.indicates.a.less.level.of.earnings.manipulations.in.accruals-based.(higher.level.of.EQ).

Measuring.REM

Following.Roychowdhury.(2006).we.consider.three.metrics.to.develop.our.proxies.for.REM:.the.abnormal.levels.of.cash.flow.from.operations.(ACFO),.abnormal.production.costs.(APROD).and.discretionary.expenses.(ADIS)..Previous.literature.(Cohen.and.Zarowin,.2010).offer.evidence.of.the.validity.of.these.three.proxies.suggested.by.Roychowdhury.(2006).

Following.Roychowdhury.(2006),.we.express.normal.cash.flow.from.operations.as.a.function.of.sales.and.change.in.sales.in.the.current.period..To.estimate.the.model,.we.run.the.following.cross

.“normal”.PROD.calculated.using.estimated.coefficients.from.equation.(6).

The.third.proxy.is.abnormal.discretionary.expenses.(ADISX),.which.is.estimated.by.using.the.following.equation:

$DISX_{it}/A_{t-1}.=.\alpha.+.\alpha.(1/A_{t-1}).+.\beta1.(Sales_{it}/A_{t-1}).+.\varepsilon_{it}.(7)$

Where.$DISX_{i,t}$..=.expenses.such.as.administration,.R&D.and.sales.expenses..All.other.variables.are.defined.above..

We.then.employed.the.coefficient.estimates.from.equation.(7).to.calculate.normal.DISX..For.every.firm.year,.abnormal.production.cost.from.operations.(ADISX).is.the.actual.DISX.minus.the.“normal”.DISX.calculated.using.estimated.coefficients.from.equation.(7)

Following.Roychowdhury.(2006).we.add.-.ACFO.to.ADISX.and.APROD.using.the.following.equation:

ustry-year.model.and.the.firm-year's.sales.and.lagged.assets.

We.defined.Production.costs.as.the.sum.of.Cost.of.Goods.Sold..and.the.change.of.inventory.for.firm.i.in.year.t..

$COGS_{it}/A_{t-1}.=.\alpha.+.\alpha.(1/A_{t-1}).+.\beta1.(Sales_{it}/A_{t-1}).+.\varepsilon_{it}..(4)$

$\Delta INV_{it}/A_{t-1}.=.\alpha.+.\alpha.(1/A_{t-1}).+.\beta1.(\Delta Sales_{it}../A_{t-1}).+.\beta2.(\Delta Sales_{it-1}./.A_{t-1}).+.\varepsilon_{it}.(5)$

Using.above.equations.(4).and.(5),.we.estimate.the.abnormal.level.of.production.costs.(APROD).as:.

$PROD_{it}/A_{it-1}.=.\alpha.+.\alpha.(1/A_{it-1}).+.\beta1.(Sales_{it}/A_{it-1}).+.\beta2.(\Delta Sales_{it}./A_{it-1}).+.\beta3.(\Delta Sales_{it-1}/A_{it-1}).+.\varepsilon_{i,t}.(6)$

We.then.employed.the.coefficient.estimates.from.equation.(6).to.calculate.normal.PROD..For.every.firm.year,.abnormal.production.cost.from.operations.(APROD).is.the.actual.PROD.minus.the

e.framework.of.BFM.to.measure.forward.looking.information.disclosure.and.compared.with.magnitude.measurement.of.forward.looking.information..They.confirm.that.by.using.multidimensional.measurement.of.disclosure,.the.new.framework.improves.the.disclosure.measurement.and.offers.more.thorough.understanding.of.disclosure.quality..Therefore,.this.study.estimated.the.quality.of.SD.by.using.the.framework.of.BMF.which.is.improved.by.Beretta.&.Bozzolan,.in.2008..The.current.study.measure.both.quantity.and.quality.dimensions.of.SD.by.the.same.framework.that.has.been.used.by.Beretta.&.Bozzolan.in.2008..This.framework.consist.of.two.phases.to.measure.the.quality.of.disclosure,.the.second.phases.is.divided.to.two.steps..The.first.phase.and.the.first.step.in.the.second.phase.which.have.been.applied.by.Beretta.&.Bozzolan.i

REM.=.ACFO.+.ADISX.+.APROD.(8)

.The.lower.level.of.REM.indicates.a.less.level.of.earnings.manipulations.in.real.activities.(higher.level.of.EQ).

