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The Relationship of Cognitive Effort, Information Acquisition Preferences and Risk to Simulated Auditor–Client Negotiation Outcomes

Gary Kleinman · Dan Palmon · Kyunghee Yoon

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Abstract The auditor–client relationship is a legally-mandated relationship in which one party, the auditor, is hired and paid by the auditee (client) to inform third party stakeholders as to whether the client firm's financial statements are presented in conformity with national financial accounting standards. When these statements do not meet the criteria for acceptable financial statements, a negotiation situation may arise in which the auditor is presumed to act in the best interests of shareholders and creditors who have no independent knowledge of the auditor's findings. The client management may then feel forced to defend its numbers. The result is a negotiation between the auditor and client (e.g., Salterio in Account Financ 52:233–286, 2012; Brown and Wright in Account Horiz 22(1):91–109, 2008). This study examines cognitive factors and risk preference factors that may impact the negotiation both in the setting of each side's negotiation position and on the outcomes of that negotiation using simulated auditor–client negotiations. Questionnaire and simulated auditor–client negotiations were used to generate the data, with MBA and MS in Accounting students playing the role of client CEOs and auditor partners. We further explore the use of a tool, Structural Equation Modeling, to test the data, in the process highlighting its usefulness in auditor–client negotiation research. We find that the cognitive characteristic of need for cognition is significantly and positively related to achievement of the negotiator's desired income objectives and reported willingness to argue strongly for

G. Kleinman
Montclair State University, Montclair, NJ 07043, USA
e-mail: Kleinmang@montclair.edu

D. Palmon (✉) · K. Yoon
Rutgers Business School, Newark, NJ 07102, USA
e-mail: Dan@Palmon.com

K. Yoon
e-mail: yoonk05@gmail.com

his/her position. Actively open-minded thinking, a second cognitive variable studied, was not significantly related to success in the negotiations, nor to a reported willingness to argue strongly for his/her position. Finally, we find that perceived aggressive tactics by the other party to the negotiation had a negative impact on the counterpart negotiator's success in the negotiation, and satisfaction with it. As expected, risk assessment-related variables were not related to outcomes of interest.

Keywords Auditor · Client · Negotiation · Role playing · Cognitive characteristics · Risk preferences · Risk assessment · Counterpart behaviors · Structural equation modeling

1 Introduction

In the US and much of the world, the auditor–client relationship is a legally-mandated relationship in which one party, the auditor, is hired and paid by the auditee (client) to inform third party stakeholders as to whether the client firm's financial statements are presented in conformance with national financial accounting standards. If the auditor finds that the financial statements do not conform to national financial accounting standards, the auditor will report that to the client's governance authorities and suggest revisions to the statements. Based on the client's reaction to the auditor's request, a negotiation situation may arise in which the auditor is presumed to act in the best interests of shareholders and creditors, the stakeholders in the corporation. The client management may feel forced to defend its numbers, and the result is a negotiation between the auditor and client (e.g., Salterio 2012; Brown and Wright 2008).

The contributions of our study are twofold. The first contribution is that this study examines cognitive factors and risk preference factors that may impact the negotiation both in the setting of each side's negotiation position and on the outcomes of that negotiation using simulated auditor–client negotiations. Brown-Liburd and Wright (2011), based on Neale and Bazerman (1991), note that auditor–client negotiations take place in three stages (see also Brown and Wright 2008). These stages are pre-negotiation planning in which each party's preferred position is formulated, the actual negotiations in which strategies are employed, and the outcome or final resolution to the negotiation. Our study encompasses all three stages. Research of this nature is rare in the accounting literature due to the difficulty in obtaining the cooperation of practicing auditors and clients (e.g., Salterio 2012; Brown-Liburd and Wright 2011). While some research (e.g., Brown-Liburd and Johnstone 2009) uses a computer to simulate one party to the negotiation, such a method would not be adequate for our purposes since differences between cognitive elements and negotiation outcomes could not be meaningfully assessed. Accordingly, this study uses students in the last semester of a full-time professional accounting MBA program and an MS in Accounting program to play the roles of auditors and clients. We specifically explore the impact of each individual's information search and acceptance profile, their need to think through problems thoroughly, and their risk assessments of their pre-negotiation preferences for a client's reported net income, the negotiated net income, and the strength of their willingness to argue for their pre-negotiation income once negotiations with

their assigned counterpart begin. In conducting this research, we employ the power of structural equation modeling (SEM) to analyze the impact of sets of variables on others variables over time.

