

Review of Compliance Measure in Empirical Accounting Literature: Perspective of International Financial Reporting Standards

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Abstract

This paper reviewed the empirical measure of compliance in accounting literature with special reference to international financial reporting standards (IFRS). The objective of this paper was to assess the level of adequacy of IFRS compliance measure in quantitative empirical studies. The evaluation of IFRS compliance has received much attention from different research focus: qualitative and quantitative evaluation. However, most of these studies particularly the quantitative studies have yielded inconclusive results. This has created doubt on the obvious relevance of IFRS adoption. One possible cause of the mixed results may be the methods and proxies used for measuring IFRS compliance. Given these challenges, this paper sought to review the existing methods for estimating IFRS compliance. This paper is the first to undertake such review and propose alternative measure of compliance. The paper is purely a review study and relied on in-depth evaluation of secondary documents on the subject matter. The review revealed that the existing empirical studies measure IFRS compliance as single construct. These studies have often used either IFRS accounting quality as proxy or mandatory disclosures as proxy or comparison of ratios. None of the reviewed studies has attempted to recognise IFRS compliance as multi-construct and used that basis for estimating the level of IFRS compliance. This paper proposes that IFRS compliance should be measured as a multi-dimensional construct which could be: Two-factor construct; three – factor or four-factor construct. It is recommended that further empirical tests should be conducted to check statistical validity of these alternative measures. Future studies may test the statistical difference between the existing single construct and the multi-dimensional construct as well as between ea the multi-factor constructs.

Keywords: IFRS/IAS, IFRS accounting quality, mandatory disclosures, voluntary disclosures and presentational faithfulness/compliance

1. Introduction

The magical phenomenon of globalisation has led to the emergence of what has been termed a global village (Gupta, 2012). The globalisation trend has swiftly been gathering pace and shifting the financial systems from one of bank-based to security market-based (Emerging Market weekly, 2008). The new outlook of the world is compelling every aspect of it to respond accordingly without fail. The accounting profession and its dimensions are continually responding to the pace of the world as well (Ahinful, Essumang, & Oppong-Boakye, 2012). The establishment of International Accounting Standards Board (IASB) to harmonise the world accounting standards is an important breakthrough with the potentials to enhance the development of the security market worldwide. In this regards, the introduction of International Financial Reporting Standards (IFRS) for global consideration is viewed as a significant regulatory changes in accounting history (Daske, Leuz, & Verdi, 2008).

Getting a common language for financial reporting is beneficial to adopters, investors, accounting practitioners and the world at large. However, potential adopters and standard setters may not adopt or adapt or welcome such common language unless its relevance is proven. The prove of suitability of IFRS/IAS as a single global accounting standards has yielded controversy. Some have argued that IFRS minimises the negative effects resulting from the diversity of accounting practices in different countries (Cordeiro, Couto & Silva, 2007). It has further been argued that acceptance of IFRS/IAS has the potential to lower the cost of processing financial information than local accounting standards (Ahinful et al, 2012). Deloitte (2008) analyses the benefits associated with IFRS adoption on the level of performance of the insurance industry. The author identified three building approaches in adopting IFRS: probability of weighted estimates of expected cash flow; adjustment of discount rate risk and residual margin of uncertainty. The study concluded that IFRS adoption is relevant because adopters will have the potential to cover the initial cost of adoption.

Despite these benefits, others have argued that there is no conclusive evidence that IFRS compliance has contributed to improvement in the reporting system and accounting quality of adopters (Barth et al, 2008; Bartou et al, 2005). This group has argued that one set of accounting standards cannot accommodate the differences in national practices of business arising from institutional and cultural diversity (Access Bank, 2010; Armstrong et al, 2007). Better still, other experts have also argued that the relevance of IFRS depends on the countries of adopters and the quality of the existing local accounting standards. They claim that IFRS is accounting standards for the developing world where accounting standards are perceived to be low quality (Ball, 2006; Leuz et al, 2003). This implies that it is not important for countries with perceived high accounting

standards to enrol for the IFRS.