The.Quality.of.CSRD

Prior.literature.has.indicated.that.there.is.controversy.on.the.measurement.of.SD.(HASSAN,.2010)..Botosan.(2004).argued.that.although.quantity.and.quality.are.inseparable.and.difficult.to.measure,.information.quantity.disclosed.does.not.necessarily.imply.quality..Beattie,.McInnes.and.Fearnley,.(2004).(BMF).create.new.framework.to.measure.both.magnitude.and.width.of.voluntary.disclosure..BMF.suggested.that.this.framework.can.be.improved.by.adding.the.depth.in.addition.to.the.width.in.order.to.measure.the.richness.of.voluntary.disclosure..Beretta.&.Bozzolan,.(2008).used.this.improvement.in.th

words,.text,.sentences,.paragraphs.or.pages.of.SD.(Each.technique.has.its.own.pros.and.drawbacks)..Coding.by.sentences,.paragraphs.and.words.have.been.criticised.by.prior.studies..Due.to.different.information.may.be.Included.into.the.same.paragraphs.or.sentence.related.to.the.SD.also.individual.words.are.meaningless..As.a.result,.a.text.unit.was.employed.to.measure.SD.in.this.study,.which.was.identified.by.Beattie.and.Thomson.(2007).as.“part.of.sentence.captures.a.piece.of.information’’..

BMF.suggested.that.“the.standardized.residuals.of.an.ordinary.least.squares.(OLS).regression.can.be.used.as.a.good.proxy.of.disclosure.quantity.using.industry.and.size.as.independent.variables”..In.this.context,.several.studies.have.supported.the.impact.of.industry.and.size.on.disclosure.quantity.(Urquiza.et.al.,.2009;.Beretta n.2008.can.be.used.to.measure.all.kinds.of.disclosure.(Beretta.&.Bozzolan,.2008)..However.the.second.step.of.the.second.phase.was.designed.to.measure.the.forward.looking.information..Thus,.this.study.followed.the.same.of.first.phase.and.first.step.of.the.second.phase.of.Beretta.&.Bozzolan.in.2008.and.adjusted.the.second.step.of.the.second.phase.to.be.suitable.for.measuring.the.usefulness.of.SD.as.following..

The.first.phase,.The.current.study,.use.content.analysis.to.measure.the.frequency.of.items.that.is.disclosed.in.the.annual.reports,.we.use.a.checklist.consists.of.25.items.classified.into.6.key.categories,.which.are.community.development,.human.resources,.products.and.services,.customers,.environment.and.others.(see.Appendix.1)..The.techniques.used,.in.previous.studies,.in.content.analysis.unit.of.disclosure.are.

RQ.=.D.$_{it}$.-.d.$_{it}$

Where.RQ.is.the.relative.quantity.index,.D.$_{it}$..is.the.disclosure.for.company.i.in.year.t.and.d$_{it}$.is.the.estimated.disclosure.by.the.residual.for.the.same.company.in.the.same.year..The.RQ.index.is.standardized.(STRQ).using.the.minimum.and.the.maximum.of.the.relative.quantity.index.of.the.sample.

The.second.phase,.Beretta.&.Bozzolan,.2008.determine.the.Richness.(RIC).as.a.function.of.the.Width.(WID).and.Depth.(DEP).of.the.disclosures..This.study.applied.the.same.method.of..Beretta.&.Bozzolan,.2008.to.measure.WID.of.SD..using.the.concentration.of.SD.and.the.coverage.of.disclosure.as.proxy.for.WID,.whereas,.the.current.study.utilizes.the..characteristics.of.Information.suggested.by.Global.Reporting.Initiative.(GRI).guidelines.IASB.(2010).as.proxy.for.DEP.e.&.Bozzolan,.2008)..Thus,.the.dimension.of.quantity.measured.by.the.method.of.Beretta.&.Bozzolan.in.2008.as.following:

D.$_{it}$...=.β0.+.β1.SIZE...+.β2.Type.$_{it}$...+.Ɛ.$_{it}$.....(1).

Where,..$_{it}$

D.$_{it}$.=..the.disclosure.for.company.i.in.year.t.measured.by.the.content.analysis.as.frequency.of.items.that.is.disclosed.in.the.annual.reports,

SIZE.$_{it}$..=.size.of.companies,.the.natural.logarithm.of.firms'.total.assets.is.used.to.measure.the.size.of.company

Type.=.industry.type.

Ɛ.$_{it}$...=..the.residual.for.the.same.company.in.the.same.year.

We.then.employed.the.coefficient.estimates.from.equation.(1).to…calculate.estimated.disclosure.(d.$_{it}$).for.every.firm-year.observations.in.the.sample:

d.$_{it}$...=.β0.+.β1.SIZE...+.β2.Type.$_{it}$.(2)..