The second contribution of our study is that it underscores the value of using structural equation modeling to understand negotiation processes in auditor–client settings. SEM has been used in accounting and auditing research to address a variety of problems that could not meaningfully be addressed otherwise. For example, Douglas et al. (2001) used SEM to study the effect of organizational culture and ethical orientation on ethical judgments made by accountants. Similarly, Giroux and McLelland (2008, p. 136) used SEM to examine the determinants of municipal audit fees. SEM allowed the authors to develop a model in which six variables were found directly related to audit fees, with five other variables playing mediating roles. As the authors note, "The SEM approach concentrates on model fit…[It] provides a much richer analysis of the municipal audit environment, incorporating the meditation processes (indirect effects) determined simultaneously in the model." The authors note that, via the power of SEM, they found that a "seemingly insignificant variable city manager [can] influence audit fees." In the behavioral accounting arena, Kalbers and Cenker (2007) used SEM to study the relationships between role ambiguity, experience, affective organizational commitment, turnover intentions, and job satisfaction. Similarly, Parker and Kohlmeyer (2005) used SEM to study the relationship of organizational justice to turnover in public accounting firms. Interestingly, for our purposes, Rodgers and Housel (2007) used SEM to study auditors' decision processes. In their experimental task, the subjects were provided with environmental risk information. They were required to integrate that information into their decision about the fictional client's prospective financial statements. Also, Sahnoun and Zarai (2009) used SEM to study the relationship between auditee business risk, audit risk, and auditor business risk in the North African context of Tunisia. Their study, which seems at first glance to involve auditor–client negotiation based on the article's title, actually studies the impact of various risk factors on the Tunisian participants' decisions. No negotiation is involved. Nevertheless, their research again demonstrates the usefulness of SEM in studying aspects of the auditing decision process. None of these studies utilized SEM to explore the impact of factors affecting auditor–client negotiations. The only predecessor study that did so was by Kleinman et al. (2003). It examined the impact of individual personality and hierarchical level on the decision reached by simulated auditor or client teams. The decision that the teams had to reach involved the choice of a negotiating position to take with their counterpart team. The Kleinman et al. (2003) study also examined the factors affecting each member's satisfaction with the solution and the team members' perception of the team atmosphere. In order to operationalize the hierarchical level variable, members of the audit team were randomly assigned to the hierarchical positions of partner-in-charge, audit manager, and review partner roles. Members of the client team were randomly assigned to the hierarchical positions of CEO, CFO, and internal audit manager roles. The Kleinman et al. (2003) research also posited that conflict style would affect individuals' perceptions of the team atmosphere and satisfaction with the solution. Conflict styles that were examined included assertive, collaborative, and avoidant behaviors. Personality variables studied included the Machiavellian, Dogmatic, and Locus of Control orientations of the

study's participants. Using structural equation modeling, the authors found that their results generally supported their expectations. They were able to isolate the direct and indirect impacts of various variables on the team decision outcome. In the process, the authors demonstrated the usefulness of structural equation modeling in understanding factors that may affect decision-making in an auditor-client setting. However, their study focused on within-team negotiations, as opposed to inter-team negotiations. When teams negotiate against each other, each side ultimately becomes committed to an outcome and pursues its outcome agenda with the opposite side. Furthermore, their study involved personality and hierarchical position variables, not cognitive variables. Our study extends theirs by demonstrating the potential impact of cognitive variables on individual auditor/client negotiation-like choices, and by demonstrating the impact of these cognitive variables and other influences on the ultimate negotiation outcome between individuals designated as auditors or as clients. Cognitive variables include components of mental processes, such as memory, attention, perception, action, problem solving and mental imagery. Information acquisition and use are important ingredients in problem-solving. For example, if only a narrow range of information is sought, the field of potential solutions to a problem may be narrowed, so information that points to better solutions may not be collected. Similarly, even with a wide range of information collected, a high quality answer to the problem may not be immediately visible, but understanding the information thoroughly by investing a great deal of cognitive effort may yield a higher quality solution. Accordingly, this study focuses on information acquisition search preferences (narrow or broad) and preferences relating to the intensity with which information is used as part of the problem-solving process. Personality measures may not capture information search and use patterns. Given that accounting is an information discipline, it is relevant to examine how information search and use patterns, which are cognitive characteristics that affect problem-solving, relate to problem resolution in this population. The Kleinman et al. (2003) paper did not address this important issue. This paper does. We used SEM to help achieve what Giroux and McLelland (2008) describe as a "much richer" picture of the factors that may influence the outcome of negotiations in an auditor–client setting. Compared to other methodologies, SEM has the ability to capture the structure of multiple relationships among variables. This study further underscores the importance of using SEM in auditor–client negotiation type studies.

