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Methodological Deficiencies in the Expert Testimony of Forensic Accountants: A Qualitative Content Analysis of Judicial Statements Pertaining to Daubert Exclusions

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Abstract

Purpose: The purpose of this research was to examine the methodological factors that judges perceive as reasons for excluding the expert testimony of forensic accountants in order to map this rationale onto the Daubert standard.

Methodology:. A case study research design using a qualitative content analysis of 34 federal cases involving methodological violations of the Daubert standard was selected. Open and axial coding was applied to the judicial statements to ascertain the general themes as well as the specific categories that constituted those themes.

Findings: Judges primarily excluded testimony based on deficiencies in evidence, methods, and reasoning. Deficiencies in evidence and method were isomorphic with the Daubert standard, whereas deficiencies in reasoning were unique to this analysis. Further, these thematic categories were interconnected in ways not explicitly expressed in the Federal Rules of Evidence.

Originality/Value: This study provided a detailed understanding of how judges understood methodological deficiencies when applying the Daubert standard in order to exclude the testimony of forensic accountants. Practical insights on what forensic accountants should focus on when analyzing their own methodological concerns is obtained.

Introduction

The role of the forensic accountant functioning as an expert witness is to provide an analysis of financial data to judges and juries in order that they may better understand the underlying nature of a potential financial crime or dispute (Crumbley, 2009; Manning, 2011). The analysis should provide proof of financial liability or calculation of damage amounts in a lawsuit (Kranacher & Riley, 2019). Although the forensic accountant functioning in the capacity of an expert witness is tasked with applying specialized training and knowledge in order to assist the trier of fact, judges will often bar the testimony of FA expert witnesses in part or in whole.

There are many reasons judges use to exclude the testimony of expert witnesses in general and forensic accountants specifically. Judges will often partially exclude forensic accountant testimony when forensic accountants attempt to interpret the law, draw legal conclusions of liability and guilt, and interpret the psychological intentions of defendants (Crumbly & Cheng, 2014). Such actions are the proper domain of the courts. Also, at the state level, testimony may be excluded based on the Frye standard when an expert uses novel scientific techniques that have yet "to gain acceptance among members of the scientific community" (p. 1164, Epps & Todorow, 2018).

In federal courts, judges primarily use the Daubert standard to exclude expert testimony. The Daubert standard focuses on the qualifications of experts and their methodology. Although PricewaterhouseCoopers ([PWC], 2020) estimated that judges prefer the validity of financial expert methods of analysis and the validity of conclusions drawn from that analysis to be determined through the process of cross-examination, judges are not averse to applying the Daubert standard *in limine* to exclude FA expert testimony. Indeed, out of 224 Daubert challenges in 2019, approximately 37% (83) resulted in partial or full exclusion of financial expert witnesses' testimony. According to DiGabriele (2020, 2011), judges are particularly

sensitive to bias, and forensic accountants often underestimate their level of objectivity.

Daubert Standard

In 1993, the United States Supreme Court established the Daubert standard in the case of *Daubert v. Merrell Dow Pharmaceuticals, Inc*. (Jurs & DeVito, 2013). The Daubert standard comprises the criteria by which a judge determines whether the testimony proffered by an expert witness is admissible in a federal court. More specifically, the language of Daubert tasks the judge with determining (a) whether a forensic accountant is qualified, (b) whether the testimony will assist the trier of fact (judge and/or jury) understand a fact or issue, (c) whether the testimony is grounded in fact, (d) whether the testimony is based on sound scientific methods, and finally, (e) whether the expert has analyzed the facts using those methods correctly (Federal Rules of Evidence, 2007). If the expert fails to meet any one of these criteria, the judge may exclude some or all of the expert's testimony.

Judge as Gatekeeper

The Daubert standard provides concrete guidelines that judges use to evaluate the admissibility of expert testimony. Although the Daubert criteria are exact, judges still have some flexibility in determining the viability of testimony (Summerford, 2002). Daubert may specifically task a judge with determining whether the methods employed are based on fact, whether they are sound, and/or whether they are relevant, but Daubert does not task a judge with how to make those determinations.

According to Summerford (2002), judges typically favor allowing competing methods to play out in court, and will often give FA's the benefit of the doubt. Additionally, judges have even allowed those who were not forensic accountants or certified public accountants to testify as financial expert witnesses despite the fact that Daubert specifically tasks judges with making sure expert witnesses are qualified (Jurs & DeVito, 2013). According to Digabriele (2008b, 2011), judges' perceptions of

the competencies of forensic accountants functioning as expert witnesses play a fundamental role in determining the outcome of a case.