1.to.be.used.as.second.proxy.for.quality.of.disclosure.

Coverage.(COV),.indicates.that.SD.quality.is.better.when.the.distribution.of.information.reported.between.the.items.taken.into.consideration.is.high.instead.of.only.a.few.of.disclosure.units.about.some.of.them....

COV.=..$\frac{1}{st}.\sum_{j=1}^{st}$ INF

Where,.INF.=.1.if.company.i.discloses.information.about.the.item.j.in.the.annual.report,.otherwise.=.0,.and.st.=.number.of.subcategory..The.value.of.WID.is.obtained.as.the.mean.of..CON.and.COV.dimensions:

WID.=...$\frac{1}{2}$. (CON.+.COV)

2.In.order.to.be.able.to.evaluate.the.usefulness.of.SD,.the.GRI.guidelines.suggested.eleven.principles.which.should.be.taken.into.an.account:.transparency,.sustainability.context,.completeness,.comparability,.relevance,.accuxplained.in.the.second.step.in.this.phase.

1.To.measure.the.WID,.this.study.determine.the.concentration.(CON).of.SD.across.items.as.a.function.of.CON.at.Subcategory.Level.(Sub.CON).and.determine.the.spread.of.disclosure.using.the.Coverage.(COV).

.Sub.CON.is.a.concentration.measure.at.subcategory.level,.which.is.defined.by:.

CON.=..$\sum_{j=1..}^{n.}$..Pj^2

Where,.Pi.=.proportion.of.disclosure.of.item.i.measured.by.the.content.analysis.as.frequency.of.item..The.maximum.value.of.CON.is.1.when.all.SD.text.units.fall.in.one.category.and.the.value.is.smaller.when.SD.text.units.are.spread.between.categories..The.higher.value.of.CON.index.is.the.poorest.quality.of.disclosure..Thus,.the.results.are.multiplied.by.-

tion.to.be.useful.for.making.decisions.(IASB,.2010,.A33)..The.understandability.and.comparability,.which.enhance.qualitative.attributes,.are.complementary.to.the.fundamental.attributes.and.distinguish.between.more.useful.information.than.the.less.useful.information..Due.to.above,.this.study.flowing.previous.studies.(Alotaibi.&.Hussainey,.2016.).defines.the.Depth.as:

$$\text{Usefulness.=....}\frac{1}{4}.\,(.\,\text{Relevant} + \text{Faithfully} + \text{Understandability} + \text{Comparability})$$

Where,

Relevance.=.0.if.no.SD,.1.if.SD.descriptive.information.is.disclosed,.2.if.descriptive.and.financial.information.of.SD.is.included,.3.if.descriptive.disclosure.including.financial.and.forward-looking.information.is.reported..racy,.auditability,.neutrality,.clarity,.inclusiveness,.and.timeliness..(Clarkson.et.al.,.2008)..Similarly,.both.the.International.Accounting.Standards.Board.(IASB).in.2010.and.the.Financial.Accounting.Standards.Board.FASB.in.2008a;.2008b;.2010.explicitly.indicate.the.desirability.of.creating.a.comprehensive.measurement.tool.that.take.in.account.all.characteristics.of.information..IASB.2010.provides.a.conceptual.framework.for.selecting.the.characteristics.of.information.that.should.be.comprised.in.such.an.index.of.quality..That.is,.the.conceptual.framework.indicate.that.the.level.of.disclosure.is.beneficial.by.relying.on.its.qualitative.characteristics..In.order.to.contribute.the.decision.usefulness,.fundamental.and.enhancing.qualitative.attribute.should.be.taken.in.an.account..The.disclosure.must.be.relevant.and.faithfully.represent.informa

Comparability..=.0.if.no.ratios.is.found.in.annual.report,.1.if.few.ratios.are.found.(less.than.5).,.2.if.some.ratios.are.found..(from.5.to.10),.3.if..enough.ratios.are.found.(more.than.10.).(Hussainey,.&.Alotaibi,.2016).

The.average.of.WID.and.DEP.is.used.to.measure.RIC.as.following:

RIC.=...$\frac{1}{2}$. (WID + usfulness)

2- Finally,.the.overall.index.of.quality.is.the.average.of.RIC.and.RQ.as.following:

The.Quality.Index.of.disclosure.(QSD).=..$\frac{1}{2}$. (RIC + RQ)

To.capture.the.relationship.between.the.quality.of.SD.and.EQ,.we.employ.the.following.models:

EQ.(REM,.AEM,CFO,.PROD.and.DISX).=.α.+.β1.QSD.+.β2.REM/AEM.+.β3.Size.+.β4.Growth.+.β5.Leverage.+.β6.Industry.+..β7.ROA.+.β8.BEFS...