Next, we present background information on auditor–client relationships. Subsequently, relevant theory and prior literature that underlie this study are presented. Then the research method and design are described, followed by the results and analysis. A concluding section follows that.

2 Background on Auditor–Client Relationships

The auditor–client relationship is one of the most problematic relationships in modern business. In the United States and much of the world, the auditor is hired, paid, and either retained or fired by the client. The auditor's job is to come to a conclusion about the quality of the client's financial statements and internal control systems. With respect to the financial statements, the auditor's role is to ascertain whether the client's

financial statements are materially misstated and, if so, to propose corrections to bring the financial statements into compliance with criteria. In the US, this means being "fairly stated" in accordance with US Generally Accepted Accounting Principles. Failure to influence the client to accept changes to the financial statements sufficient to make the statements not materially misstated may force the auditor to issue a qualified or an adverse opinion, which would be undesirable to the client, or simply to accede to the client's wishes and issue an unqualified opinion, which would be desirable from the client's perspective. In the former case, the auditor stands to lose the client and the revenue stream that the client represents. In the latter case, the auditor faces potential litigation costs, regulatory discipline, and/or reputational damage if discovered. From the client's side, receiving a qualified or adverse opinion may damage the client's ability to raise capital. Receiving such an opinion may also result in a drop in the market price of the client's stock if investors sell the client's shares because they are no longer certain of the quality of the firm's financial information. To avoid receiving a qualified or adverse opinion, the client may revise its financial statements to show that it is less profitable. In that case, the price of the company's stock may fall because investors may perceive a diminished future dividend stream or capital growth opportunities from owning the stock.

It is also possible that the auditor and client may negotiate away their differences, with each side aware that the more it gives up from its preferred choice, the more risk it bears. Thus, developing a negotiating position requires each side to understand the broader environmental situation facing both sides, as well as the potential consequences of arriving at an unpalatable decision. Accordingly, such negotiations require the use of informational resources, such as those that can be gathered through observation of the business world, the motivation to utilize such resources to evaluate the situation in order to develop arguments that may lead to a preferred solution, and a willingness to take risks.

3 Theory

The relationship between auditors and clients is a subject of interest due to its importance in assuring the investing public of the quality of corporate financial statements. Given the inherently contentious nature of the relationship and the importance to both sides of resolving issues through negotiation, it becomes important to understand the cognitive determinants that help each side become more successful negotiators. Research of this nature is unusual in the accounting literature. Research on interactions between individuals is especially rare (e.g., Salterio 2012). In an attempt to understand the factors that affect interactions in an auditor–client context, Kleinman et al. (2003) developed and tested a model of elements that had the potential to impact auditor decision-making. This model held that individual personality, hierarchical level and conflict style influenced each group member's satisfaction with a team-derived solution and affected the perceptions of team atmosphere. This research also posited that conflict style would influence individuals' perceptions of the team atmosphere and satisfaction with the solution. Using SEM, the authors found that the results generally supported their expectations. Kleinman et al. (2003) used MBA and MS in Business

and Accounting students to document their model. The use of MBA and MS students in the accounting and business arenas was justified due to the difficulty that researchers face in gaining access to practicing professionals, a difficulty noted as far back as 1974, by Montagna (1974), and also voiced by Salterio (2012).

Fu et al. (2011) found that the auditors' negotiation experience and the client negotiation style had an impact on the auditor's perception of the final negotiation outcome with respect to the conflict issue, an asset impairment write-down. Auditors with higher levels of negotiation experience performed better when the client had a contentious, rather than collaborative, negotiation style. Brown and Wright (2008) noted that existing research examines whether factors such as auditor incentives and experience, client knowledge and negotiation expertise, and environmental factors such as governance, risk, and regulation affect auditor–client negotiation outcomes. However, the extant research has not examined whether cognitive factors may influence the auditor–client negotiation.