Trends in Daubert Exclusions

PWC conducted a 20-year study (2000-2019) of Daubert challenges to financial expert witnesses. Their analysis indicated a total of 2,842 Daubert challenges to financial expert witnesses for that period. The following trends were observed:

- Reported challenges in 2019 numbered 224, which was an increase of 8% over the previous year. Of those 224 challenges, 83 (375) resulted in partial or full exclusion of the financial expert witness.
- Over the 20-year period, the primary reason for exclusion was lack of reliability (529) followed by lack of relevancy (321). The third reason was lack of qualification (79).
- The most commonly cited reasons for lack of reliability were insufficient data and faulty methods. The most commonly cited reasons pertaining to relevancy were experts presenting testimony beyond the scope of their expertise or testimony that failed to assist the trier of fact.
- The type of finical expert seeing the highest number of challenges over the 20-year period was economists (43%), followed by accountants (28%), a category with included forensic accountants.
- Although accountants saw fewer challenges than economists, in 2019, accountants experienced higher exclusion rates (43% versus 31%).
- Over the 20-year period, 67% of Daubert challenges are brought against plaintiff side financial experts, whereas 33% of challenges are brought against defendant-side finical experts.

Statement of the Problem

According to PCW, from 2000 to 2019, judges have excluded the testimony of financial experts at a rate of 33%. Meuhlman, Burnaby, and Howe (2012) determined the exclusion rate for forensic accountants was 46% from 1982 to 2010. The

exclusion rate has been determined as too high, and is particularly problematic when damage calculations are involved (DiGabriele, 2008a). Crumbly and Cheng (2014) argue that the judges have been particular open to excluding testimony since the advent of the Daubert Standard as Daubert includes explicit criteria for exclusion.

From 2000 to 2019, of the 2,842 Daubert challenges brought against financial expert witnesses, 929 cases resulted in partial or complete exclusion (PWC, 2020). PWC discovered that of the primary reason for exclusion was lack of reliability (529) followed by lack of relevancy (321). The third reason was lack of qualifications (79). Reliability and relevancy are related to methodology. However, these are broad categories. The purpose of this research was to better understand judges' perceptions of methodological deficiencies in order to develop a more detailed scheme of what comprises methodological categories for exclusion. Doing so will provide a more accurate understanding of the specific methodology related reasons judges use to excluded forensic accountant expert testimony.

Fradella, O'Neill, and Fogarty (2004) discovered that judges are often hostile toward allowing FA expert testimony when such testimony involves calculation of damages. Although Meuhlman et al. (2012) indicate the 46% is too high and Fradella et al. (2004) describe judges as hostile to FA expert testimony regarding damage calculation, researchers do not identify the reasons for FA expert testimony disallowance.

Defendants, including individuals and businesses that require that forensic expert witness testimony be effective may suffer when the FA lacks the necessary competencies to convince judges to hear FA testimony (DiGabriele, 2008a; Folami et al., 2013). In addition, judges and juries base their decisions partly on the information presented by FA expert witnesses (Crumbley & Cheng, 2014; Crumbley, Heitger, & Smith, 2005). If FA expert witness testimony is disallowed, then judges and juries may receive incomplete or poor information from which to make inferences (Crumbley et al., 2013). By understanding judges' perception of FAs as

expert witnesses as to why they disallow FA expert testimony, practitioners will potentially better understand how those competencies are evaluated thus potentially leading to improved FA testimony and potentially, an improved testimony-allowance rate.

Purpose of the Study

The purpose of this research was to examine the methodological reasons that judges perceive as reasons for excluding the expert testimony of forensic accounts. The Daubert standard provides general criteria for excluding expert testimony. By examining the language judges offered in federal court when they explain their rationale for exclusion, we were able to map this rationale onto the Daubert standard. That is, themes and categories emerging from a qualitative analysis of the language of judges can be compared to the actual language of Daubert. Mapping themes and categories that represent judicial perception onto Daubert allowed for an understanding of where judicial perceptions converge and where they diverge when compared to the Daubert criteria.

Research Questions

Because this study sought to discover the methodological reasons judges provided when excluding the testimony of forensic accountants when applying the Daubert standard, the following research questions were explored:

Q1. What are the methodological reasons judges state for excluding FA testimony when applying the Daubert standard?

Q2. How are those expressed reasons conceptually and thematically interrelated?

Q3. In what way do the emerging themes correspond to the language of Daubert and how might they diverge, if indeed they do?

Research Methods and Design

A case study research design was employed. The initial step in a case study design, according to Yin (2018), is to identify the case within the social context. This is because the context informs not only the boundaries of the case, but also many characteristics of the case itself. Miles and Huberman (1994) describe the case as a phenomenon associated with a specific context. The difference between the social context and the case being studied is not necessarily discrete. That is, the relationship between the case and the context is not always separate. For this research endeavor, the case was defined as the judiciary perceptions of forensic accountant's methodology when they chose to exclude that testimony in part or in whole. The context was the defined as the court of law involving fraud cases where forensic accountants functioned as expert witnesses. Stake (1995) argued that the case should be described in terms of time and activity. Cases were analyzed from 2003 until 2020, thus setting the time parameter, and judges' perceptions as indicated by their statements were equivalent to the activity.