These controversies required empirical investigations. These empirical studies are expected to provide information on whether or not IFRS adoption is worth pursuing. One means to evaluate the consequence or relevance of IFRS compliance is to examine the effect of the level of compliance on key firm performance indicators. To statistically investigate the consequence or effect of IFRS/IAS on the key performance indicators require appropriate method for measuring or estimating the level of IFRS compliance. However, the method for estimating IFRS/IAS compliance has remained empirical problem. Some have estimated IFRS from the perspective of disclosures (Ahinful et al, 2012; Ferrer et al. 2011) and others have estimated it from the level of accounting quality (Barth, Landsman & Lang, 2008; Paananen & Lin, 2009; Prather-Kinsey, Jermakowicz, & Vongphanith, 2008; Tanko, 2012). The results from these studies have also yielded mixed results, similar to the theoretical assertions (Jeanjean & Stolowy, 2008; Paananen & Lin, 2009). Estimating IFRS compliance from either disclosures or accounting quality such as loss recognition and earning management implies that these studies have partially estimated IFRS and this might have affected the results and conclusions drawn. It is against this backdrop that this study explores alternative measure of IFRS compliance. The search for alternative is imperative because the relevance or benefits associated IFRS assume full compliance (Manel, 2015).

2. Empirical measure of compliance to accounting standards

A number of prior empirical studies have assessed IFRS relevance by estimating the level of accounting quality. For instance, Barth, Landsman and Lang (2008) sampled companies from 21 countries both adopters and non-adopters of IFRS. These authors estimated accounting quality for those that comply with IFRS and non-adopters of IFRS. The study reported that in the same country IFRS adopters exhibit higher value relevance compared to non-adopters. They concluded that the level of accounting quality with IFRS is higher than local accounting standards. Similarly, Prather-Kinsey, Jermakowicz, & Vongphanith (2008) examined the IFRS accounting quality of adopters on the capital market in 16 European countries. They also found that financial reports prepared under IFRS are more informative and quality.

Contrary to the positive results on IFRS reported by authors such as Barth, et al (2008) and Prather-Kinsey, et al (2008), Paananen and Lin (2009) reported a decline in the accounting quality of the adopters following the mandatory adoption of IFRS in Germany. This suggests that IFRS accounting quality is lower in German. Prior to the study of Paananen and Lin (2009), Jeanjean and Stolowy (2008) used data from three countries including two giant European countries but also found contradictory results. They reported that following IFRS adoption, earnings management in France has increased but remained same in UK and in Australia. This seeks to suggest that the IFRS accounting quality in France is low compared to France GAAP. The findings again imply that there are no real quality benefits in UK and Australia. The mixed positions and conclusions on assessing IFRS relevance from one facet-IFRS accounting quality remain worrying. These empirical literatures are just adding to the existing theoretical controversies as well as opinionated debates. This may put potential adopters in a state of indecision.

Other researchers have focused on disclosures to measure IFRS compliance and subsequently assess its relevance. Researchers' interest and confidence in measuring IFRS compliance from disclosures can be seen from large amount of literature on the subject matter and the strive to develop sound methods for constructing disclosure index (See Abd-Elsalam & Weetman, 2003; Al-Shiab, 2008; Glaum and Street, 2003; Hodgdon et al., 2008; Street & Bryant, 2000; Street & Gray, 2001). These efforts have made 'Unweighted Approach' and 'Partial Compliance Approach' very popular. The extent of the studies on disclosures as measurement of accounting standard compliance in general has reached a stage where the disclosures have been separately estimated and analysed. It is now common to read studies on mandatory disclosures and voluntary disclosures (Barako, et al, 2006, Campbell, Shrives & Saager, 2001). Despite these efforts and contributions, this stream of studies have still not resolved the controversy (Ahinful, et al, 2012; Akhtaruddin, 2005, Barako, et al, 2006; Barth, et al, 2008, Bharath, et al, 2008).