Kleinman et al. (2003) did not address cognitive factors, but instead focused on personality, hierarchical level, and conflict style variables in their attempt to understand what goes on in groups grappling with auditor–client issues. Subsequently, Kleinman et al. (2010) noted that the earlier work in the field excluded the impact that judgment variables, such as expertise, cognitive heuristics and affect might have on auditor decision-making (see also Nelson and Tan 2005). However, Kleinman et al.'s (2010) work was solely theoretical. It drew on the earlier writings of Mayer (2003) and Libby and Luft (1993), etc. to develop a model of cognitive factors that could affect auditor performance. In that work, Kleinman et al. cite Romer (2000) as noting that decisions stem from at least two subsystems. One is feeling-based and the other is thought-based. The Kleinman et al. (2003) paper draws on behavioral influences that can be considered feeling-based. Our current research, which explores the impact of need for cognition (Cacioppo et al. 1996), actively open-minded thinking (Stanovich et al. 2004), and risk perceptions and preferences (Center for Behavioral and Experimental Economic Science, hereafter CBEES 2006) on decision-making in an auditor–client context, draws on behavior that explore Romer's (2000) other subsystem, the thought-based decision-making influences. Thus, it extends previous theoretical work exploring the impact of cognitive biases on auditor decision-making in groups, such as that seen in Kleinman and Palmon (2009). Like Kleinman et al. (2003), it also uses SEM to explore these issues.

Kleinman and Palmon (2009) note that the behavioral auditing area has little to say about how individual differences in cognitive ability and fallibility (cognitive heuristics) affect the group decision-making process and are, in turn, influenced by that process. Fundamentally, the authors considered whether group decision-making in an auditor–client context is likely to experience process gains (i.e., be improved by having decisions made in that setting) or process losses (i.e., be hindered by having decisions made in that setting.) The authors then presented a theoretical discussion of how the stages of group decision-making may interact with each individual's cognitive heuristics and ability, with the outcome ultimately determined at the close of the group process. Kleinman and Palmon (2009) did not study the interaction of cognitive ability and fallibility in the determination of the group decision outcome empirically. However, the research reported here focuses on two aspects of cognitive characteris-

tics. Specifically, this research focuses on the individual's need for cognition, that is, the person's drive to think information through and solve problems well, and the individual's information acquisition and discrimination patterns, more typically known as actively open-minded thinking. Actively open-minded thinking examines the individual's open-mindedness to new information, including information that may contradict or challenge what he/she already believes. This paper, therefore, draws on the commonplace that individuals need information to think about and the willingness to think hard about it in order to come to a better decision.

Individuals' decisions are also affected by their perceptions of risks and rewards that attend those decisions, and presumably based on these evaluations, may make different choices. Evaluation of risk and reward depends on the information available to the decision-maker. Thus, openness to new information is useful in shaping risk assessments unless that new information is discounted, either due to the receiver's authoritarianism or dogmatism, or a simple belief that he/she knows the right answer already and is simply seeking further *confirming* evidence. The actively open-minded variable, as developed by Stanovich et al. (2004), measures willingness to receive new information and tendencies to discount that information due to the person's authoritarian or dogmatic nature. Rigidity of stance in the face of new information, whether it comes from the environment or is perceived during interactions with a negotiating partner, may lead to dysfunctional negotiating behaviors and ultimately a failed negotiation or a poor outcome arising from the negotiation.

Accordingly, the variable actively open-minded thinking (hereafter, *AOT*) is examined here because it purports to measure openness to new information, as well as a levels of dogmatism and authoritarianism. We argue that individuals who measure more highly on the actively open-minded thinking construct will seek and absorb more information and take a more flexible approach in both setting their net income targets in the game (further described below) and in negotiating with their counterpart. Flexibility in this regard does not necessarily mean giving way to the other person's arguments, but rather being willing to consider the other person's arguments and develop an appropriate response, given the background information each participant was provided prior to the negotiation's start. In describing the principled negotiation approach, Brown and Wright (2008) note that "This approach highlights the importance of explicit consideration of the interests, options, alternatives, and goals of both the negotiators and their counterpart, since failure to understand their interests and position can result in suboptimal outcomes (Galinsky and Moskowitz 2000; Trotman et al. 2005)." We argue that willingness to collect information and being flexible in considering a wide variety of factors may impact the negotiations explored here as well. Please see Fig. 1, specifically the arrows pointing from the *AOT* circle to *PRE_STRONG* (H1a) and to *DIF_INCOME* (H1b). Accordingly, we hypothesize that:

H1: Individuals who score more highly on the Actively Open-Minded Thinking Scale will be more likely to

(a) State that they will work aggressively to achieve their preferred outcome once the negotiation begins (i.e., *AOT* will be positively related to *PRE_STRONG*), and

(b) Achieve their negotiating goals in the simulated auditor–client negotiation session (i.e., *AOT* will be positively related to *DIF_INCOME*).