Population

The population consisted of approximately 10,000 federal and state judges in the United States (United States Courts, 2015). Within the population of 10,000 judges, it is not known how many judges have overseen cases of fraud, bankruptcy, and intellectual property cases, which are the kinds of cases forensic accountants participate in.

Sample

Purposive sampling, a non-randomized form of sampling, was employed. Cases were chosen "to make sure that specific kinds of cases of those that could possibly be included are part of the final sample in the research study" (Campbell et al., 2020, p.654). The characteristics of the case determined the selection. Consequently, the sampling units corresponded to legal cases involving the exclusion of expert testimony from forensic accountants. In addition, because the purpose of this

research was to analyze judges' perceptions of methodological related reasons for exclusion, only cases in which judges based their exclusion on methodology were included in the final sample.

Sample size was determined by saturation. Saturation, as defined by Urquhart (2013), occurs when no new codes arise from coding, and reiteration and redundancy characterize the coding process. Additionally, in alignment with criteria provided by Marshall, Cardon, Poddar, and Fontenot (2013), saturation was obtained when the coding frame remained constant and analytic memos provided no additional insight.

Qualitative Content Analysis

First, the legal case documents were prepared so that they could be entered into the Coding Analysis Toolkit (CAT), which is a qualitative tool for coding segmented text data. Second a coding frame was developed from the literature, as well as the language of Daubert (Davis, Farrell, & Ogilby, 2010; DiGabriele, 2008a; Folami et al., 2013; Summerford, 2002). After the data was segmented and entered into CAT, the data was coded and the coding frame reworked to accommodate new codes. After the first pass of the data was conducted, the data was recoded until no new codes emerged from the data. The coding allowed for both linguistic units corresponding to secondary and tertiary codes and more sophisticated thematic codes, which emerged as the primary codes (Renz, Carrington, & Badger, 2018; Schreier, 2012). Data were analyzed by organizing secondary and tertiary codes into primary codes and developing themes from those codes.

Open and Axial Coding

Coding was conducted using open and axial coding. After doing the open coding, the resultant codes were compared with each other in order to reveal the major categories associated with methodological reasons for exclusion. The open codes, which corresponded to judicial statements about methodology and exclusion of

testimony, were linked together in order to inform the primary themes. The open coding was primarily linguistic, a code representing a specific statement, whereas the axial codes revealed the more generalized perceptions of judges about deficiencies in methodology.

Results

Thirty-four cases involving Daubert exclusions where the judges based their exclusions on methodological flaws in the testimony of forensic accountants were analyzed using qualitative content analysis. Within those cases, 223 segments of the text were coded as relating to methodological flaws. Content analysis of judicial statements revealed nine sub-codes associated with methodological deficiencies. They were as follows: (a) deficient evidence, (b) deficient methods, (c) deficient reasoning, (d) lack of relevance, (e) faulty assumptions, (f) reference, (g) subjectivity, (h) standards of control, and (i) peer-reviewed status. Among these primary codes, (a) deficient evidence, (b) deficient methods, and (c) deficient reasoning were the reasons that judges cited most frequently when choosing to disallow forensic accountant testimony. These three primary codes corresponded to the three primary themes. Consequently, these codes capturing the qualitative dimensions of methodological competency that judges perceived that forensic accountants failed to display.

Theme 1: Deficient Evidence

The most often cited reasons judges disallowed forensic accountant testimony was *deficient evidence*. Three tertiary codes, namely *insufficient data*, *irrelevant data*, *absence of facts,* and *inaccuracy* comprised deficient evidence. Deficient evidence also displayed associations with other primary and secondary codes, including *faulty assumptions*, *lack of relevance*, *irrelevant data*, and *deficient reasoning*.

Judges expressed the perceptions of deficient evidence through the tertiary codes. For example, some forensic accountants used irrelevant data. In the following

excerpt, the judge deemed the evidence to be irrelevant because the FA used data from a non-comparable organization.

> To the extent that the expert relied on data from larger companies that were not comparable and thus not relevant to the measure of lost profit damages, the trial court acted within its discretion to exclude the testimony because it was not based on matter of a type reasonably relied upon. (*Sargon Enterprises, Inc. v. University of Southern California*, 2012)

In a different case, the judge characterizes the evidence as being insufficient. This insufficiency undermined the "methods, principles, and conclusions" presented by the FA. Regardless of how technical or sound a methodology is, if it is not supported by enough evidence, the judge has a valid reason to disallow expert testimony.

