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Conceptual formation and explanation in IFRS-based financial accounting research

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Abstract: This article provides a comprehensive review of the conceptual formation and explanation within International Financial Reporting Standards (IFRS)-based financial accounting research. The mandatory adoption of IFRS by the European Union (EU) on 1 January 2005 resulted in an increase in the number of scientific articles explaining the effect of mandating IFRS on capital markets within the EU. Independently, these studies offer interesting insights; however, there have been few attempts to offer a critical analysis of the current state of the field in terms of conceptual formation and the role of theories in explanation. This paper provides a richer understanding of the scientific basis of the empirical research within this emerging field. We identify and critically assess a sample of eight relevant scholarly articles. Our findings suggest that the concepts in these articles appear to be borrowed from the mainstream accounting and finance literature and used in the form of variables. These concepts primarily play a deductive role. The nature of explanation appears to be mechanistic. We offer a discussion of our review's findings and suggest some implications for future research.

Subjects: Business, Management and Accounting; Accounting; Financial Accounting; Philosophy; Introductory Philosophy; Philosophy of Social Science

Keywords: IFRS; conceptual formation; scientific explanation; accounting research

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PUBLIC INTEREST STATEMENT

The International Financial Reporting Standards (IFRS) based Financial Accounting Research has gained significant attention in the recent years. As a result, a considerable amount of knowledge has accumulated on the effects of IFRS adoption on stock prices and returns, investment efficiency, and cost of capital of a firm etc. Nonetheless, negligible attention has been paid to offer an understanding of the issues related to the construction and use of concepts and explanation of relevant phenomena within the field. We contribute to the literature by providing an overview of the current state of literature in terms of conceptual formation and role of theories in explanation. Our review shows that the concepts are mainly formed deductively, and the nature of the scientific explanation appears to be mechanistic.

1. Introduction

The purpose of this article is to review the conceptual formation and the role of theories in explanation of phenomena associated with International Financial Reporting Standards (IFRS)-based financial accounting research. We provide a review of how the concepts are constructed and defined and describe the functions of the concepts within this research stream. Moreover, we examine the role of theories in explanation of the phenomena.

Concepts are words with a special kind of power, which are used by social science researchers as means to describe social phenomenon, organise knowledge, and provide a framework within which to develop theory. For instance, concepts such as the cost of capital are helpful in organising knowledge within IFRS research into several categories, such as the impact of IFRS on capital markets. The same also applies to other fields in social sciences.[1] These concepts also aid researchers in developing research questions and hypotheses.

Concepts thus serve as the building blocks of theories or theoretically loaded elements of theories (Leiulfsrud & Sohlberg, 2017). Given the power that concepts possess, it is thus necessary that they be defined as clearly possible, since they have an impact on scholars' ability to enhance the knowledge base. Clearly defined concepts are more fruitful and enable scholars to identify qualitative aspects for further elaboration and that can be formed into a model. A clear definition of concepts is thus critical to the foundation underlying a theoretical construction of all theories, which plays an important role in scientific explanation; this is the major goal of all sciences (Reiss, 2013).

Concepts in the social sciences, however, are usually loosely defined. This hinders researchers from achieving the ultimate purpose behind their scientific inquiries (i.e., to build knowledge). This undermines the fruitfulness of the concepts and impedes one's ability both to enhance the knowledge base and develop models to explain the phenomena. Since IFRS-based financial accounting research appears to confront this issue, it is difficult to reconcile the results of the studies on the topic. In this paper, we therefore address the issues of conceptual formation and the role of theories in explanation within this research stream.

A major aim of IFRS-based financial accounting research is to explain and predict the effects of IFRS adoption on capital markets using a variety of scientific tools and methods. This provides a picture of how the current practice of reporting under IFRS has affected the economy and whether there is any need for policy development to address such effects. We therefore also review the different forms of theoretical explanation that are found in selected IFRS-based accounting research articles and address important questions regarding the scientific basis of the bulk of the research within this field in terms of justification, reasoning, research method, and argumentation.