The variable need for cognition is examined here because it measures the individual's willingness and drive to expend mental energy in understanding the situation and developing solutions to problems. Need for cognition (hereafter *NCOG*) has been defined as "an individual difference in the motivation to engage in and enjoy thinking and cognitively challenging tasks" (Petty et al. 2009: cited in Hill et al. 2013). The ability of those with a higher need for cognition to perform better is enhanced because, as Hill et al. (2013) found, need for cognition is significantly and positively related to some aspects of intelligence, including general intelligence, fluid intelligence, and crystallized intelligence. Need for cognition has also been found to be positively related to greater information searching, greater information elaboration, stronger behavioral intentions, and greater attributional complexity. It is found to be negatively related to anxiety in information processing tasks and hindsight and primacy biases (Verplanken et al. 1992). Thus, the literature suggests that individuals with greater motivation and drive to think through problems are also less likely to fall subject to cognitive biases.

Furthermore, they are likely to exhibit greater fluid intelligence, which is a higher ability to solve novel problems using deductive or inductive reasoning without regard to acquired knowledge (Hill et al. 2013, p. 22). Greater crystallized intelligence, on the other hand, refers to the semantic knowledge the individual has gathered over his or her lifetime. The combination of greater intelligence, greater motivation to understand a problem thoroughly, greater information search, and a reduced likelihood of falling prey to common cognitive heuristic errors suggests that these individuals may be superior negotiators. It also suggests that the greater effort may lead to greater confidence in their choice, and therefore greater willingness to take a strong stand in the negotiation. Please see Fig. 1, specifically the arrows pointing from the *NCOG* circle to *PRE_STRONG* (H2a) and to *DIF_INCOME* (H2b). Accordingly, we hypothesize that:

H2: Individuals who score more highly on the Need for Cognition Scale will be more likely to

(a) State that they will work aggressively to achieve their preferred outcome once the negotiation begins (i.e, *NCOG* will be positively related to *PRE_STRONG*), and

(b) Achieve their negotiating goals in the simulated auditor–client negotiation session (i.e., NCOG will be positively related to *DIF_INCOME*).

Logically, individuals who are more willing to argue strongly for their position should be more likely to achieve their goal, other things being equal. For example, individuals who are more willing to argue for their position may produce more arguments or just verbiage to support their preferences (see, for example, Hoffman and Kleinman 1994). In addition, the display of one individual's determination to have his or her choice selected in the inter-team negotiation may intimidate the other team. Alternatively, the influence may come about through the mere display of conviction that the person who is arguing more strongly shows in his or her choice, thus convincing his/her counterpart to agree. This *may* happen even if that agreement runs