> The court's view in both cases is the same: that [the FA's] methods, principles and conclusions are unsupported by sufficient facts or data and are not based on reliable accounting methods or principles sufficient to overcome the Receiver's evidence that VesCor was a Ponzi scheme. (*Wing v. Buchanan*, 2014)

In addition to insufficiency, some testimony was marked by a complete absence of facts, as indicated by the following excerpt: "In short, it appears many of [the FA's} assumptions, which constitute the bases for the conclusions she had formed by the time she wrote her report and sat for her deposition, are based on no evidence at all" (*Durham v. FCA US LLC, 2019*). Again, the judge typically ties deficient evidence to other aspects of the methodological failure. In the above case, the absence of evidence makes the FA's assumptions invalid, the judge later noting that this ultimately does not assist the trier of fact. (*Durham v. FCA US LLC, 2019)*

Another type of deficiency pertained to the accuracy of the evidence. In the following passage, the judge disallowed the testimony of one FA in favor of another. This is

because the facts on which conclusions are draw did not accurately represent depreciation value:

> The replacement value as stated does not include any adjustment for depreciation or out of service equipment that is included on [the] equipment list. Based on the overstatement of equipment, the Goodwill calculation is impacted. Therefore, the court relies on [FA2's] forensic expert's report (*Smith v. Smith*, 2007).

The judge disallows the first forensic accountant's report because the facts on which valuation calculations were made were inaccurate. Inaccurate evidence was coded as a type of deficient evidence.

Theme 2: Deficient Methods

Thirty-six judicial statements were coded as expressing perceptions of deficient methods. *Absence of method*, *unreliability*, and *non-specialized methods* were the most frequent sub-codes that informed the primary code. In the following example, the judge finds that simply reproducing data without analysis constitutes an absence of method and is thereby grounds for disallowance:

> The Court can find no accounting methodology at work in DiRuzzo's reading of deposition testimony and responses. With no methodology to examine and no accounting data to examine, the Court cannot even say "there is too great an analytical gap between the data and the opinion proffered" [...] At rock bottom, DiRuzzo's methodology consists of regurgitating percentages printed on tax forms. (*Arvidson v. Buchar, 2019*)

Elsewhere, the judge indicates that a market forecast cannot be based on wishful thinking about market share. The particular FA's testimony is disallowed because the judge perceives the method was based entirely on an assumption about market share and confuses assumptions about market share with market forecasting. This makes the market forecasting method unreliable at best:

> [FA's] Market Forecast Analysis assumes that [company number one], through [company number two], was expected to capture a ten-to-fifteen-percent market share [...] Defendant writes that [FA's] Market Forecast Analysis "is based solely upon the wishful thinking that 'if' [company number one] could achieve a percent of [company number three's] business, it would be a huge success."). [Company number two] asserts that "[s]uch a statement cannot serve as a foundation for the calculation of damages" (id. at 14), and we agree [...] Contrary to this representation, the Market Forecast Analysis is not built on such projections and, absent this support, [the FA] must be precluded from testifying to this methodology or its implications at trial. (*Washington v. Kellwood Co.*, 2015)

This particular method, market forecasting, could not be used to predict market share and thus was an irrelevant and therefore unreliable method. In a separate case, a different judge in disallowed the FA's testimony because it was fond to be unreliable:

> Moreover, [the FA] did not present any expert testimony supporting either his method or his resulting figure. Indeed, [the FA] testified that, due to the hybrid nature of [defendant's] practice, other valuation methods "couldn't be used here." Thus, the trial court could properly find that [FA's] suggested valuation, too, was unfounded and unreliable. (Court of Appeal of California, 2003)

Yet another type of deficient method occurred when the judged deemed the method rudimentary to the extent that no specialized knowledge or skill would be required to conduct an analysis. Judges determine whether a given method is a product of expert or lay analysis. That does not mean the forensic accountant needs to be an expert in specific fields related to the case. It does mean that if a non-expert can conduct the analysis, then the judge may very

well evaluate the method as unprofessional and requiring no special knowledge particular to forensic expertise.

> Schachter testified that his analysis of the market for bamboo viscose products consisted of his turning on his computer, visiting websites, reading product descriptions, comparing SKU numbers, and speaking to his wife and a few individuals in his office. This "analysis" is hardly the application of any special skills or knowledge at all, let alone the application of any special skills or knowledge associated with accounting or forensic accounting. It is an analysis that anyone with internet access and a high school education could have undertaken. (*New Eng. Mercantile, LLC v. Fishers Finery, LLC, 2019*)

Theme 3: Deficient Reasoning

Analyzing valid and sufficient evidence using scientific and expert methods is not always enough to guarantee the FA's expert testimony will not be rejected. The third most common reason for rejecting FA testimony as it relates to methodology was the failure on the part of FAs to reason logically toward a sound conclusion. According to statements made by judges, FA testimony must express a coherent argument both in the FA's report and verbally. For Case 39, the judge evaluated the FA's reasoning as being "entirely circular." (*Sargon Enterprises, Inc. v. University of Southern California*, 2012)

> The summary exclusion of other companies from his analysis, along with the fact that it should not be a startling revelation that biotechnology companies that have innovative products, all other things being equal, do better than those who do not, render this 'driver' equally meaningless for comparison purposes. (*Sargon Enterprises, Inc. v. University of Southern California*, 2012)

The comparison with unlike companies led to the circular reasoning described by the judge. The trial judge observed that no logical comparison with similar companies was made, leading to merely speculative conclusions.

Faulty assumption formed another major sub-code related to problems with deficient reasoning. Faulty assumption was most frequently tied to relevancy.