We used a sample of eight relevant scholarly articles within IFRS-based financial accounting research spanning from 2008–2021, including both recent studies and ones that emerged soon after mandating of IFRS by the EU in 2005. Moreover, we include studies representing different country contexts to ensure some level of heterogeneity in our sample.

We contribute to the literature in a number of ways. First, to the best of our knowledge, this is the first study to provide an understanding of conceptual formation and explanation in IFRS-based accounting research. Most of the extant research has focused on the role of paradigms and validation in management accounting and addressed the shift from a post-positivist to critical realist paradigm in financial accounting research (Baldvinsdottir et al., 2010; Lukka, 2010; Lukka & Modell, 2010). We address the role of inductive and deductive reasoning in developing the theory and the conceptual apparatus used here, which has been a topic of little attention in the extant research.

By illustrating these issues, we offer insight into conceptual formation and methodological choices researchers have undertaken to position the research in relation to various IFRS studies; this permits the development of a more fruitful body of knowledge within this research stream. For instance, the theoretical understanding of concepts such as depreciation, amortisation, and accounting profit has been key to understanding various phenomena that IFRS-based financial accounting research aims to explain.

We structure the paper as follows. First, we provide a review of conceptual formation in social sciences in general. In this section, we provide a description of the different ways concepts are formed in social sciences including examples from IFRS-based accounting research. These descriptions are used in the analysis and commentary on the sample articles. We then briefly outline the research philosophy and methodology underlying IFRS-based accounting research. Next, we review eight articles on IFRS-based financial accounting research and address the issues related to conceptual formation and explanation in these articles.

2. Conceptual formation in social sciences and IFRS-based financial accounting research

Concepts are words with a special kind of power. They serve as the foundation of theoretical construction in all sciences, acting as the building blocks of theories. Concepts can thus be considered heuristic and theoretical tools. As such, it is important to distinguish between two aspects when considering concepts. One aspect relates to the very construction of the tools. Here, we are concerned with how the concepts are constructed. The second aspect is related to the application of these tools. Here, we are interested in learning about the consequences of the use of concepts and what functions they fulfil (Leiulfsrud & Sohlberg, 2017).

Concepts in social sciences, unlike in IFRS-based financial accounting research, are typically loosely defined and should therefore be assessed in terms of their fruitfulness and not their truth value (Leiulfsrud & Sohlberg, 2017). Looking at the fruitfulness of a concept from an inductive perspective means that important qualitative aspects that are to be further elaborated upon and eventually crafted into a model or a theory are identified from the patterns that are expressed in the conceptualisation process. Fruitfulness, in this case, refers to a concept's deductive potential (Merton, 1968). From the deductive perspective, a concept is fruitful if it identifies important qualitative aspects of a topic that are ripe for further investigation. Regardless of the approach a given research project takes, finding an argument to distinguish between inductive and deductive forms of fruitfulness is difficult (Leiulfsrud & Sohlberg, 2017). Not all IFRS-related articles exhibit fruitfulness, however.

Identifying the conceptual space is one way to approach the vocabulary in which a concept is embedded. Conceptual space refers to how a concept relates to other concepts, which can sometimes be a matter of theoretical logic but is more commonly a question of the contingent relations established in the sociological tradition (Leiulfsrud & Sohlberg, 2017; Sohlberg, 1999). For instance, consider the concept of accounting quality. This is usually defined in terms of the extent to which a certain set of accounting numbers facilitate the measurement of some economic performance. "A certain set of accounting" and "any economic performance" could vary immensely in terms of content. This makes functional reasoning complex and diffuse in general terms, like the various instances in the body of IFRS research that address whether accounting quality has improved after the standards were mandated in the EU. Thus, to address accounting quality, one must approach this concept through the vocabulary or context it is embedded in.