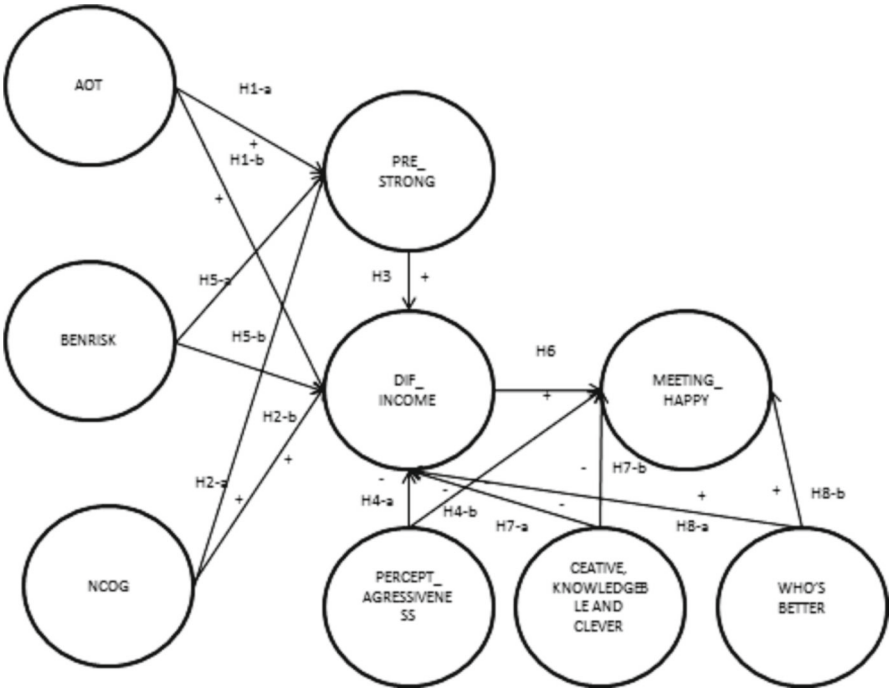

Fig. 1 Hypothesized model

counter to his or her own interest. Please see Fig. 1, specifically the arrows pointing from *PRE_STRONG* to *DIF_INCOME* (H3). Thus, we hypothesize that:

H3: The stronger an individual's pre-meeting assertion that he/she will argue strongly for his/her position, the more likely he/she is to achieve his/her desired net income goal (i.e., *PRE_STRONG* will be positively related to *DIF_INCOME*).

Given the negotiation design of this study, it could be argued that if each negotiating pair has equally high levels of actively open-minded thinking, need for cognition, or a stated and presumably felt belief that they will argue strongly for their preferred pre-meeting net income, then we are unlikely to find an effect of the equally matched variables. That may very well be true, but that makes our test of the relevant hypotheses a very conservative feature of our design.

Negotiations can be seen as contests for the achievement of goals between individuals whose interests may diverge. Furthermore, given that negotiation is a very human process, the behavior of one's counterpart may affect one's own prospects for success. As Kleinman and Palmon (2000a, 2003) argued, auditor–client negotiations can be seen as multidimensional. On the one hand, the participants can choose to collaborate to some degree, or contest to some degree. Alternatively, they could choose to withdraw from the contest of wills and engage in avoidance behaviors. The negotiation set-up used here placed considerable pressure on the participants to seek the best outcome for their own side, since both sides face potentially heavy penalties the farther they deviated from the outcome most favorable to themselves. In such a contest, indi-

viduals face the choice of pressuring the opposing party or seeking a compromise or collaborative outcome. Feelings of being pressured may lead to less happiness with the negotiation process itself. Also, one reaction to pressure may be poorer performance in the negotiation. For the purposes of this study, we utilized a questionnaire to tap each negotiator's post-meeting perceptions of their own performance and that of their counterpart. We had originally developed, tested, implemented and analyzed the results of this questionnaire for an earlier study. Accordingly, we were aware of its psychometric properties in the earlier effort. Please see Fig. 1, specifically the arrows pointing from *PERCEPT_AGRESSIVENESS* to *MEETING_HAPPY* (H4a) and *DIF_INCOME* (H4b). Based on the factor analysis of the current data, we developed these hypotheses:

H4: The more the other negotiator is perceived as being overbearing, threatening or hostile:
- (a) The less satisfaction the subject will have with the negotiation itself (that is, *MEETING_HAPPY* will be negatively related to Threatening Perceptions of the other or, in the figure, *PERCEPT_AGRESSIVNESS*);
- (b) The less likely the subject will achieve his/her negotiation goals (that is, Threatening Perceptions of the Other will be negatively related to *DIF_INCOME)*.

As our next key variable, we used a set of risk-related measures drawn from the CBEES instrument. All negotiations are risky, and the participants in this study were assigned to roles in which an unfavorable negotiation result could be a problem. As detailed in the case (discussed further below), the auditor faced either the risk of losing the client by taking a tough stance, or the risk of potential legal liability should he/she give in to the client. The client faced the risk of losing out on a profitable merger opportunity or losing the business and bonuses. The impact of the perception of risk, the perceived benefits of taking the risk, and the indicated willingness to take that risk helps us to understand the interplay of risk and reward anticipations in a simulated auditor–client negotiation setting. Measuring financial risk perceptions is easy to do, but difficult to interpret. However, assessing the probability of success in the negotiation endeavor may powerfully affect the relationship of success to any given behavior. Furthermore, both sides were bound by constraints. Violation of constraints in either direction may have harmed the participants' characters. Accordingly, we do not offer a directional hypothesis for the risk perception variables. Since it is impossible to measure the impact of an individual's risk aversions to given levels of potential reward, and risk preferences may differ among different domains in life, we offer only a null hypothesis. Please see Fig. 1, specifically the arrow pointing from the *BENTRISK* circle to *PRE_STRONG* (H5a) and to *DIF_INCOME* (H5b). The hypotheses are stated as follows:

H5: Measures of individual risk assessment and perceived rewards will not be related to the outcomes of the auditor–client negotiation, specifically:
- (a) Risk perceptions will not be related to success in the negotiations as measured by *DIF_INCOME*, and
- (b) Risk perceptions will not be related to a willingness to take a strong stand during the negotiation, as measured by *PRE_STRONG*.