> [The FA] may only opine on the prudence and fairness of the sale of the stock executed in a SIT on December 27, 1999. His opinions based on the assumption that separate transactions existed are excluded for the reasons set forth in the Court's summary judgment order. (*Hans v. Tharadlson, 2011*)

Elsewhere, the FA based his reasoning on several faulty assumptions.

> [The FA] did not provide any facts to support his assumption that these four games would all have sold 2.5 million copies. In making this unsupported assumption, he relied exclusively on another unsupported assumption, that Too Human would have sold 2.5 million units but for the delay. He also discounted SK's expected profits on each game by a percentage, in order to reflect the probability that the game would not be produced. Lloyd Report 29-30. However, [FA] admitted that in assigning these probabilities, he made another "judgment call," and that there was a wide range of reasonable probabilities that he could have chosen for each game. (*Silicon Knights, Inc. v. Epic Games, Inc., 2011).*

Theme 4: Categorical and Thematic Relations

Axial coding revealed the interrelationships between different codes and between different codes and themes (figure 1). In many instances, a given sub-code was linked to no only the primary code that the sub-code helped define, but it was also linked to other sub-codes. These links were non-definitional; that is, the connection was either between sub-codes or when they were axially linked to a primary category or themes, it was primary in terms of association. For example, in Arvidson v. Buchar

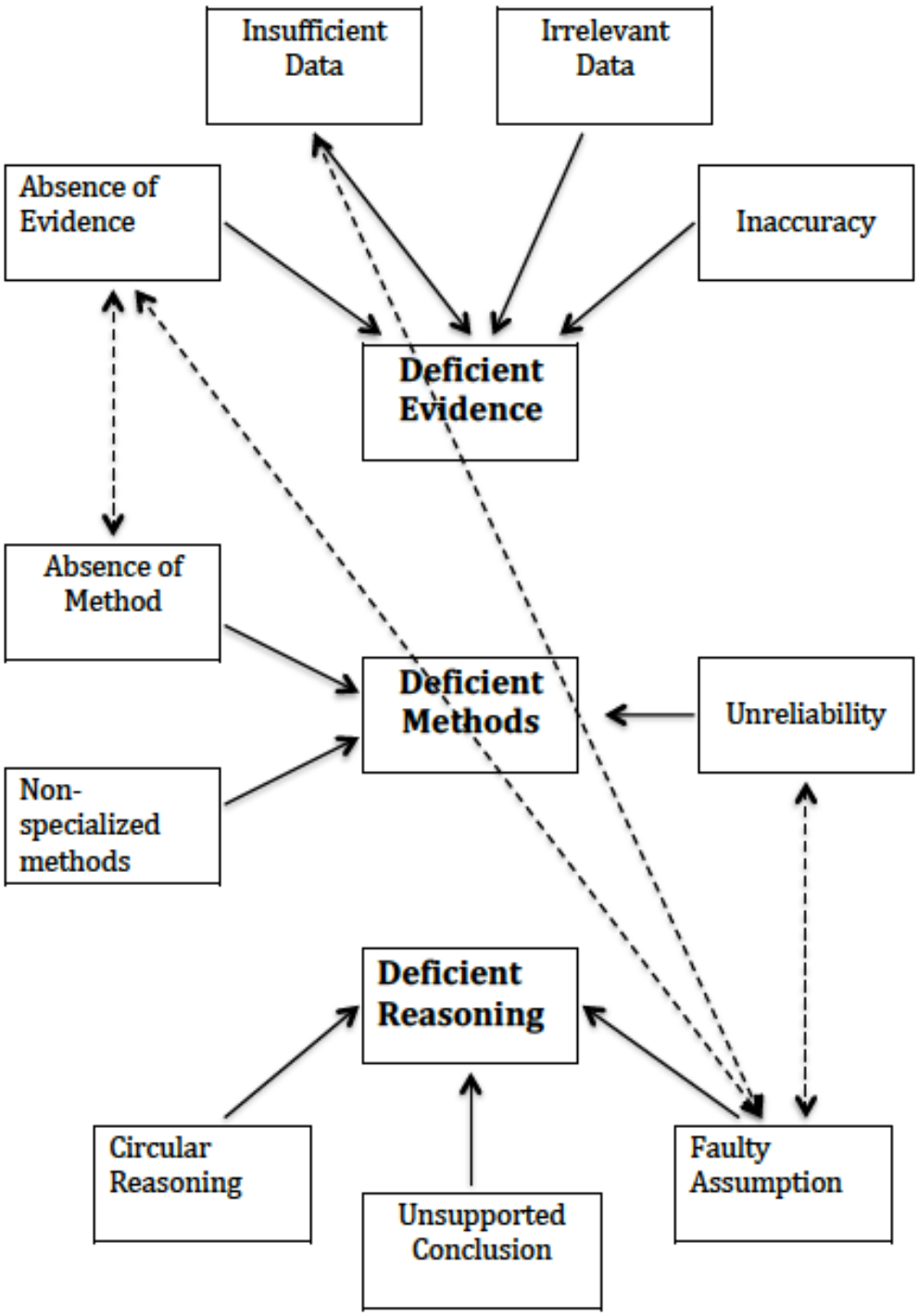
(2019), the absence of facts and the absence of method are linked to each other in the judge's perception. However, the absence of facts and the absence of method run parallel. Absence of method is not based on absence of facts although the characteristic of both types of absence is described as coeval.