(e.g..Jonas.and.Blanchet,.2000;.McDaniel.et.al.,.2002).

Faithfully.representation.=.0.if.no.disclosure.on.sustainability.practice,.1.if.the.positive.events.only.mentioned.(less.than.10.sentences),.2.if.emphasize.on.more.positive.events.(more.than.10.sentences),.3.if..more.positive.and.negative.events.are.disclosed.(Razaee,.2003;.Chakroun.et.al..2013,.Hussainey,.&.Alotaibi,.2016)..

Understandability.=.0.if.no.disclosure.on..sustainability.practice,1..if..poor.presentation.(nonfinancial.information.only,.without.any.table,.pictures.or.graphs),.2.if.financial.and.nonfinancial.information.without.any.table.are.provided.,.pictures.or.graphs,.3.if.a.good.presentation.(text,.financial.information.and.graphs,.tables.or.pictures).(Jonas.and.Blanchet,.2000).

o.manage.earning..The.trade-off.between.REM.and.accruals-based.is.a.function.of.their.relative.costs.(Zang,.2012)..Therefore,.following.Kim.(2012).we.include.REM.as.a.control.variable.in.the.first.equation.and.AEM.as.control.variable.in.second,.third,.fourth.and.fifth.equations.

2.Independent.variables:

QSD.=.The.Quality.Index.of.disclosure

SIZEit.=.size.of.companies,.the.natural.logarithm.of.firms'.assets.Total.assets.is.used.to.measure.the.size.of.company.

GROWTH.=.Growth.ratio.measured.through.the.change.of.sale.

LEV...=.financial.leverage.measured.by.total.liabilities.to.total.assets.ratio..

ROA...=.the.profitability.of.company,.the.income.from.operation.to.total.asset.

BEF.=.board.effectiveness..We.award.1.if.the.company.comply.

Where,

1.Dependent.variable:

AEM...=.absolute.value.or.discretionary.accruals.for.company.i.and.period.t,.discretionary.accruals.are.used.as.dependent.variable.in.the.first.equation..

REM...=.combined.proxy,.which.is.calculated.by.aggregating.of.CFO,.PROD.and.DISX.of.company.i.and.period.t,.REM.is.used.as.dependent.variable.in.the.second.equation.

CFO.=.abnormal.cash.flows.from.operations,.which.is.used.as.dependent.variable.in.the.third.equation.

PROD.=.abnormal.production.costs,.which.is.used.as.dependent.variable.in.the.fourth.equation.

DISX.=.abnormal.discretionary.expenses;.which.is.used.as.dependent.variable.in.the.fifth.equation..

Managers.are.likely.to.use.a.mix.of.AEM.and.REM.as.tools.t

ows.that.the.mean.for.the.three.individual.proxies.of.real.earnings.management.(ACFO,.APROD.and.ADISX).are.0.0031,.0.0022.and..0015.respectively..These.results.are.similar.with.the.findings.of.Ferentinou.(2014),.who.found.that.the.mean.values.of.ACFO,.APROD.and.ADISX.are.0.005,.0.002.and.0.003.respectively..With.respect.to.the.independent.variables,.25%.of.the.sample.have.less.than.0.160.with.the.mean.value.of.QSD.at.0.300..This.figure.is.relatively.higher.than.the.results.reported.by.Hussainey.and.Alotaibi.(2016),.who.found.that.the.average.value.of.quality.of.SD.is.0.334.in.Saudian.companies.

with.Libyan.code.for.corporate.governance,.otherwise.zero.

3.DESCRIPTIVE.STATISTICS

Table.1.describes.the.total.observations,.mean,.standard.deviation,.25.percentiles.(Q1).and.75.percentiles.(Q3).values.and.median.for.all.variables.used.in.this.study..The.descriptive.statistics.indicate.that.the.mean.value.of.current.AEM.is.0.041..This.result.is.consistent.with.the.average.reported.by.Rao.&.Dandale.(2008).,.who.found.that.the.mean.value.of.AEM..is.around.0.05..Regarding.real.earning.management,.table.2.shows.that.the.mean.value.of.real.activity.earning.management.is.0.002..Table.2.also.sh

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Table.1:.Descriptive.statistics

variable	Mean	Sd	p25	p50	p75
AEM	.041	.106	.007	.021	.049
REM	-.002	.128	-.037	.002	.048
CFO	-.0031	.107	-.037	-.002	.029
PROD	-.0022	.102	-.032	-.001	.025
DISX	-.0015	.113	-.043	-.003	.034
QSD	.300	.136	.160	.508	.62
ROA	.112	.124	.041	.090	.15
SIZE	7.48	.663	7.00	7.39	7.8
GROWTH	.255	.325	.088	.189	.32
LEV	.546	.224	.392	.583	.71
BEF	.367	.482	0.....	0.....	1
ACEF.	.621	.485	0	1	1.