Concepts in the social sciences can be constructed in either an inductive or deductive way. The inductive approach places emphasis on observation and deriving conclusions through observation (Zalaghi & Khazaei, 2016). Thus, inductively formed concepts are based on patterns revealed through observation and generalisation. As a mode of inference, induction is always open-ended (Leiulfsrud & Sohlberg, 2017). On the other hand, the deductive approach mainly involves developing hypotheses or assumptions based on existing theories and testing those hypotheses (Zalaghi & Khazaei, 2016). Thus, forming concepts under this approach is simply an operationalisation of a theoretical category, which is rarely a matter of formal logic. It can thus be seen as a way to structure an empirical field (Leiulfsrud & Sohlberg, 2017). One can find some examples of such approaches in IFRS-based accounting research (e.g., Bodle et al., 2016; Charitou et al., 2015; Christiansen et al., 2015) and other social science disciplines such as supply chain management (e.g., Gharaei et al., 2019; Giri & Bardhan, 2014; Yin et al., 2016).

Lazarsfeld and Rosenberg (1955) deeply influenced the way sociologists at Columbia University approached the concepts. These sociologists approached the concepts from a methodological perspective, insofar as methodology not only deals with theoretical issues but also with research methods. Based on Lazarsfeld and Rosenberg (1955) publication, Lazarsfeld (1966) formulated a basic approach about how to use concepts, consisting of four steps. Step 1 states that a researcher must have some general idea (i.e., "imagery") or a concept.[2] In step 2, a researcher must divide the imagery into its components. Step 3 requires the researcher to be inventive, as it involves the location of empirical indicators. In step 4, the researcher must construct the indices and close the gap between reality and the concept (Swedberg, 2017). Notably, IFRS-based accounting research involves concepts that are mainly formed through deduction. The imagery, thus, does not play a major role in this research stream. In this field, most concepts are borrowed from past research and take the form of variables. Thus, scholars typically do not seem to follow the Lazarfeld's approach with complete fidelity.

Colligation is yet another method that can be used to construct concepts in social sciences. This is an open concept that has not been used frequently. Here, the word "colligation" means "binding together through an idea". The main idea of colligation is that facts related to a scientific phenomenon are bound together in an analytically useful manner through an idea (Swedberg, 2017).[3]

Concepts in the social sciences are also sensitised. The optimal way to proceed here is to begin with an initial flexible concept and to refine it during the course of research (Blaikie, 2000). In contrast to a definitive concept, a sensitising concept does not have a clear definition based on specific criteria or properties (Blumer, 1969). Therefore, the main purpose of sensitising concepts is to open the field for exploration and help researchers look in a specific direction without locking oneself into a certain understanding of a phenomenon (Sohlberg & Sohlberg, 2013). Sensitising concepts serve as heuristic devices and enable researchers to become acquainted with the subject of their research, allowing them to identify new relationships, perspectives, and worldviews (Flemmen, 2017).

3. Research philosophy and methods in IFRS-based financial accounting research

Notably, IFRS-based financial accounting research is a subset of financial accounting research, a field which is mainly dominated by "mainstream" accounting research conducted within a positivist paradigm. Financial accounting research has its origins in the 1960s when Ball and Brown (1968), Beaver and Manegold (1975), and other researchers introduced empirical finance methods to financial accounting. Since that time, theory construction and verification in such research have been conducted within a positivist paradigm, with empiricism being the critical research doctrine.

Research within this paradigm holds an objective and independent view of reality, favours quantitative methods, and presupposes that accounting phenomenon can be explained, predicted, and discovered using scientific research approaches (Ryan et al., 2002). Thus, financial accounting research is dominated by an objectivist ontology that provides that the "reality" of accounting can be discovered through direct observation and objective measurement and that generalisable findings can be produced by testing accounting hypothesis through an appropriate statistical analysis (Bisman, 2010).