The most frequent interrelated code was faulty assumption. It was linked to a wide range of sub-codes, including absence of facts, insufficient data, relevance, and unreliability of methods. For example, in Washington v. Kellwood Co. (2015), the judges expresses an unreliable method as being based on a false assumption, namely, that market share can be determined through market forecasting.

In Silicon Knights, Inc. v. Epic Games, Inc. (2011) the methods that the FA used rested on certain faulty assumptions, and although the methods and calculations may themselves be reasonable, if the assumptions on which those methods and calculation rests are not valid, then the method, no matter how reliable in-and-of-itself, becomes irrelevant in the context of the case. Finally, insufficient evidence was another frequent interconnected code. Often applied methods that were based on insufficient evidence were perceived as deficient. Additionally, in one case, imagined evidence was an instance of both deficient evidence and faulty assumption (Hans v. Tharadlson, 2011). Finally in Silicon Knights, Inc. v. Epic Games, Inc. (2011) the absence of facts did not support an assumption.

Figure 1

Axial Coding Relationships between Themes and Codes



Note. Solid lines indicate secondary codes informing the major themes. Dashed lines indicate the relationship between secondary codes.

Discussion

Analysis of the methodologically related reasons that judges excluded the testimony of FAs revealed the following three primary categories of exclusion: (a) deficient evidence, (b) deficient methods, and (c) deficient reasoning. Each of the primary categories was comprised of frequent sub-themes or –categories. Deficient evidence was most often marked by being insufficient, absent, irrelevant, or inaccurate. Deficient methods was primarily characterized by absence, lack of reliability, and being non-specialized. Deficient reasoning was indicated by unsupported conclusions, circular reasoning, and faulty assumptions.

According to PWC (2020), "When excluding testimony due to a lack of reliability, courts most frequently cited a lack of sufficient data or the use of methods that are not generally accepted as reasons for exclusion" (p.5). The current research corroborates that insufficient data and unacceptable methods are primary reasons for exclusion. Such observations, however, are unfortunately too general. The current research suggests the lack of sufficient data and unacceptable methods are too generalized a description to be very useful. Content analysis of the language of judges reveals a more complex and nuanced perceptual dynamic for reasons of exclusion. In addition, problems associated with logical reasoning formed a major category of judicial perception.

Furthermore, often these categories are related. For example, when describing the absence of methods in Arvidson versus Buchar (2019), the judge estimates that the regurgitation of tax percentages by the FA is not only indicative of any discernable method, but that no facts were analyzed as well. Although tax percentages are arguably evidence in the technical sense, the act of simply reproducing those facts without meaningful analysis rendered those facts meaningless. The judge estimated that the FA did not use any valid accounting data. Absence of method is thus associated with absence of evidence. Importantly, this case displays the link between

deficient evidence and deficient methods. That is, they are not necessarily categorically distinct.

Elsewhere, faulty assumption appeared to intertwine with unreliability of method. When, in Washington versus Kellwood Co (2015), the judge perceives the method as unreliable, he does so due to faulty assumptions. The assumptions about a what-if scenario amounts to “wishful thinking” on the part of the FA (*Washington v. Kellwood Co*, 2015). In what-if scenarios, "the expert constructs a model that assumes an alternative reality" (Todd & Jewell, 2018, p. 307). According to Todd and Jewell (2018), "Sometimes the model gazes backward to predict how business would have performed from the moment of the unlawful act until the time of trial" (p. 307).

According to the authors, there are three types of dubious assumptions "so severe as to warrant exclusion of expert damage testimony" (p. 298). They are (a) unreasonable comparisons, (b) unfounded simplifications, and (c) unrealistic scenarios. For this study, three cases fell under the category of unrealistic scenarios. In addition, faulty assumptions pertained to a more general category of deficiencies of reasoning.

Thematic Mapping to the Daubert Standard

There are three criteria within the Daubert standard that are arguably related to methodology. They correspond to (1) whether the testimony is grounded in fact, (2) whether the testimony is based on sound scientific methods, and (3) whether the expert has analyzed the facts using those methods correctly (Federal Rules of Evidence, 2007). The results of this investigation suggest that Daubert exclusions based on methodological inadequacies, as perceived by judges, in the expert testimony of forensic accountants corresponded to three primary themes: (1) deficient evidence, (2) deficient methods, and (3) invalid reasoning. Daubert criteria can be directly mapped onto the first two of these three themes.

