

## **The Impact of Qualitative Factors on Ethical Judgments of Materiality: An Experimental Study with Auditors**

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### **ABSTRACT**

The place of the qualitative materiality in the professional judgments of audit has become increasingly important in research and especially after the publication of SAB.99. Our work has focused on the influence of qualitative factors (SAB.99) on the ethical judgments of materiality in France. Through real scenarios involving three qualitative factors, we tried with a sample of 44 experienced auditors, to test the influence of these on the ethical judgments of materiality. The results confirmed the influence of the qualitative factors on materiality's ethical judgments. The results provided also that the magnitude of consequences and the social consensus are two main criteria on which ethical materiality judgments are focused. The proximity of auditor to his client weakly influenced the ethical materiality judgments.

*Keywords:* Judgment of materiality; Ethics; Qualitative factor

## I. INTRODUCTION

The objective of audit such as defined by the IFAC standards (international Federation of the accountants) is to allow the expression of an opinion on the reliability of the images provided by the financial documents. To achieve this objective, the auditor uses a methodology which complies with audit standards. According to these standards, the auditor is brought to estimate the company's audit risks, to design its audit strategy and to define the means and the tools that he will use to estimate at best these risks. In this context, materiality represents one of the principal tools set by the standards and which determines audit quality.

The materiality allows the auditor to determine the extent of the audit works, to evaluate the accounting errors materiality identified by auditors and finally to express an opinion on the reliability and the sincerity of the accounting documents. The materiality is determined by quantitative criteria, but also qualitative criteria defined by the professional standards. While the professional standards (NEP 320, ISA 320, HER 107) are precise in relation to the quantitative criteria (easy to apply by the auditor, Manuel of audit of "Big4"....), these standards are not precise enough about the qualitative criteria which remain ambiguous and are subject to a big interpretation margin and auditor evaluation (McKee and Elifsen, 2000). To deal with this situation, the auditors are brought systematically to apply the quantitative criteria (active net, total result, etc.) while neglecting the qualitative criteria.

However, according to the S.E.C, the exclusive application of the quantitative materiality (such as 5 % of the profit) is groundless in the accounting or legal literature. Quantified in terms of percentage, the estimation is only the beginning of the analysis of the materiality; it cannot be correctly used as a substitute in a complete analysis which takes into account all the relevant considerations. These criticisms led to the emission of explicit orientations in USA, such as the SAB.99 accounting bulletin (1999) and the CIFIR's report (2008) published by the SEC and the audit standard SAS 107 (AICPA, 2006). They made the international audit normalizer (IAASB) revise the standard ISA 320 and emit the new standard ISA 450. These latter standards underline more the importance of the qualitative aspects in the determination of materiality by proposing 11 material qualitative factors (QFM). In France, the standard about the significant abnormality and the materiality (NEP320, 2006) adapted to the international standards (ISA) by redefining in particular the materiality with regard to the users' expectations.

During last decade, the academic literature was interested in the quantitative factors to explain the materiality judgments (Holstrum and Messier, 1982; Iskandar and Iselin, 1999; Messier et al., 2005). After the publication of the SAB 99, the academic researchers began to study explicitly the qualitative factors (Wright and Wright, 1997; Braun, 2001; Shafer, 2005; Ng and Tan, 2007; Del Corte et al., 2010). Most of these studies recognize the influence of the qualitative factors on the materiality judgments (Nelson et al., 2005; Braun, 2001; Ng and Tan, 2007; etc.).

In audit, the consideration of the QFMs is a matter of the professional ethical judgment. This judgment does not depend only on individual factors linked to the personal and auditor's intrinsic characteristics (Rest, 1979; Kohlberg, 1969) but also on the situation's context (specific factors, inherent pressures) and on decision consequences, (Jones, 1991; Trevino and Weaver, 2003; Bel Haj, 2010) defined by

Jones (1991) as “moral intensity”. According to Jones (1991), the moral intensity is a multidimensional construction containing several characteristics (the scale of the consequences, the probability of the effect). He argues that the individuals identify more easily the ethical problems of strong ethical intensity. In this context, every QFM presents for auditor a situation with a low or strong moral intensity unless there is a consensus about the ethical nature of a given situation (Shafer, 2005).

Taking as a basis Jones’ (1991) ethical judgment model, we might suggest to study the influence of the qualitative factors on the ethical judgments of materiality. This model provides an ideal frame discussion of the QFM’s ethical perception because he allows to study individuals judgment confronted with ethical problems.