As individuals come closer to achieving their negotiation goal, the more likely they are to be happier with the outcome. The case presents a negotiation situation in which there are distinct negative and positive outcomes for each party to the negotiation. The audit partner avoids threats to his/her career and firm by achieving a negotiated net income goal closer to his/her preferences. The CEO may receive a bonus that grows proportionately with the agreed upon level of net income. Please see Fig. 1, specifically the arrow pointing from the *DIF_INCOME* circle to *MEETING_HAPPY* (H6). Accordingly, we hypothesize that:

H6: The greater the correspondence between the individual's pre-meeting net income goal and the achieved post-meeting net income, the happier the individual will report being with the outcome of the meeting (i.e., *DIF_INCOME* will be positively related to *MEETING_HAPPY*).

Pressuring, threatening, and bullying are behaviors that may be used at the negotiating table. Other behaviors are possible as well. For example, the negotiators may choose to seek a collaborative solution that works to the benefit of both parties, and result in greater happiness with the meeting. In a truly collaborative setting, it is unlikely that either party would achieve its pre-meeting net income goal. However, it is possible that one party's creativity, knowledge and cleverness may lead the other party to be more accepting of its numerical aims, and therefore curtail its own demands for a preferred net income number. Please see Fig. 1, specifically the arrow pointing from the *CREATIVE, CLEVER AND KNOWLEDGEABLE* circle to *MEETING_HAPPY* (H7a) and to *DIF_INCOME* (H7b). Therefore, we offer these hypotheses:

H7: The more the other negotiator is perceived as Creative, Clever and Knowledgeable:
- (a) The more satisfaction the subject will have with the negotiation itself (i.e., Creative, Clever and Knowledgeable will be positively related to *MEETING_HAPPY*);
- (b) The less likely the subject will achieve his/her pre-meeting negotiation goals (i.e., Creative, Clever and Knowledgeable will be negatively related to *DIF_INCOME*).

Finally, a negotiation is a contest of wills and skills and wiles between two individuals. Even when they know each other, we believe that each individual will inevitably evaluate his/her own performance with respect to that of the other party (see Kleinman et al. 2010). Individuals may evaluate themselves more favorably than they evaluate the other, or less so. Accordingly, other things being equal, participants in a situation involving conflict will evaluate their own resources against those employed by the other side, and come to a conclusion as to whether they were "good enough". These forces, individually or in combination, may act to foster each negotiator's feelings of satisfaction with the negotiation process. Of course, success in the negotiations themselves may foster greater happiness with the meeting's outcome. Please see Fig. 1, specifically the arrow pointing from the *WHO'S BETTER* circle to *MEETING_HAPPY* circle (H8a) and to the DIF_INCOME circle (H8b). Accordingly, we offer a final hypothesis:

H8: Individuals who evaluate their performance in the negotiation more highly compared to the performance of the other party are also more likely to report:
(a) Being happier with the meeting itself (i.e., Who's Better will be positively related to *MEETING_HAPPY*); and
(b) Being happier with the outcome of the meeting (i.e., Who's Better will be positively related to *DIF_INCOME*).

Next we present our research method and design.