The first methodological criteria of Daubert, namely, whether the testimony is

grounded in fact corresponds to theme 1, namely, deficient evidence. The second criteria, whether the testimony is based on sound scientific methods corresponds to theme 2, which is deficient methods. The final criteria, whether the expert has analyzed the facts using the methods correctly appears also to correspond to theme 2. Deficient reasoning, theme 3, may or may not correspond to the second criteria. Insofar as invalid reasoning characterizes correct application of methods to facts, then perhaps it does. However, only one sub-code that informed theme 3, namely, conclusion unsupported by facts, appears to be related to the third criterion of Daubert. The other two sub-codes, circularity and faulty assumptions, really belong to their own category.

Conclusion

This research suggests that forensic accountants functioning as expert witnesses should be cognizant that the reasons related to methodology that judges use to exclude expert testimony are multifaceted. Methodology based on exclusions revolved around the three central concepts of evidence, methods, and reasoning. For each of those concepts, there were tendencies that the content analysis revealed, pinpointing the specific makeup of those concepts. Unsurprisingly, methodological related exclusions mapped fairly accurately onto the Daubert standard. This was particularly true for the concepts of evidence and methods when comparing the language of Daubert with the language expressed by federal judges. However, deficiencies in FA reasoning, which were perceived as being grounds for exclusion, are not specifically covered in the language of Daubert. That is, for example, Daubert does not specifically excluded testimony that is characterized by circular reasoning or is based on faulty assumptions.

Additionally, the language provided by judges revealed more specific dimensions of methodological exclusion. This suggests the Daubert standard is general guideline and that FAs should pay particular attention to specific rationale that informs the concepts of evidence, methods, and reasoning.

For example, regarding deficient methods, FA's should pay particular attention to avoiding non-specialized methods. Daubert mentions "specialized knowledge" in a conditional sentence, but does not explicate what specialized knowledge is (Federal Rules of Evidence, 2007); it only specifies that methods used should be reliable and applied reliably to the facts of the case. It is also crucial that FAs actually have a method to begin with. Simply conducting basic calculations is not enough. As Crumbley and Cheng (2014) state, "Accounting experts should ensure that they are well versed in the assumptions that comprise the theoretical model and be prepared to explain why these assumptions are, or are not, relevant to the test of the theory or the application of the theory to the case" (p. 52).

Finally, FAs should pay close attention to the intersection of evidence, methods, and reasoning. This research suggests that these concepts do not function in isolation. Evidence, method, and reasoning are intertwined. When judges cited methods and being absent, for example, they often cited lack of evidence. Additionally, deficient reasoning, particularly false assumptions, was associated with deficient methods or deficient evidence. Although the finding and s apply to U.S.-based forensic accountants operating in U.S. courts, these same findings may apply to international court settings where judges must decide on the admissibility of forensic accountants functioning as expert witnesses.

References

Arvidson v. Buchar, VI Super. 153. No. ST-16-CV-140, LEXIS 140 (2019).

Campbell, S., Greenwood, M., Prior, S., Shearer, T., Walkem, K., Young, S., Bywaters, D., & Walker, K. (2020). Purposive sampling: complex or simple? Research case examples. *Journal of Research in Nursing*, *25*(8), 652–661. https://doi.org/10.1177/1744987120927206

Coding Analysis Toolkit [Computer software]. Pittsburg: University Center for Social and Urban Research, University of Pittsburg. Retrieved from. http://cat.ucsur.pitt.edu/

Court of Appeal of California, Cal. App. Unpub. LEXIS 8670 (Cal. Ct. App. 2003).

Crumbley, D. L., & Cheng, C.C. (2014, February). *Avoiding losing a Daubert challenge: Some best practices*. Paper presented at the 2014 JLTR Conference. doi: 10.2308/jltr-50765

Crumbley, D.L., Heitger, L.E., & Smith, G.S. (2005). *Forensic and Investigative Accounting*. Chicago, IL: CCH Group.

Davis, C., Farrell, R., & Ogilby, S. (2010). *Characteristics and Skills of the Forensic Accountant.* New York, NY: AICPA.

DiGabriele, J.A. (2008a). An empirical investigation of the relevant skills of forensic accountant. *Journal of Education for Business, 83*(6), 331-338. doi:10.3200/JOEB.83.6.331-338

DiGabriele, J.A. (2008b). The adversarial bias of accounting experts in financial litigation: An empirical analysis of compromised objectivity in accounting expert testimony. *Journal of Accounting, Ethics & Public Policy*, *8*(1), 1-22. Retrieved from http://www.jaepp.org/home

DiGabriele, J.A. (2011). An observation of difference in the transparent objectivity of forensic accounting expert witnesses. *Journal of Forensic & Investigative Accounting, 3*(2), 390-416. doi: 0.1016/0278-4254(84)90025-5

Digabriele, J., Heitger, L.E., & Riley, R. (2020). A synthesis of non-fraud forensic accounting research. *Journal of Forensic Accounting Research*. 5(1), 257-277. https://doi.org/10.2308/JFAR-19-034