Much of the IFRS-based financial accounting research is undertaken from the perspective of positive accounting theory (Bisman, 2010) and falls into the capital market research paradigm. Furthermore, IFRS-based accounting research focuses on the economic consequences of the adoption of accounting standards and strives to predict and explain the impact of adopting the standards on the informational efficiency of the stock markets. The research also relies considerably on financial theories, such as the efficient market hypothesis, and uses information from firms' accounting statements (Ryan et al., 2002). Based on these theories, researchers draw hypotheses and use statistical techniques to test them. However, when studying phenomena in IFRS-based financial accounting research, the focus is on interpretation rather than on prediction or explanation.

The methodological basis of IFRS-based financial accounting research lies in the nature of the assumptions and in the linkages between observation and theoretical terms (Ryan et al., 2002) and is derived from the hypothetico-deductive approach. Most IFRS studies include several a priori assumptions that are used to deduce a model and which can be used to compare different accounting practices. Many of these a priori assumptions combine empirical observations of accounting practices with economic theory. Researchers then use the resulting models for empirical testing. This contrasts with the empirical inductive approach employed by early accounting researchers, which involved surveying and synthesising accounting practices and then attempting to generalise the principals underlying the observed practices (Ryan et al., 2002).

Moreover, IFRS-based financial accounting research has a decision usefulness objective. The starting point of this approach is to consider the objectives of the financial statements. Research tends to be driven by motives and intentions stemming from the regulations that cite the benefits of adopting the IFRS (Ryan et al., 2002). The problems with this approach are associated with the fact that several of the benefits of IFRS-related research are unobservable and context-dependent. Therefore, the research is theoretical in nature and focuses on the interpretation and meanings of what the empirical findings suggest. The differences in contexts where this research is carried out, however, mean it is often challenging to make generalisations, which are often important to shape and improve policy and practice.

4. Review of selected articles

We begin by describing the process underlying the selection of articles for this research and the central phenomena the chosen studies address. We then proceed to address the conceptual formation, explanation, and role of theory within the selected articles. As such, we only selected and reviewed eight articles for this research.

4.1. Selection of articles

Since the studies within IFRS-based financial accounting research have focused mainly on the effects of IFRS adoption on accounting quality, we identified articles using the following keywords: “IFRS”, “financial reporting quality”, and “effects of IFRS”.

The search produced results that included studies published in economic, accounting, and financial reporting journals that focus on the effects of IFRS on accounting quality and economic consequences. From the search results, we selected eight articles published between 2008–2021 based on their resemblance to the keyword search. Delimiting the study to the aforementioned time period allowed us to select both seminal and recent articles in this field of research. In order to have heterogeneity with respect to the context of the selected studies, we also included studies that focused on the effects of IFRS adoption in non-European settings, such as those conducted in Korean and Ghanaian context.

Following the EU’s adoption of IFRS in 2005, research on the effects of its widespread adoption flourished. Several countries began to adopt or aligning their local standards with IFRS. We thus analysed studies from the year 2008 as these studies form the conceptual and methodological basis for forthcoming articles and capture the initial effects of mandatory IFRS adoption. We focused on later research as well as to capture advances during the selected time period. This facilitates an understanding of the current state of the literature in this research stream in terms of conceptual formation and explanation.

We decided to focus on the Daske et al. (2013) article rather than Daske et al. (2008) work. The reason is that the method and the research questions addressed by both articles are similar. The articles set out in Table 1, below, were considered for further analysis:

Table 1. Articles chosen for the study (numbers in parentheses represent total citations)		
Number	**Authors and Year**	**Title and Journal of Publication**
1.	Barth et al. (2008)	International Accounting Standards and Accounting Quality, *Journal of Accounting Research (4080)*
2.	Key and Kim (2020)	IFRS and Accounting Quality: Additional Evidence form Korea, *Journal of International Accounting, Auditing and Taxation (8)*
3.	Christensen et al. (2015)	Incentives or Standards: What Determines Accounting Quality Changes around IFRS Adoption? *European Accounting Review (712)*
4.	Mensah (2020)	The Effect of IFRS Adoption on Financial Reporting Quality: Evidence from Listed Manufacturing Firms in Ghana, *Economic Research-Ekonomska Istraživnaja*
5.	Trimble (2018)	A Reinvestigation into Accounting Quality Following Global IFRS Adoption: Evidence via Earnings Distributions, *Journal of International Accounting, Auditing and Taxation (12)*
6.	Daske et al. (2013)	Adopting a Label: Heterogeneity in Economic Consequences Around IAS/IFRS Adoptions, *Journal of Accounting Research (986)*
7.	Barth et al. (2018)	Effects on Comparability and Capital Market Benefits of Voluntary IFRS Adoption, *Journal of Financial Reporting (20)*
8.	Li et al. (2021)	Economic Consequences of IFRS Adoption: The Role of Changes in Disclosure Quality, *Contemporary Accounting Research (3)*

IFRS, International Financial Reporting Standards; IAS, International Accounting Standards.

The central phenomena these articles address is whether the adoption of IFRS resulted in the improvement of accounting and reporting quality and IFRS's economic consequences. The central research question the first five articles address is whether the adoption of IFRS (either voluntary or mandatory) resulted in improved accounting quality when compared to local generally accepted accounting principles (LGAAP). The central phenomena the sixth and eighth articles examine and assess are the observed economic consequences around IFRS adoption, while the seventh assesses whether voluntary IFRS adoption resulted in improved comparability of accounting amounts.

The authors of these studies related to IFRS adoption and accounting quality (i.e., the first five articles) address the central phenomena under study by examining changes in earnings management, timely loss recognition, and earnings distributions, as well as the variability of changes in net income relative to the changes in cash flow variability. Daske et al. (2013) address their central research questions through the use of measures, such as the price impact of trades, percentage bid-ask spreads, and the implied cost of capital, while Barth et al. (2018) cross-compare the accounting amounts produced by local standards and IFRS. Li et al. (2021) address their central research question by measuring changes in disclosure quality.

The methodology the authors use to answer their research questions is empirical in nature. While using theory, the authors define a model, which consists of variables. They then test the model using statistical techniques such as regression analysis. Next, the authors use significance levels to accept or reject their hypotheses and craft explanations for the phenomena through interpretation of the empirical results. The findings of these studies are mixed, which makes it difficult to reach a conclusion as to whether IFRS adoption has resulted in any change in accounting quality, economic consequences, or comparability.

4.2. Conceptual formation in IFRS research: the case of selected articles

The central concepts addressed in studies by Barth et al. (2008), Christensen et al. (2015), Trimble (2018), Key and Kim (2020), and Mensah (2020) belong to the conceptual space of accounting quality. The accounting quality can itself be assessed using different measures that vary immensely in terms of the contexts they are applied to. On the other hand, Daske et al. (2013), Barth et al. (2018), and Li et al. (2021) studies include concepts that belong to the conceptual space of economic outcomes and accounting amounts. These conceptual spaces can also vary immensely in terms of their contexts. Thus, a contextless discussion relating to accounting quality or economic outcomes is impossible. The authors of the chosen studies also use various combinations of accounting concepts (such as accounting ratios) to examine the phenomena in their papers.