What is the conclusion then? The empirical question of : Is IFRS relevant? is still unresolved. It is therefore not surprising when Daske et al. (2008) argued that the economic consequences of mandating IFRS reporting are not obvious, and therefore from an economic perspective, there are reasons to be skeptical about the expectations from the adoption of IFRS. Should companies and national standard setters accept IFRS or continue to marry their local accounting standards? These questions are critical as it bothers on decisions relating to policy formulation, implementation, implications and global accounting practice. Although the real value of IFRS is not conclusive with certainty, one thing is clear in the literature. All the studies have looked at accounting standard as a single construct which can be measured using either accounting quality as proxy or disclosures scores. The core objectives of accounting standards in general and IFRS in particular include both qualitative characteristics and disclosure requirements (IASB, 2015). Therefore these indicators or dimensions are not mutually exclusive. As stated by Manel (2014), the outlined benefits associated with IFRS assume full compliance. Drawing from this argument partial estimation of IFRS compliance may be a contributing factor to

the inconsistencies in the empirical literature.

Hubert and Heger (2011) might have noted this partial estimation in the literature when they stated that accounting researchers try to disentangle the “complete path” instead of using the complete path. What makes the situation quite interesting is that Hubert and Heger (2011) are equally victim to the partial estimation as they also relied on only voluntary disclosures to estimate compliance. Thus, evaluating the economic benefits of IFRS using the current single construct makes the findings factually inaccurate and validity of conclusions doubtful. The shortfall in the current measure of generic compliance of accounting standard and for that matter IFRS compliance raises an important research question: what is the true measure of IFRS compliance? Providing answer to this research question would form the foundation for re-evaluating the economic consequence of IFRS compliance.

3. Accounting standard compliance as multi-dimensional construct

It is learnt from the literature that the single construct measure of IFRS as accounting standards has failed to resolve the mixed positions on the economic relevance of IFRS. This paper therefore proposes alternative measure to conceptualise IFRS compliance. Generally accounting standard can be viewed as interrelated multi-dimensional construct. The draft exposure of the IASB conceptual framework reveals some key facets of relevant accounting standards, namely, qualitative characteristics; recognition, derecognition & measurement and presentation and disclosure (IASB, 2015).

The streams of studies that assess IFRS from the perspective of accounting quality have focused on the qualitative characteristics of the conceptual framework (Prather-Kinsey, et al, 2008, Paananen & Lin, 2009; Tanko, 2012). For instance, Prof. Tanko justified his estimation of IFRS compliance from accounting quality by referring to the qualitative characteristics in the IASB conceptual framework (Tanko, 2012, p.8). The mandatory disclosures literature seems to have borrowed the recognition, derecognition & measurement and presentation and disclosure within the themes of the framework (see Ahinful, et al, 2012; Tsalavoutas, 2009).

Although conceptual framework of any accounting standard is not the accounting standard on its own and does not override any provision in a particular standard (IASB, 2015), it is the basis for developing accounting standards and a guide to accounting practice. Therefore drawing the compliance measure from the thematic areas of the framework as revealed in the literature is not erroneous. Weetman (2006) opined that a conceptual framework for accounting is a statement of principles which provides generally accepted guidance for the development of new reporting practices and for challenging and *evaluating the existing practice* (Weetman, p.7). From Weetman’s explanation to conceptual framework of accounting, it can be learnt that one purpose of such framework is for challenging and evaluating existing standards. Therefore estimating accounting compliance from the conceptual framework is well fetched.