*Significance.at.the.0.10.level,

**Significance.at.the.0.05.level,

***Significance.at.the.0.01.level

is.between.AEM.and.BEF,.which.is.-0.22..Thus,.the.correlation.coefficients.of.all.other.study.variables.are.less.than.conventional.thresholds.and.there.is.no.multi-collinearity.problem.between.the.study.independent.variables.

The.current.study.uses.the.correlation.matrix.to.examine.whether.there.is.high.correlation.between.the.independent.variables..Table.2.and.3.report.the.correlation.coefficients.between.independent.variables..It.shows.that.the.highest.correlation.coefficient.

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Table.2:.correlation.matrix.

	CSRD	AEM	Type	ROA	Size	Growth	Lev	BEF	ACEF
CSRD	1.000								
AEM	-.093***	1.000							
Type	.0824***	.0184	1.000						
ROA	.0184	-.0497*	.045**	1.000					
SIZE	.103***	.-.0481*	-.074***	-.113***	1.000				
GROWTH	.058**	-.052**	-.034	.0137	.0091	1.000			
Lev	.006	-.0114	.007	.072***	0.059***	-.0127	1.000		
BEF	.023	-.221***	-.044**	.044**	-.079**	-.034**	-.0099	1.000	
ACEF	-.019	-.066***	.002	-.0105	.0183	-.0109	-0.016	.089***	1.000

Table.3:.correlation.matrix.

	CSRD	REM	Type	ROA	Size	Growth	Lev	BEF	ACEF
CSRD	1.000								
REM	-.015**	1.000							
Type	.0816***	.009	1.000						
ROA	.0172	-.091***	.045*	1.000					
SIZE	.112***	..0084	-.074***	-.113***	1.000				
GROWTH	.056**	-.0152	-.035	.0127	.0091	1.000			

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Lev	.006	-.006	.006	.071***	0.059***	-.0117	1.000		
BEF	.032	.022	-.042*	.045**	-.078***	-.032***	-.0089	1.000	
ACEF	-.027	.053**	.001	-.0106	.0183	-.0108	-0.006	.098***	1.000

5).suggest.that.if.the.p-value.is.less.than.0.05,.the.fixed.effect.method.is.most.appropriate.for.examining.the.relationship..In.order.to.determine.the.most.appropriate.effect.to.use.in.this.study,.the.Hausman.test.was.conducted.for.the.regression.models.used.in.the.study..Since.the.p-value.for.the.regression.models.used.in.this.study.is.at.the.0.001.level.(see.Appendix.3),.the.fixed.effect.method.is.more.appropriate.in.examining.the.relationship.between.the.QSD.and.QE.in.this.study.(Kim.et.al.,.2012)..Furthermore,.Gujarati.(2003).suggests.that.normality.problems.should.be.investigated.in.order.to.ensure.an.appropriate.regression.mod

4.Multivariate.Analysis

In.order.to.choose.the.most.appropriate.model.(panel.or.pooled.data.model),.a.Chow.test.is.conducted.for.the.regression.models.to.examine.the.relationship.between.the.QSD.and.QE..Twumasi.et.al..(2015).indicate.that.if.the.F.value.of.the.Chow.test.is.less.than.0.05,.the.preferred.model.is.the.panel.data.model..Since.the.results.of.the.Chow.test.for.this.study.showed.that.the.F.value.of.the.Chow.test.was.less.than.0.01.for.the..models.used.in.the.study,.the.panel.data.model.is.more.appropriate.(see.Appendix.2).The.panel.data.model.can.be.classified.by.random.effect.or.fixed.effect...Clark.and.Linzer..(201

.managers.are.less.likely.to.manipulate.earnings.with.less.information.asymmetry..Signalling.theory.assume.that.QSD.is.a.useful.tool.to.reduce.the.information.symmetry.between.management.personnel.and.stakeholders,.which.would..decrease.earnings.manipulation.as.a.result.