The concepts used by the studies that assess the impact of IFRS adoption on accounting quality are ambiguous, and definitions vary across the articles. Several concepts include sub-concepts in order to study a phenomenon effectively, and the concepts are thus embedded within one another. For instance, research articles that examine accounting quality employ concepts such as “earnings management”, “timely loss recognition”, “value relevance”, and “earnings distributions”.[4] In Christensen et al. (2015), the authors define earnings management using the three sub-measures: “the variability of changes in earnings, variability of changes in earnings relative to the variability of changes in cash flows and the negative correlation between accruals and cash flows”. Key and Kim (2020) use a similar definition of earnings management, while Barth et al. (2008) scaled net income by total assets and measured the variability of changes in earnings relative to variability of changes in operating cash flows. Mensah (2020) measured earnings management through discretionary accruals. In contrast, Trimble (2018) measured accounting quality using earnings distributions, which Trimble defines as the discontinuity of earnings distributions at the zero earnings threshold. Barth et al. (2008) defined timely loss recognition as the coefficient on the large negative income of regressions of this variable (along with other controls) on the dummy variable indicating whether the firm adopted International Accounting Standards (IAS). The study by Key and Kim (2020) follows the same definition, while Christensen et al. (2015) scaled net income by total assets. Christensen et al. (2015) and Barth et al. (2008) measured value relevance, using concepts like share price, earnings per share, and book value per share. These authors base their work on the results of regressions of stock price on net income. The remaining articles define the concepts the authors use in the articles explicitly within their studies; however, the scope of their definitions are narrow. For instance, Barth et al. (2018) focus on accounting amounts of the book value of equity, net income, and net income before extraordinary items, while Daske et al. (2013) measured their economic outcomes using three concepts. Furthermore, Li et al. (2021) use a two-step research design to determine the economic consequences of IFRS adoption.

The studies generally appear to use existing concepts and methodologies from mainstream financial accounting research including certain instances of within field use. Key and Kim (2020), for instance, state that they “apply the methodology of Barth et al. (2008)”, which indicates that their analysis relies on existing concepts and attempts to enhance the meaning of those concepts when used in a different setting. In Barth et al. (2018) study, the authors state that “All of the accounting quality metrics are based on previous research”. In a recent study, Li et al. (2021) state that they “use the level of disaggregation of accounting numbers reported in financial statements proposed by Chen et al. (2015)”. One can find similar statements in the other studies, suggesting that the authors have taken concepts from previous research and applied them in various settings.

Except for Daske et al. (2013), the concepts the authors use in these studies do not appear to follow Lazarsfeld's approach completely. Imagery and the formulation of indices did not play any role in these studies. Daske et al. (2013) appear to follow Lazarsfeld's approach to conceptual formation. The authors make use of "latent" or unobserved constructs formulated using an economic theory that one can measure, such as reporting incentives. One could view this as the "imagery" of the concept. The authors then specify the construct and chose empirical indicators, which they use in an attempt to close the gap between reality and the concepts (Lazarsfeld & Rosenberg, 1955).

The concepts in all the studies play primarily a deductive role or are formed in a deductive way. Furthermore, the central phenomenon is operationalised using existing concepts. For instance, in Daske et al. (2013) study, the authors measured the central phenomenon using three existing concepts. Barth et al. (2018) wrote: "We operationalize accounting quality using earnings management, timely loss recognition and value relevance metrics". After being operationalised, the concepts were then transitioned into an empirical setting in the form of variables. The inductive part of the process led to the formation of informative patterns, which aid in understanding the phenomenon (Swedberg, 2017). The authors identified patterns from the qualitative assessment of the model, which they then described and offered meaning.

The concepts in the studies by Barth et al. (2018), Trimble (2018), Mensah (2020), and Christensen et al. (2015) appear to identify the qualitative aspects which require further elaboration (albeit only within the context of their papers). The concepts used in the studies could also be seen as sensitising concepts, as they open up the field for further investigation. Moreover, in a sense, the concepts are borrowed from past research and amplified in the authors' work. They are thus heuristic devices. The authors elaborate on the concepts and form them into models that they then test. The studies other than the above, however, did not identify any future research areas, and the patterns expressed do not identify any qualitative aspects for further elaboration.

The main function of the concepts in the selected studies is to form a structure among the variables. All the selected studies have used variables based on past research. Then, the authors form higher-level aggregate structures based on the assumption of causal power arising from these structures. The authors first identify relationships between IFRS adoption and its effect on the phenomena in question. The authors then form the variables to specify a higher order economic structure to assess whether IFRS adoption had any effect on the phenomena they examine.

The concepts in the selected articles also appear to be formed through colligation. The concepts in the studies are bound through the general essence of the phenomena the authors are investigating. The authors also tie certain facts to this idea and show that IFRS adoption has affected the phenomena they are investigating. Later, the authors bind these facts and analyse the phenomena. The formation of concepts in these works thus follows the approach in Swedberg (2017).