However, it may not be accurate to estimate compliance from only one or few of the themes as portrayed in the literature (Tanko, 2012). To fairly estimate compliance, it is expected that the method should substantially reflect the extant of the thematic areas of the framework. All the key thematic areas underscore the full compliance crusade of the IASB. Withdrawal or weaknesses in the scope or content of a key thematic area affect the relevance of the standard (IASB, 2015). The importance of the contents and how critical the framework is to the standard setters can be seen from the urge to keep the framework updated with the current economic situation so as to maintain the relevance of the standards. IASB and US national Financial Accounting Standards Board (FASB) in 2004 initiated joint project to revise the conceptual framework to maintain its relevance and is currently at the exposure draft stage. IASB (2015, p.7) stated below as reasons which have called for such revisions

- (a) Some important areas are not covered;
- (b) The guidance in some areas is unclear; and
- (c) Some aspects of the existing *Conceptual Framework* are out of date.

It is evidential from the assigned reasons that inadequacy of the content of the framework necessitated such revision. It is therefore critical for researchers not to relax on the contents of the framework in the pursuit of measurement of compliance. This suggests that the partial measure of compliance from either the accounting quality or disclosures in the literature is deficient and might have affected the results and conclusions drawn. One possible means to correct the IFRS estimation deficiency is to consolidate the accounting quality measure and the disclosure score into what this paper term ‘*Two-factor dimensional constructs*’. Since these dimensions are related, there is likelihood of correlation. Therefore to estimate the composite score for the two-factor construct one may use Principal Components Analysis (PCA) technique. PCA summarises the variation in a correlated multi-attribute to a set of uncorrelated components (Fernandez, 2014). Thus, the PCA correct possible correlation problems whiles constructing the two-factor construct. This construct can be conceptualised as:

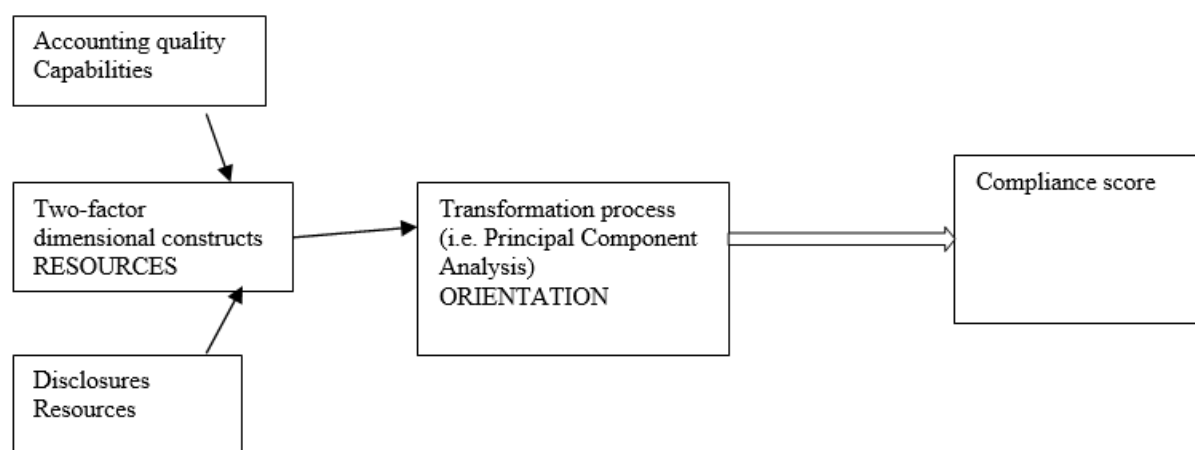


Figure 1: Two-factor construct for measuring compliance

Source: Author's construct from literature

Figure 1 demonstrates how the two main measures of IFRS can be transformed from the single construct to a two-factor construct through principal component analysis. The individual dimensions, namely, accounting quality and disclosure are expected to be measured as usual from the existing methods such as the earning management method, loss recognition, accrual methods, unweighted approach, partial compliance (Tsalavoutas, 2009; Tanko, 2012). Having conceptualised the two-factor model, the PCA of the construct can be presented mathematically as:

$$CI = \sum W_1 I \quad (1)$$

Equation 1 portrays the generalised PCA model; where W_1 is the individual weight of each dimension. 'I' is the individual dimensions.