Durham v. FCA US LLC., No. 2 C 17-cv-00596-JLT (Eastern District of California 2020)

Epps, JoAnne & Todorow, Kevin (2018). Refryed forensics: Screening expert testimony in criminal cases through frye plus reliability, *Seton Hall Law Review*. *48*(4), 1161-1198. Available at: https://scholarship.shu.edu/shlr/vol48/iss4/9

Federal Rules of Evidence: Rule 702 (2007). Retrieved from, http://www.uscourts.gov/rules/Evidence_Rules_2007.pdf

Folami, L. B., Mason, M. E., & Perreault, S. (2013). Evaluating the competence of a financial expert witness: Seven factors for consideration. *CPA Journal*, *83*, 55-57. Retrieved from, http://search.proquest.com/openview/23614b90673d06d830c6f7d53e8e3a81/1?pq-origsite=gscholar

Fradella, H. F., O'Neill, L., & Fogarty, A. (2004). The impact of Daubert on forensic science. *Pepperdine Law Review, 31*(2), 323-362. Retrieved from , http://digitalcommons.pepperdine.edu/cgi/viewcontent.cgi?article=1273&context=plr

Jurs, A. W., & De Vito, S. (2013). Et tu, plaintiffs? An empirical analysis of Daubert's effect on plaintiffs, and why gatekeeping standards matter (a lot). *Arkansas Law Review, 66*, 975-1006. Retrieved from http://media.law.uark.edu/arklawreview/files/2014/03/66-ArkLRev-975-Jurs.pdf

Kranacher, M., Riley, R. (2019). *Forensic Accounting and Fraud Examination*. United Kingdom: Wiley.

Manning, G.A. (2011). *Financial investigations and forensic accounting*. Boca Raton, FL: CRC Press.

Marshall, B., Cardon, P., Poddar, A., & Fontenot, R. (2013). Does sample size matter in qualitative research?: A review of qualitative interviews in IS research. *Journal of Computer Information Systems*, *54*(1), 11-22. https://doi.org/10.1080/08874417.2013.11645667

Miles, M. B., & Huberman, A. M. (1994). *Qualitative data analysis: An expanded source book* (2nd ed.). Thousand Oaks, CA: Sage.

Muehlmann, B.W., Burnaby, M.H., & Howe, M. (2012). The use of forensic accounting experts in tax cases as identified in court opinions. *Journal of Forensic & Investigative Accounting*, *4*(2), 1-12. Retrieved from http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2130161

PricewaterhouseCoopers (2020). *Daubert challenges to financial experts: A yearly study of trends and outcomes (2000-2019)*. Retrieved from https://www.pwc.com/us/en/services/consulting/cybersecurity-privacy-forensics/library/daubert-study.html

Renz, S. M., Carrington, J. M., & Badger, T. A. (2018). Two strategies for qualitative content analysis: An intramethod approach to triangulation. *Qualitative Health Research*, *28*(5), 824–831. https://doi.org/10.1177/1049732317753586

Sargon Enterprises, Inc. v. University of Southern California, 55 Cal. 4th 747; 288 P.3d 1237 (Sup. Ct. CA. 2012).

Silicon Knights, Inc. v. Epic Games, Inc., U.S. Dist. LEXIS 147633 (Eastern District of North Carolina, Western Division 2011).

Smith v. Smith, No. B190102 Cal. App. LEXIS 4883 (2007).

Schreier, M. (2012). *Qualitative content analysis in practice*. Thousand Oaks, CA: Sage. Security Exchange Commission (SEC, 2015). Derivatives. Retrieved from https://www.sec.gov/spotlight/dodd-frank/derivatives.shtml

Stake, R. (1995). *The art of case study research*. Thousand Oaks, CA: Sage.

Summerford, R.Q. (2002). *Expert witnessing: The changing landscape*. Austin, TX: Association of Certified Fraud Examiners. Retrieved from, http://www.forensicstrategic.com/

Todd, J., and R.T. Jewell (2018). Dubious Assumptions, Economic Models, and Expert Testimony, *Delaware Journal of Corporate Law, 42*, 279-321.

United States Courts (2015). *Caseload Statistics Data Tables.* Administrative Office of the United States Courts. Retrieved from http://www.uscourts.gov/statistics-reports/caseload-statistics-data-tables

Urquhart C. (2013). *Grounded Theory for Qualitative Research: A Practical Guide.* Thousand Oaks: Sage.

Washington v. Kellwood Co., 105 F. Supp. 3d 293 (U.S. Dist. N.Y. 2015).

Hans v. Thraldson., No. 3 C 05-cv-115 U.S. Dist. LEXIS 151083, (D. North Dakota 2011).

New England Mercantile, LLC v. Fishers Finery, LLC, Conn. Super. LEXIS 2295, (2019).

Wing v. Buchanan, No. 8 C 803 U.S. Dist. LEXIS 54298 (D. Utah 2014).

Yin, R.K. (2018). *Case study research: Design and methods* (6th ed.) Thousand Oaks, CA: Sage.