4.3. Explanation and the role of theory in the selected articles

In all the articles, the authors begin by mentioning the explanandum or the phenomenon of interest in their study that is associated with the effects of IFRS adoption. The authors use concepts, in the form of variables, to create a model. The authors next derive explanans or hypotheses and subsequently test them using empirical analysis. If statistical significance is attained, then the authors consider the explanans to be successful in explaining the phenomenon.

Based on the observations of other accounting standards that may be similar to IFRS, the authors produce hypotheses, which they test in a new setting. This is the hypothetical aspect of the theory. However, in some of the studies the authors do not explicitly state their hypotheses in the form of statements. Rather once the authors arrive at a hypothesis, they deduce statements describing the phenomena from the theoretical statements.

The authors link the concepts of the theories to the concepts describing the phenomena. In this sense, theories also serve to provide a functional explanation. The texts first consider the phenomenon that is being investigated. The authors form variables to measure the phenomena being investigated, and thus they aid in the explanation of the main phenomenon. The questions about the relationship between the parts and the whole to which they belong is explained. These authors then use the relationships to predict the phenomena.

The nature of the explanations in the selected studies appears to be mechanistic. One could view the mechanism in the studies as an underlying structure or a process. The papers examine the change in the information environment through IFRS adoption. Thus, one could view adoption of IFRS as the process that leads to changes in the information environment. Li et al. (2021), for instance, mention that IFRS causes changes in disclosure quality which further leads to changes in economic consequences around IFRS adoption. Hence, the nature of the authors' explanation appears to be mechanistic.

5. Discussion

The central phenomena addressed in IFRS-based financial accounting research is the assessment of accounting quality after the standards were adopted and their effect on capital markets. Much of the theory construction and conceptual formation is conducted within the positist paradigm and the research thus strives to present an objective reality.

Conceptual formation and the role of theories in explanation is the same across the sample. These studies appear to benefit from the theories and concepts used in past research. This is expected, given that the field is relatively new; the EU first mandated IFRS in 2005, prompting IFRS-based accounting research in subsequent years. Naturally, in the period after a particular field establishes itself, it gradually develops its own concepts and theories. The role theories play in explaining the phenomena, however, remains the same.

Research on IFRS-based accounting has mainly been conducted within the positivist paradigm, which offers a highly objectivist view of a common single reality. The reality here exists independently of human thought and perception where it can be accurately described and causally explained (Benton & Craib, 2001; Bisman, 2010; Ryan et al., 2002). This positivistic view does not appear to fully comport with IFRS-based accounting research in this sense, as empirical work cannot clearly address the phenomena in question. Standard setters and enforcers do not necessarily exhibit a common pattern of thought and background. This leads to unobservable cross-country and interfirm differences that the empirical model does not account for. This calls for considering other philosophical lenses that can assist in incorporating the unobserved or qualitative aspects of the research. For instance, IFRS-based financial accounting research could offer a critical realist perspective that allows researchers to match their research questions with particular methods while maintaining a sound empirical basis, appreciating exactitude in research investigations and the idiographic and contextual nature of human behaviour, and remaining cognisant of the role accounting information plays in society (Bisman, 2010).

Most of the studies in the IFRS-based financial accounting research literature seem to benefit from the use of existing concepts from the mainstream financial accounting research including certain instances of within field use. Though not currently very common, this research stream could also benefit from more studies that use sociological or behavioural concepts rather than being referred to a particular topic. The use of behavioural concepts could, for instance, enhance the body of knowledge on financial reporting behaviour as Guermazi and Halioui (2020) show. This would add a significant wealth of ideas that will enable research to be integrated into a sociological tradition where one not only produces research based on an exclusive topic, but also refers to concepts and theory and influences future research (Swedberg, 2017).