Having substituted two dimensions into eqn (1), the two-factor model is shown as:

$$CI = W_1 Aq + W_2 Ds \quad (2)$$

Where CI measures the compliance index

Aq measures accounting quality

Ds denotes disclosure score

Besides the two-factor model designed from the empirical literature as conceptualised and modeled in Figure 1 and equation 2 respectively, theoretically the two-factor can be expanded further into three-factor and four-factor dimensional construct. The IASB framework has four main themes: defining the objectives of financial statements; identifying characteristics that make the information useful; defining the basic elements of financial statements; and providing concepts of capital maintenance (IASB, 2010).

The themes have been expanded in detailed in the current exposure draft. In the current draft more lights have been exposed on recognition, derecognitions, measurement, presentation and disclosure. Technically, disclosure used as generic term to embrace recognition, derecognitions, measurement, presentation and disclosure can further be segregated into two or three dimensions. Recognition, derecognition, measurement and presentation are more related than disclosure itself (Weetman, 2006).

Recognition means reporting an item by means of words and amount within the main financial statements in such a way that the item is included in the arithmetic totals (IASB, 2010; Weetman, 2006, p.33). Weetman explained that unlike recognition, disclosure involves reporting items in the notes to the account. Gibbins, Richardson and Waterhouse (1990) also defined financial disclosure as a deliberate release of financial and/or non-financial information, whether numerical or non-numerical, mandatory or voluntary, or through formal or informal channels. In other words, a disclosure involves reporting financial item either by words, or words and amounts outside the face of the financial statement. It may include notes or explanation on how an item appearing on the face of the financial statement has been measured and recognised.

Measurement also precedes recognition. The amount to be recognised is determined by measurement, hence they are inseparable. Presentation may be defined as the physical arrangement or framework for recognising the elements of the financial statement and the structure of the various components of the financial statements including the notes to the account. From these, recognition, measurement and the presentation are similar and may be reclassified as a separate dimension called *presentational compliance* or *presentational faithfulness*. The actual explanation on how items are measured, recognised and presented on the notes to the financial statement can be maintained as the normal disclosure as technically explained by Weetman (2006).

The question is : What is the economic consequence of this reclassification? Since the users of financial information include non-technocrats, some of these users may base their investment decisions on the mere physique of the financial reports rather than the technical information provided in the notes as disclosures. For instance, non-financial or accounting experts who have sat on a particular board for years may easily study the physique or framework of the reporting and form opinion as complied or non-compliance. These non-experts may not know the technical information provided; however, they may use the pictorial view of the financial statements in terms of the titles used, terms used, arrangement of the items on the face of the financials and components of the financial statements presented to do their assessment.

In the same vein, investors may probably make investment decisions on the basis of the physique especially in the developing world where financial literacy is low (Kweigya, 2011) and most of these investors are unwilling to hire the services of finance experts. Investors within this category may place high value on structure but not the content.

Holding these discussions as fair, ‘Ds’ in equation 2 may be expanded into Ps and Ds*. Integrating this into the two-factor dimensional construct, produces three-factor construct as conceptualised in figure 2 below:

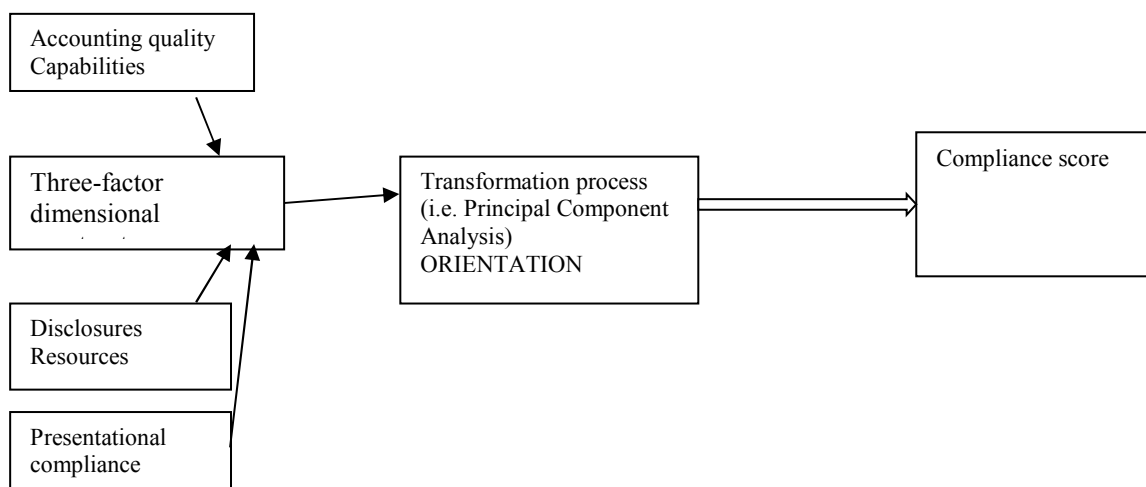


Figure 2: Three-factor construct for measuring compliance
 Source: Author’s construct from literature

Substituting the three dimensions into eqn (2), the three-factor model is also presented as:

$$CI = W_1Aq + W_2Ps + W_3Ds^* \quad (3)$$

Where Ps measures the presentational compliance score

Ds* measures the new disclosure score

Other variables remain as described earlier

Generally, financial disclosures may be mandatory or voluntary (Gibbins, et al, 1990; Healy & Palepu 2001, Omaira & Claire, 2010). Mandatory disclosure relates to information which is disclosed or revealed in conformity with requirements of statutes, laws, professional regulations and the listing rules of stock exchanges (Omaira & Claire, 2010). It is the least standard of information that is obligatory for any reporting unit by accounting standards or any national decrees (Owusu-Ansah, 1998). Voluntary disclosure is not mandated by law or statute but a mere authoritative recommendation by experts or body (Omaira & Claire, 2010). It is any financial and non-financial information disclosed in excess of the mandatory disclosure.

Besides the empirical support to this classification, there is theoretical significance. The capital needs theory argues that voluntary disclosures reduces investors risk in dealing with the disclosed entity and ultimately reduces the entity cost of capital (Abd-Elsalam, 1999; Choi, 1973). Similarly, the mandatory disclosures also minimises agency problem as it enhances transparency and provide the basis for monitoring the activities of management (Lambert, 2001). Mandatory disclosures instill investors’ confidence as they will get the needed information which otherwise will not have been available (Morris, 1987; Tsalavoutas, 2009). It is evident that although both voluntary and mandatory disclosures are related, they have respective unique economic roles. Whiles voluntary enhances corporate chances of securing external funds at cheaper cost, mandatory disclosures

enhance current and prospective owners' confidence. Drawing from the discussions, it can be concluded that accounting standards may be viewed as four-factor dimensional constructs as portrayed in figure 3.