In terms of contribution to theory, this work adopt theoretical frame developed outside of the sciences of management (ethical psychology) to explain materiality judgments in audit. The methodological interest is resides in the construction of real scenarios combining three qualitative factors of SAB.99 standard and a quantitative factor. The results of this study are supposed to contribute in the understanding of the materiality judgment process in French context.

Three real scenarios implying three qualitative factors were the object of an experimental study carried out with a sample of 44 experienced auditors. The study results confirmed the influence of the qualitative factors on materiality’s ethical judgments. In addition to that, our results provided that the magnitude of consequences and the social consensus are two main criteria on which ethical materiality judgments are focused. The proximity of the auditor to his client weakly influenced the ethical materiality judgments.

Firstly, we begin with literature review concerning the materiality *and the* ethical judgment in audit. Secondly, we develop the research methodology adopted in this study. Finally, we present and discuss the results.

## **II. THE MATERIALITY and THE ETHICAL JUDGMENT: LITERATURE REVIEW**

### **A. The Concept of the Materiality: Evolution of the Concept in the Audit Standards**

Since the materiality became an integral part of audit methodology, the definition and the interpretation of this concept were the subject of many discussions and were the object of several audit standards. The first standards did not provide precise orientations determining the materiality. In order to resolve the information deficiency in the determination of materiality, these standards referred to the auditor’s professional judgment (Thompson et al., 1990). Many Anglo-Saxon researches debated on the excessive practice of materiality (Levitt, 1998 and 2000; Chong, 1994; Carpenter and Dirsmith, 1992; Carpenter et al., 1994). The international and national professional authorities (IASB, FASB, SEC, GAO, CNCC) made considerable efforts to clarify the materiality concept and to guide better the auditors in their practice (FASB N°2, 1980; SAS N°47; SEC, 1995; ISAC, 1989). However these improvements were focused on the determination of materiality quantitative criteria and ignore qualitative criteria. To avoid this problem, the American and international standards introduced important modifications, to take into account materiality qualitative criteria and published new

standards (SAB 99 in the USA and ISA 450 who comes to replace ISA 320 on an international scale). These standards include explicitly a list of 11 materiality qualitative factors (QFM) (Table 2) which auditors have to evaluate correctly anomalies' materiality which is below the quantitative thresholds (IAASB, 2008).

## **B. Ethical Judgment of the Materiality**

The absence of a precise audit standard of materiality justified the existence of a large number of researches dealing with various aspects of the materiality judgment process (Holstrum and Messier, 1982; Iskandar and Iselin, 1999; Messier et al., 2005; Martínez, 2007). The first works which were interested in identifying the factors implied in materiality judgment process, demonstrated the dominance of the quantitative factors. Previous studies (Pattillo and Siebel, 1974; Messier, 1982; Krogsted, 1984) distinguished between the financial factors (result tendency, the total asset, total of stocks) and the not financial factors (experience, company size). After the publication of the SAB 99, the qualitative materiality was studied by several researches (Libby and Kinney, 2000; Braun, 2001; DeZoort et al., 2003; Shafer, 2004; Nelson et al., 2005; Ng and Tan, 2007). However, these studies were only interested in the materiality in a context of results management (Shafer, 2005). Merchant and Rockness (1994) found that the differences of ethical judgments for the big and small tampering were rather insignificant and that the result intentional management on the ethical judgments remains object of debate. Shafer et al. (1999) and Ketchand et al. (1999) studied the errors' effects, as well as certain qualitative variables, (such as the probability received from the damage caused by the users of financial documents) on the auditor's materiality judgments. Both studies revealed that auditors tend to give up the anomalies 'correction if these anomalies are associated with a subjective judgment or with a quantitatively unimportant error (Wright and Wright, 1997; Braun, 2001; Nelson, 2003; Nelson et al., 2005). In this context, Libby and Kinney (2000) demonstrated that auditors might require the correction of the quantitatively unimportant errors if these errors generate profits inferior to the objectives set by the financial analysts. However several other qualitative factors defined by the recent audit standards (SAB 99 and ISA 450) were not studied by researchers<sup>1</sup>.

Several explanatory models borrowed from the cognitive psychology can be used to understand the decision process concerning the materiality judgment (Chang, 1998; Jones, 1991; Jones and Ryan, 1997; Stead, Worrell, and Stead, 1990; Trevino, 1986; Trevino and Youngblood, 1990). Certain models of the ethical judgment are based on factors related to the personal characteristics of auditor's decision and on the context as an object judgment. Generally these models appeal to three explanatory dimensions: The recognition of an ethical problem, the ethical judgment and the creation of intention which results in an ethical behavior. In this context, Jones's model (1991) constitutes a model which was the object of a consensus on behalf of the researchers. His model takes into consideration the individual dimension of the decision-maker and the dimension related to the situation as an object of study, but also the consequences of the decision (Jones, 1991; Trevino and Weaver, 2003; Bel Haj, 2010). These varies dimensions were defined by Jones (1991) as "moral intensity".