Table.4.in.column.2,.4.and.5.also.show.that.the.estimated.coefficients.for.the.regressions.of.REM,.ACFO.and.APROD.are.157;..-.099;.and.-.101.respectively,.which.are.negatively.and.significantly.related.to.the.quality.of.SD.at.level..05.for.REM.and..10.for.both.ACFO.and.APROD..Although.there.is.no.significant.impact.of.QSD.on.ADISX,.the.relationship.between.them.is.still.negative.(coef.=.-.069,.p.<.0.114),.**thus,.the.second.sub.hypothesis.of.the.current.study.is.accepted..**These.figures.are.consistent.with.previous.rel..The.normality.of.the.study.data.was.verified.using.a.histogram.test.(see.Appendix.3),.the.results.of.regression.model.is.shown.in.Table.4..

Table.4.column.1.indicates.that.the.QSD..is.negatively.and.significantly.associated.to.AEM.(coef.=.388,.p.<.0.01),.**thus,.the.first.sub-hypothesis.of.the.current.study.is.accepted**..These.findings.are.consistent.with.previous.findings.reported.by.Wang.et.al..(2015).suggesting.that.firms.with..higher.QSD.report.less.discretionary.accruals.compared.to.those.companies.with.a.lower.QSD..These.results.are.consistent.with.the.ethical.perspective.which.suggests.that.companies.that.are.socially.responsible.more.likely.to.prepare.reliable.and.transparent.financial.reporting.(Choi.et.al.,.2013)..These.findings.are.also.in.line.with.signaling.theory,.given.that

p.<.0.01.respectively)..Company .size.also.is.significantly.and.negatively.related.to.AEM,.DISX,.CFO,.and.PROD.at.level..0.05,.indicating.that.less.profitable.and .smaller.company.may.have.a.higher.incentive.to.manage.earnings.compared.to.high.profitable.and.large.companies..This.is.also.consistent.with.previous.studies.(Kim.et.al.,.2012)..In.the.context .of.corporate.governance.mechanisms.as.control.variables,.table.4.shows.that.board.effectiveness .is.negatively.and.significantly.related.with.AEM.(Coef.=.011,.p .<.0.05).which.suggest.that.companies.with.less.effective.board.have.more.flexibility.to.engage.in.AEM..

esults.found.by.Kim.et.al..(2012),.indicating.that.companies.with .less.level.of.QSD..are.more.likely.to.using.real.transactions.to.manipulate.earnings..Additionally, .table.4.column.1.and.2.indicates.that.the.combined.proxy.for.real.activities.earnings.management.is.negatively.and.significantly .associated.with.absolute.value.of.discretionary.accruals..This.indicates.that,.companies.that.use.less.accrual.based.earnings.management.are.more.likely.to.engage. in.real.activities.earnings.management..and.vice.versa..This.findings.is.in..line.with.previous.studies.(Ho,.L..et.al.,.2015)..With.respect.to.the.company.characteristics.as.control.variables,.table.4. shows.that.there.is.a.negative.and.significant.effect.of.profitability.on.both.AEM.and.REM.(Coef. =.0.078,.p.<.0.01;.Coef.=.0.090,.

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Table.7:.Results.of.panel.regression:.the.relationship.between.QSD.and.EM

	.....AEM.(1)		REM.(2)		DISX.(3)		CFO.(4)		PROD..(5)	
	Coef	**t**	Coef	..T	Coef	**T**	Coef	t	...Coef	**.....t**
QSD	-.388***	-12.47	...-.157**	-3.02	-.101	-1.49	-.099*	-1.93	-.101*	-1.88
REM/AEM	-.212**	-12.76	.....-.391***	.-12.76	-.406***	-13.23	-.380***	-13.19	-.394***	-14.68
ROA	-.087***	-4.47	.....-.096***	-4.43	.013	0.18	.011	0.14	-.013	-0.65
size	-.015**	-2.36	-.011	-0.26	-.031**	-2.69	-.028**	-2.03	-.018**	-2.79
Growth	.005	0.86	.....-.011***	-0.37	-.013	-0.53	.013	0.62	.001	0.00
type	.014	0.77	.012	0.89	-.017	-0.23	-.019	-0.46**	-.006	-0.33
Leverage	-.021*	-1.81	014	0.31	.014	0.37	.012	0.21	.003	0.19
BEF	....-.011**	-1.36	..023*	1.73	-.013	-0.57	-.014	-0.53*	-.007	-1.03

.*Significance.at.the.0.10.level,

**Significance.at.the.0.05.level,

***Significance.at.the.0.01.level.

,.several.studies.have.investigated.whether.corporate.social.responsibility.companies.behave.differently.in.delivering.more.transparent.financial.statement.to.shareholders.and.stakeholders..However,.contradictory.results.have.been.produced.by.previous.studies.on.the.association.between.SD.and.EQ..These.puzzling.findings.may.be.due.to.difference.in.their.measurement.of.SD.and.EQ..This.study.employ.multidimensional.proxy.to.measure.both.qualit