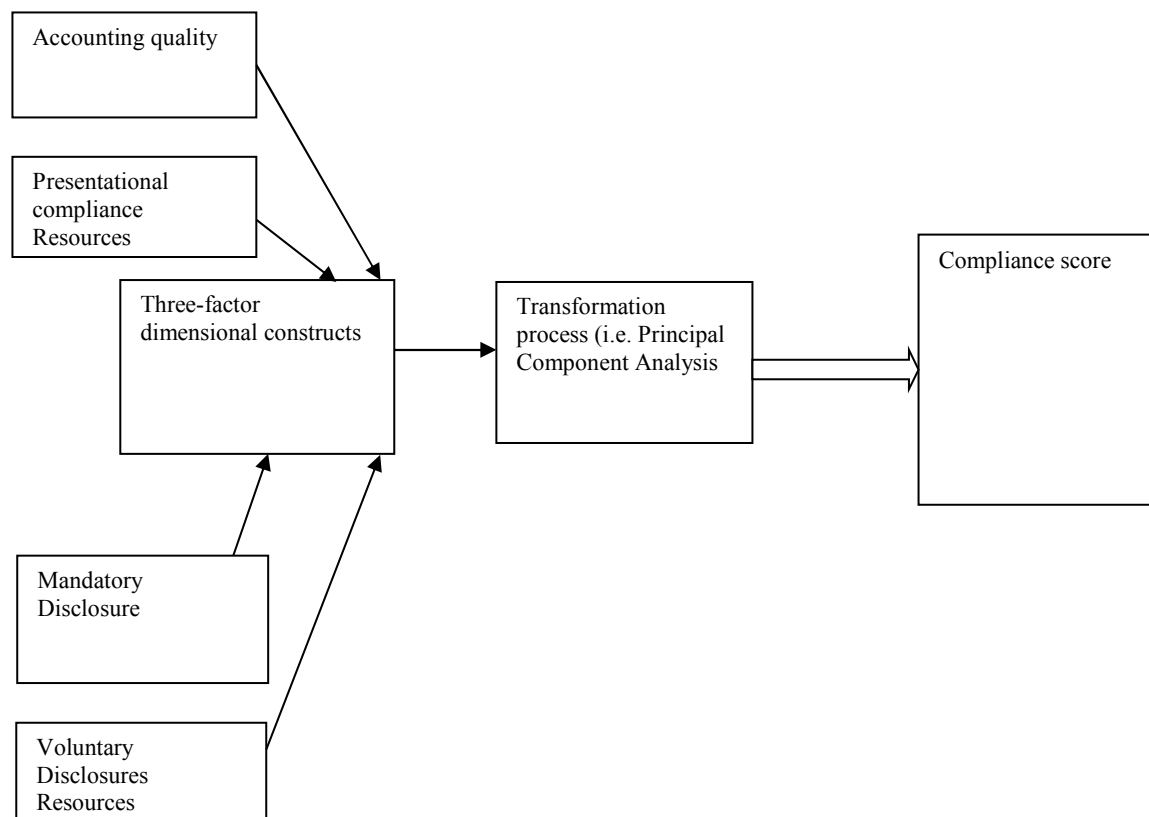


Figure 3: Four-factor construct for measuring compliance
 Source: Author's construct from literature

The four-factor construct is modeled from equation (3) as follows:

$$CI = W_1Aq + W_2Ps + W_3Md + W_4Vd \quad (4)$$

Where Md measures the mandatory disclosure score
 Vd represents the voluntary disclosure score
 Other variables remain as described earlier

5. Conclusion

This review has shown that the existing literatures on compliance with accounting standards (IFRS) have measured compliance as a single construct. The results and conclusions drawn from these studied have generated controversy. The single construct of compliance has been evaluated and accounts on deficiencies revealed. Base on the review this paper recommends multi-dimensional construct for estimating compliance as it embraces key thematic areas upon which the accounting standards are built. In applying the recommended multi-dimensional construct, one may consider the construct in terms of two-factor model, three-factor model or four-factor depending on the perspective of interest.

The multi-dimensional construct is the starting point of the alternative measure of compliance; therefore further empirical tests are needed to validate the models from this construct. Future researchers might consider using more than one of the models, as a robustness check. In addition, studies may consider testing the statistical difference between the single construct and the multi-dimensional construct. Moreover, researchers may equally focus on establishing significance differences among the multi-dimensional models, namely, the two-factor

model, three-factor model and four-factor model. Establishing statistical differences among the multidimensional models may provide insight into whether or not it is important to use one or more of these models for robustness checks.

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