In audit, it is obvious that the ethical judgment depends on auditor's individual characteristics (experience, personality), on the situation as the object of judgment, but

especially on the consequences of this judgment on the audited company and on the decision-maker himself (auditor reputation and independence). Therefore, the Jones's (1991) theory of moral intensity constitutes a theoretical frame adaptable to study the effects of qualitative factors on auditor's materiality ethical judgment.

According to the Jones's theory (1991) an individual has to go through four psychological stages to adopt an ethical behavior.

- Firstly, he has to interpret a given situation as an ethical problem (ethical sensibility). This stage includes the identification of possible options and their consequences.

- Secondly, the individual has to decide which option is correct from the moral point of view.

- Thirdly, he has to behave in a ethical way, even if his own interest imposes an opposite attitude.

- Finally, the individual should be strong-willed enough to behave in compliance with his ethical intention (ethical behavior).

According to Jones (1991), all the process stages of ethical decision-making are influenced by extend of the problem related to ethical imperatives in a given situation. Jones (1991) argues that the moral intensity of a given question is influenced by six characteristics: the magnitude of the consequences, the social consensus, the probability of the effect, the immediate character on the temporal plan, the proximity and the concentration of the effects. However, literature considers that some characteristics are more influential and dominant than others. There are two characteristics which are more influential: magnitude of consequences and the social consensus (Morris and MacDonald, 1995)

### III. METHODOLOGY

Various methodologies were used to study the auditor's ethical judgments. These methodologies are made up of questionnaire, experimental studies and an analysis of archives data (audit manuals, auditors' working documents, published financial statements, and audit reports).

The archival research is limited because audit firms make it difficult to researchers to consult their audit files under the pretext of professional secret. They explain their refusal by professional secret (Acito, Bruks, and Johnson, 2009). The experimental studies are supposed to be adapted to understand better the complex character of process driving judgment of materiality. Many researchers analyzed cognitive aspects of judgment come to the conclusion that an experimental frame (in opposition to an investigation or archival methodology) would be better adapted to achieve this objective.

Therefore a methodology based on experimentation has been chosen for this research. This methodology consists of two stages and based on real scenarios developed with auditors

#### A. Exploratory Study

In order to explore practices used by auditors to determine materiality in France, an interne ship was carried out in a big audit firm. During this interne ship, several audit files were studied in order to understand the practice of materiality in different domains.

In order to verify if French auditors recognize the influence of the qualitative factors defined by SAB.99 about ethical judgments of materiality, a questionnaire was prepared. This questionnaire was based on qualitative factors determined by this standard. It was submitted for evaluation to 44 experienced auditors. Every participant had to attribute to every qualitative factor determined by the standard, a note from 1 to 10 on a Likert scale in 10 points. These qualitative factors could be or not influenced by his judgment about materiality. If the participant agreed that every qualitative factor influenced his judgment about materiality he was attributed a note superior or equal to 5 points. 1 = Strong disagreement, 10 = Strong agreement.

This stage allowed to identify various difficulties related to determination of materiality, to test the sensibility of auditors to qualitative factors and to design real scenario implying certain qualitative factors.

## **B. Experimental Protocol**

This stage aims at testing empirically the taking into account by French auditors of environmental circumstances in their professional judgment about materiality according to the results of exploratory study.

In fact, qualitative factors which obtained the scores superior to 5, were classified according to their average scores. Real scenarios were elaborated for 3 factors which obtained the first ranks<sup>2</sup>. These factors are related to: tendency changes, bonus granted to management and the compensation of errors. These scenarios were elaborated with the partners of the audit firm where the interne ship was carried out. They were submitted to two other auditors and two researchers in audit to improve understandings these real scenarios and validate their contents. These scenarios constitute an ethical dilemma as far as the auditor has to choose between a strict application of the law and standards and his personal ethical principles.

It has been establish that every scenario contains an inaccuracy the extent of which is inferior to materiality (5 % of net result). These inaccuracies could be explained by various reasons which are related either to bad interpretation and application of accounting standards or to controversial subjective evaluation.

This study demonstrated that motivation and intention of the management were known (bonus, tendency change, illegal behavior, etc.) in certain scenarios and not known in others (errors compensation, etc.).