Conclusion

This.study.examines.the.effect.of.QSD.on.EQ.using.a.sample.of.Libyan.industrial.companies..Although.earnings.quality.is.considered.as.an.important.communication.tool.among.management.and.stakeholders,.many.companies.attempt.to.manipulate.their.financial.statements,.which.would.undermine.the.credibility.of.financial.information..Since.previous.literature.perceives.earnings.management.as.a.moral.problem

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X)..Whereas,.this.study.employ. multidimensional.proxy.to.meas ure.the.quality.of.SD..The.result s.of.this.study.indicate.that.the.q uality.of.SD.is.Positively.and.sig nificantly.associated.to.EQ..Con sistent.with.the.signalling.theory .,.agency.theory.and.ethical.pers pective,.these.results.support.the .assumption.that.companies.whi ch.show.QSD.are.more.likely.to. provide.high.EQ,.and.less.likely. to.use.aggressive.EM.through.A EM.and/or.REM..This.study.pro vides.insights.for.academics.and .policy.makers..To.the.academic s,.the.study.results.on.the.impact .of.QSD.on.real.earnings.manip ulation.may.present.stepping.sto ne.for.future.studies.so.that.futur e.research.can.consider.the.role. of.voluntary.disclosure.in.reduci ng.REM.to.protect.investors..Se condly,.this.research.has.policy.i mplications.for.regulators.and.st andard.setters.to.continue.impro y.and.quantity.of.SD,.whereas.E Q.is.measured.by.both.real.activ ities.and.accruals.based.measure ment..By.employing.these.meas urements,.this.study.contributes. to.the.existing.literature.by.provi ding.new.evidence.on.the.associ ation.between.EQ.and.SD.in.Lib yan.context.as.developing.count ry..This.study.examines.whether .companies.that.disclose.higher.l evel.of.SD.quality.behave.in.diff erent.way.when.making.their.ac counting.and.operating.decision s..Real.and.accruals.based.earni ngs.management.are.used.as.pro xy.for.EQ..Modify.Jones.model. is.used.as.main.measure.of.accru als.based.earnings.management.. Following.Kim.et.al..(2012),.thi s.study.uses.REM,.which.is.the. combination.of.three.individual. proxy,.as.main.proxy.of.real.acti vities.earnings.management.as. well.as.the.three.individual.prox ies.(ACFO,.APROD,.and.ADIS

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ving.the.framework.and.guidance.to.assist.companies.to.provide.high.QSD.

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Appendix: 1 Sustainability disclosure checklist items

Community development
1- Education,
2- Contribution to national economy
3- Charity and donation,
4- Social activities support
5- Other Community investment

Human resources
1- Safety and health,
2- Employee equal opportunities
3- Employee training and development
4- Retirement benefits.
5- Other employee Data

Products and services
1- Products/ Services quality
2- Products safety.
3- Product or service development,
4- ISO or other awards received by company.
5 - Other products data

Customer
1- Customer service information.
2- customer feedback
3- Others customer data

Environment
1- Pollution
2- Recycling
3- Waste management
4- Water usage
5- Emission of carbon and harmful gases
6- Energy policy statement
7- ISO or other awards received by company
8- Other environmental policy statement

Others sustainability Information
1- General sustainability Information

Appendix 2: The results of Chow Test

The relationship between AEM and QSD

```
     sigma_u  .74368149
     sigma_e  .06596534
         rho  .99219354   (fraction of variance due to u_i)
------------------------------------------------------------------------------
F test that all u_i=0: F(211, 1683) = 11.35                     Prob > F = 0.0000
```

The relationship between REM and QSD

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كلية الأقتصاد - جامعة بنغازي
المجلـــد 42
العدد الثاني لسنة 2023

sigma_u	.60755348
sigma_e	.09836472
rho	.97445697 (fraction of variance due to u_i)