Concepts in financial accounting research are defined loosely. Their definitions may vary across different research contexts. This makes it challenging to integrate the findings of empirical research into the discipline. Given that most studies use concepts in the form of variables, IFRS-based accounting research arguably belongs to the operationalising research tradition where concepts are specified and measured to produce variables for research. This approach has been criticised both for not being sufficiently radical and for assuming and strengthening pre-existing differences. However, some concepts are also sensitising insofar as they open up the field for further investigation. This also suggests that concepts are used as means to establish a connection with the empirical world (Flemmen, 2017); this is present in all of the chosen studies.

Much of the IFRS-based accounting research appears to utilise hypothetico-deductive forms of explanation where theories are only used to deduce statements about observable patterns (Benton & Craib, 2001). The definitions of the concepts are offered here to link concepts that appear in the theory with the concepts used in the description of the phenomena that are to be explained. These definitions could be seen as bridging principle that could be interpreted in different ways. Given the positivist nature of IFRS research, one could view these definitions merely as formal rules (i.e., bridging principals) for translating theoretical concepts into empirical ones. These, however, do not commit the researcher to belief in the reality of the phenomena assumed in the theories. Alternatively, these bridge principals might also be viewed as containing substantive knowledge claims in their own right (Benton & Craib, 2001). The nature of the quantitative relationship between IFRS adoption and the outside world of financial reporting needs to be investigated thoroughly as one cannot simply use theoretical concepts and their definitions.

The aim of much of the IFRS research has been to work with above-mentioned phenomena. However, the conclusions of the research are not fully attributable to IFRS adoption. This might hint at theoretical inadequacy and one way to address this issue is developing a better understanding of the mechanisms involved, which the extant research seems to provide only a vague understanding.

5.1. Limitations and recommendations for future research

Our study has certain limitations. For example, while our paper attempts to offer an overview of conceptual formation in IFRS-based financial accounting research, our analysis is based on a rather small sample of eight articles. Consequently, we cannot claim our review offers a representative snapshot of the relevant issues within the field, and our study should be viewed as preliminary assessment. Moreover, our review was rather narrow in its topical scope, focusing mainly on conceptual formation and explanation. This scope could be broadened in future research to offer a more elaborate analysis of other philosophical issues related to the field.

Based on the above, we suggest the following for future research. First, we suggest that future studies explore the issues raised in this paper in the context of other articles within the field. Second, we recommend that future IFRS-based accounting studies should incorporate sociological and behavioural concepts to broaden the diversity and enhance the fruitfulness of the research field. Further, future research should take a critical realist perspective, which could potentially benefit accounting research agendas in providing an in-depth understanding of the economic, regulatory, social, and political effects and uses of accounting.

6. Conclusions

In this paper, we addressed conceptual formation and different forms of explanation in IFRS-based financial accounting research. Our review suggests that most IFRS-based financial accounting research is conducted within a positivist paradigm and uses concepts from existing research. Further, the central phenomena this type of research examines is the effect of IFRS adoption on accounting quality and information environment. The concepts are mainly formed in a deductive way, and the methodology applied within this research field is strictly empirical. In these studies, the explanation tends to be mainly mechanistic. We recommend more research in the future relating to the issues we have raised in this paper.

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Notes

1. For instance, in supply chain management. For more details, see Tsao (2015), Sayyadi and Awasthi (2018), and Hao et al. (2018).
2. Lazarsfeld did not believe in producing definitions of concepts, and he was not very interested in the initial phase of concept formation (Swedberg, 2017). Hence, the term "imagery" is used.
3. For instance, in IFRS-based fianancial accounting research, the concepts appear to be bound through the idea of financial reporting quality. In other social science areas such as supply chain management, they seem to be linked through the idea of efficient and sustainable supply chain management. See the following studies for more examples of colligation: Christensen et al. (2015), Barth et al. (2008), Rabbani et al. (2019), and Rabbani et al. (2020).
4. The studies using these concepts are mentioned in Table 1.

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The author(s) declare no conflict of interest.

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