The correction of these errors might influence results tendency (profit, loss) or discover illegal acts. Therefore, in order to test the judgments of auditors according to Jones's (1991) model, the data related to three (from six) characteristics of moral intensity were integrated to every scenario: magnitude of consequences, social consensus, and the proximity with client. Once materiality of error and anomalies integrated into various scenarios were judged by auditors, the participants were asked to explain the factors having influenced their decisions.

As the judgment of auditor does not depend only on factors related to the situation but also to the individual factors, a sample was selected avoiding the maximum of statistical bias related to three chosen factors. Two homogeneous groups of auditors were selected (according to age, experience, status in firm) according to their connection to a big or small audit firms. An experimental protocol was prepared and tested with two groups of auditors. The first sample was composed of 20 managers

of the big four accounting firms. The second consisted of 24 managers working for small firms.

These auditors had an average experience in the post of 2 years for the first group and 5 years for the second. The average age of participants was 30 years for the first group and 42 years for the second. Considering the impossibility to gather the partners in a same place, several groups made up of 2 to 3 managers working in the same audit firm were interviewed.

The experimental protocol consists of 6 stages and can be summarized as follows:

**Stage 1:** welcome of the participants

**Stage 2:** explanation of the instructions and distribution of scenarios

**Stage 3:** reading of the scenarios and

**Stage 4:** Q&A

**Stage 5:** quasi-experience

- Every participant answers the questions according to the provided instructions
- Ban on exchange between the subjects
- Ban on going out before all the present subjects were finished

**Stage 6:** Collect of participants answers

All documents used in experimental study, were anonymous and contained an identification code sent by e-mail a few days earlier. This procedure allowed to integrate the data of the experiment with the data collected previously.

The files were used to keep pages of documents in the predefined order. They were distributed after establishing the subjects. An oral procedure of welcome and presentation was used systematically, in the same way for various groups to assure a uniformity of the instructions. At the end of session, files were handed in. The research objectives were explained to participants. During this explanation, participants were reassured about the anonymity of answers and the possibility for every auditor to contact the experimenter if he wishes to modify or to remove his answers, according to the current legal rules (CNIL) and to the business ethics of the researcher in social sciences (Myers et al., 2007: 42-66). The answers were taped on the calculation sheet to be treated.

## IV. RESULTS and DISCUSSIONS

### A. Materiality of the Qualitative Factors

Taking as a basis the list of statutory auditors registered on the site of the CNCC, a list of auditors belonging to big four and small audit firm was established. They were contacted by e-mails or telephone and asked to participate in our study.

A large part of auditors contacted did not wish to take part in our study. Some auditors did not answer to our demand in spite of being contacted again. The percentage of answers returned by auditors was relatively low. Despite our insistence, this percentage was approximately 13 %.

The majority of participants strongly agreed with the SAB.99 and considered eight of nine qualitative factors as relevant for materiality judgment. For every factor the average score was above 7 except for one factor the average score of which was inferior or equal to 5 points.

**Table 1**  
The impact of the qualitative factors on the materiality judgments

	Auditors	
	Big Four	Non Big Four
1. The motivation of the inaccuracies or the omissions, quantitatively not significant (deliberate manipulation, a discord of opinion, involuntary error.)	8.53	8.12
2. If the irregularity or the omission, quantitatively unimportant, reveal a change of earnings tendency (sales, results)	8.76*	8.33*
3. If the irregularity or the omission, quantitatively unimportant, mask an incapacity to meet the expectations of financial analysts.	8.12	7.21
4. If the irregularity or the omission, quantitatively unimportant, modifies the losses into result.	8.23	7.33
5. If the irregularity or the omission, quantitatively unimportant, belongs to a division of the company which was identified as particularly important for the success of the company.	7.55	7.12
6. If the irregularity or the omission, quantitatively unimportant, allows the executives to have an incentive payment (bonus)	9.13*	8.25*
7. If the false revelation or the omission, quantitatively unimportant, consists in the dissimulation of an illegal act.	9.25*	9.11*
8. If the inaccuracy quantitatively not significant will be translated by a significant reaction in the stock market	8.43	8.21
9. If the inaccuracy or the known omission is compensated with another inaccuracy having an opposite consequences on the result.	9.33*	8.43*

\*Factors having obtained the high scores and retained within this research

## **B. Influence of the Qualitative Factors on the Ethical Judgment of Materiality**

For three tested scenarios, the results show that the majority of auditors questioned consider that they may influence their ethical judgment of materiality. The results also show that there are no significant differences of judgment between the auditors of big four and those belonging to the small audit firms. In fact, the minimal frequencies of auditors having considered these three factors as significant and deserve to be included in audit reports are 66, 67 % for auditors of big four and 69 % for auditors from small firms. The following table presents the frequencies of answer of the auditors for three tested factors<sup>3</sup>.