F test that all u_i=0: F(211, 1683) = 4.95 Prob > F = 0.0000

Appendix 3: The results of Hausman test

The relationship between AEM and QSD

```
Hausman fixed random, sigmamore
```

	Coefficients (b) fixed	(B) random	(b-B) Difference	sqrt(diag(V_b-V_B)) S.E.
Q_S_D	-.0789183	-.0724977	-.0064206	.0183782
AEM	-.4253807	-.5751781	.1497974	.023567
ROA	-.0908497	-.1111477	.020298	.0140013
size	-.0031786	-.0044941	.0013155	.0069975
Growth	-.0015186	.0000682	-.0015868	.0017334
type	.0104279	.0008485	.0095795	.0153842
Lev	.0061509	.00113	.0050209	.007993
BEF	.0080937	.0010664	.0070273	.0030711

```
                b = consistent under Ho and Ha; obtained from
          xtreg B = inconsistent under Ha, efficient under Ho; obtained
          from xtreg

    Test:  Ho:  difference in coefficients not

                systematic chi2(12) = (b-B)'[(V_b-

                V_B)^(-1)](b-B)
                      =      135.59
              Prob>chi2 =      0.0000
```

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The relationship between REM and QSD

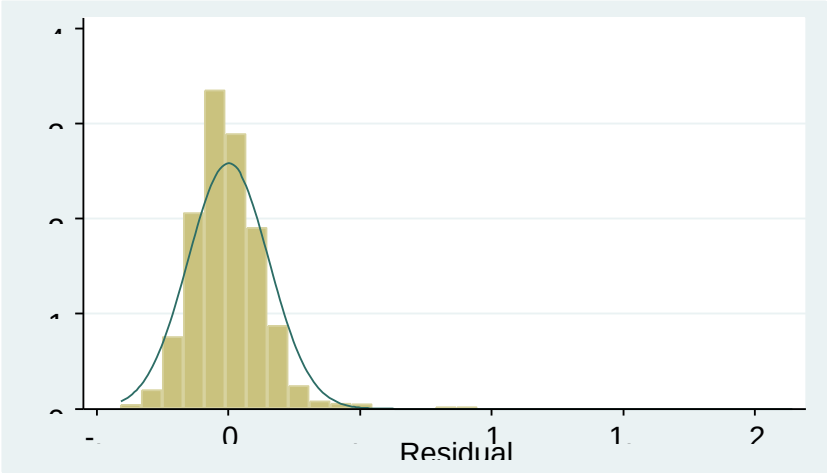
```
Hausman fixed random, sigmamore
```

	Coefficients			
	(b) fixed	(B) random	(b-B) Difference	sqrt(diag(V_b-V_B)) S.E.
QCSRD	-.0556525	-.0696031	.0139505	.0099255
REM	-.1913069	-.3323943	.1410874	.0082962
ROA	-.0916874	-.0853776	-.0063098	.0072167
size	-.0266205	-.015718	-.0109025	.004014
Growth	.0068861	.008436	-.0015499	.0008615
type	.0041342	.000314	.0038203	.0109872
Lev	-.0146606	-.0118602	-.0028004	.0041047
BEF	-.0109498	-.0126401	.0016903	.0015651

```
                b = consistent under Ho and Ha; obtained from
        xtreg B = inconsistent under Ha, efficient under Ho; obtained
        from xtreg

Test:   Ho:  difference in coefficients not

             systematic chi2(12) = (b-B)'[(V_b-

             V_B)^(-1)](b-B)
                       =      361.22
            Prob>chi2 =      0.0000
```

Appendix 4: The results of normality test

The relationship between AEM and QSD



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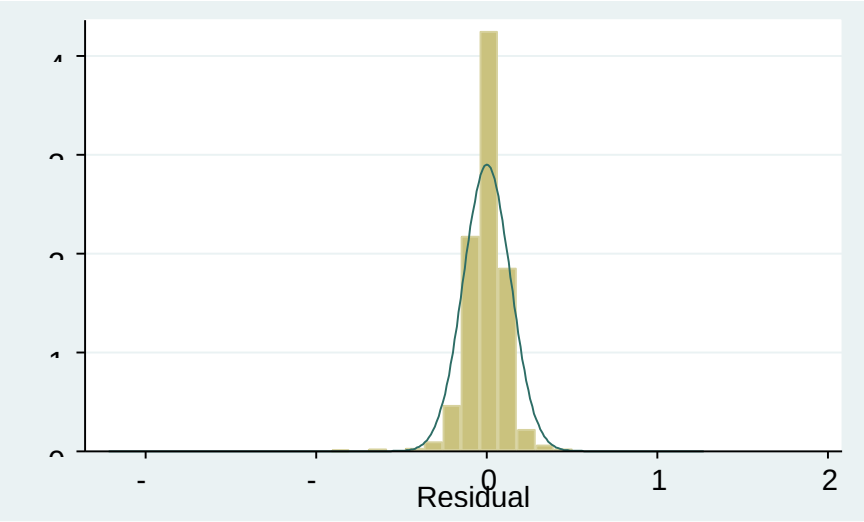
The relationship between REM and QSD



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