**Table 2**  
Results of the real scenarios

	Qualitative Factor	The ethical judgment of materiality (big four auditors)		The ethical judgment of materiality (non big four auditors)	
		Significant	Not significant	Significant	Not significant
scénario 1	Tendency Change	66.67%	33.33%	78%	22%
scénario 2	Bonus	85%	15%	69%	21%
scénario 3	Illegal behavior	80%	20%	83%	17%

**Table 3**  
Averages scores of auditors

	Qualitative Factors	Criteria of ethical decision	The ethical judgment of materiality (big four auditors)	The ethical judgment of materiality (non big four auditors)
scenario 1	Tendency Change	Magnitude of consequences	9.1	8.2
		social Consensus	7.2	5.5
		Proximity	2.1	6.4
scenario 2	Bonus	Magnitude of consequences	8.9	7.9
		Consensus social	7.5	5.3
		Proximity	3.2	5.4
scenario 3	Illegal behavior	Magnitude of consequences	4.1	3.2
		Consensus social	3.1	1.5
		Proximiy	2.5	6.4

For the three scenarios tested, the results demonstrate that the majority of auditors questioned consider that criteria of moral intensity might influence their ethical judgment of materiality. According to these results, there are no significant differences if judgment between the auditors of big four and those belonging to small firms concerning the justification of their evaluation of materiality. However, the average scores of notes obtained are slightly superior for the auditors of big four than for those belonging to these small firms. It seems that sensitiveness of the auditors from big four is stronger concerning criteria of moral intensity.

The results show that for these three scenarios, the magnitude of consequences was the main criteria to be considered for the judgments of materiality. The strong scores of the auditors from big four (9.1) (7.9) can be explained by the sensitiveness of auditors to the economic consequences of intentional qualitative anomalies. This result is confirmed by the new orientation of professional authorities aiming at protecting all stakeholders of the company. The auditor must certify financial statement taking into account the expectations of users (bankers, clients, shareholders, etc.).

Also, the social consensus was very significant for both categories auditors with a higher score for the auditors from big four. Contrary to the assumption about social consensus concerning immateriality of quantitatively unimportant errors, our study that social consensus is not any more a general practice among auditors. In fact, the scenarios (1.2) show that the judgments of the materiality were centered on a new social consensus with which all auditors considered that deliberate errors (tendency change, bonus) was inferior a quantitative materiality (5 %) were ethically significant with average scores superior to 5 on a scale of 10 points.

As for the criterion of proximity, the scores are higher auditors from small firms than for the auditors belonging to big four. It seems that auditors from small firms are more sensitive to the loss of client and to economic consequences of their judgment than the auditors of big four. These auditors from big four might be worry about their reputation on the market and about their eventual loss of client in the event of the error committed in one audit case.

## V. CONCLUSION

Audit firms widely abused of the strict application of the quantitative definition of materiality. Given the new regulations, the auditors are brought to estimate better the expectations of their clients and the significant character a piece of information might represent. They have to evaluate better the qualitative factors capable to dissimulate financial situation for their clients independently of their threshold. The publication of SAB 99 gave a lot of importance to the quality approach which became fundamental in audit process.

Our results show that the judgments of materiality reflect considerations which are quantitative qualitative and qualitative (SAB.99). The result of our study show the incoherence of the classic approach according to which the net result is the dominating reference criterion to explain the decisions of correction of the anomalies. Our study shows that the qualitative factors of materiality influence the judgment of auditors about the evaluation of materiality. Our results reveal that the criteria of magnitude of consequences and the social consensus of Jones (1991) justify and motivate the judgment of auditor better than other criteria.

Our search research allows enriching the works of the professional authorities by contributing to the understanding of the processes judgments of materiality in France. The theoretical originality of this work resides in the loan of a theoretical frame borrowed from the ethical psychology to explain the judgments of the materiality. The methodological interest consists in the construction of real scenarios combining three qualitative factors of SAB.99 adapted from model of Jones (1991). However, our study presents certain limits related to the data collection and to the methods of analysis. However, our study can be mainly limited by statistical bias produced by distortion of

the answers of participants who despite all our precautions, might have tended to follow the expectations of researchers.

### ENDNOTES

1. In this case we mean inaccuracies which are insignificant but intentional, the practice of errors compensation and certain circumstances in which the low number of inaccuracies becomes significant. It is the case for example when an inaccuracy masks a result change or tendency change.
2. Scenarios can be available from authors on request
3. For more details, results and tables are available from authors on request

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