4 Research Method and Design

4.1 Case Materials

Participants were randomly assigned to play the role of an audit partner or the CEO of the client firm in a case adapted from Kleinman and Palmon (2000b). The first part of the case consisted of information that was made available to the participant who was designated to be the audit partner and to the participant who was designated to be the CEO. The second part of the case presented information that was available only to the person playing the CEO, and the third part presented information that was available only to the person playing the audit partner. The case itself involves a firm whose net income has been declining for the three previous years. The unaudited net income of $112,000,000 would reverse that trend and increase the likelihood of a merger that would benefit the CEO. The case booklet prepared for the client describes the financial situation facing the client and gives the probability that the desired merger would occur for each separate possible net income number. It also specifies the probable financial benefit to the CEO should the merger take place. Kleinman and Palmon (2000b) note that the case was built to incentivize the client negotiator(s) to pursue the merger by arguing strongly for a higher net income result. The individual who plays the audit partner, who negotiates on behalf of the audit firm, is told that the current year's unaudited net income is $18,000,000 too high. The audit firm had previously been taken to task by regulatory authorities for a prior audit of a different client. The person playing the audit partner is told that the audit firm fears being sued should it be perceived to have agreed with a net income number considered materially too high. The case booklet prepared for the auditor also contains descriptions of the SEC, the competitive situation surrounding the audit firm, and the probability of litigation associated with different levels of net income. In using a case with these elements, we control for the incentives that each party faces, the regulatory environment, litigation risks, auditor tenure, and the impact of a potential change in income trend on materiality determinations, as well as the impact of client size on the negotiations. Prior literature (e.g., Brown and Wright 2008) has found that these factors potentially affect auditor behavior in auditor–client negotiations. Furthermore, by assigning individuals to both auditor and client roles, we address another gap in the literature in which the auditor position is usually studied while the client position is held constant (Brown and Wright 2008).

Each individual role player was asked first to read the stimulus materials, and then make a judgment of how much they would like the negotiated net income for the

client firm to be. The individuals were also asked how strongly they would argue for that amount of net income. Having made these judgments, the individuals were then asked to negotiate with their counterpart. Upon conclusion of this negotiation, the teams were asked to indicate the agreed upon net income amount. Both negotiators were then asked to indicate how happy they were with the outcome of the negotiation, and to complete a questionnaire describing their own behavior and their perceptions of various aspects of the other individual's behavior. The number of complete sets of data totaled 94, with 47 individuals participating as auditor partners and 47 individuals participating as client CEOs.

4.2 Data Collection and Analysis

We use a between-subjects design. We gathered the data from the 94 students in two waves. In the first wave, the participants, all MBA or MS in accounting majors at a large AACSB-accredited educational institution, provided basic demographic information and completed the actively open-minded, need for cognition and risk assessment/reward scales. Eighty-five of the 94 participants were in their twenties, and nine participants were in their thirties or above. Forty-six females and forty-eight males participated. Most students had Bachelor's degrees in business-related fields. During the second wave, we randomly selected participants to play a role as either an auditor partner or as the client's CEO. They were provided role-specific case materials to read. Based on this, they were asked to make a role-specific decision about the "right" amount of net income before beginning negotiations with their counterpart. We also asked them how strongly they would argue for this amount. Then the individuals were randomly assigned to negotiate with a counterpart playing the opposite role. There was a 1 1/2 h time limit to reach the conclusion of the negotiation, and all pairs reached a negotiated conclusion within that time frame. The experimenters remained available to the students throughout the data collection and negotiation exercises. The students behaved appropriately with respect to all facets of their participation, playing their roles seriously.

In addition to demographic data on each participant, three sets of measures were collected in the pre-negotiation phase of the study. The first set measured aspects of the subjects' cognitive flexibility and motivation to exert cognitive effort. One of the measures used here measured individual breadth of information collection preferences, as measured by Stanovich, Sà and West's (2004) Actively Open-Minded Thinking scale. The second set measured the individual's need for cognition, using Cacciopo et al.'s (1996) Need for Cognition scale. The willingness to use resources gathered through information collection and mental effort may potentially be affected by a personality-related measure: individual risk preference. Accordingly, we employed financial/investment-oriented risk assessment items drawn from a more general risk perception scale designed by the CBEES, due to the business-oriented subject matter of this study. Individuals exist in social contexts that may powerfully influence actual behavior. After the negotiation/meeting took place, we collected information on subject perception of their own behavior and their counterpart's behavior during the negotiation round. To do this, we tapped a pool of items we had previously devel-

oped and tested, measuring the perceptions and self-reflections in this study. Below we present more detailed information on each of the key scales.

4.3 Information Acquisition Preferences and Flexibility

The Actively Open-Minded Thinking (*AOT*) scale (Stanovich et al. 2004) measures both the willingness of individuals to seek information and their openness to information available in the environment. It also includes subscales measuring dogmatism and authoritarianism. Stanovich et al. (2004) define thinking dispositions as the degree of open-mindedness, willingness to exert effort to acquire information, and lack of bias with respect to the contrary opinions of others. Kleinman et al. (2010) stated that thinking dispositions may best be considered as mental preferences that allow information inputs to rise to awareness. However, even after awareness occurs, there remains a need to work on these inputs in order to derive, for example, a negotiating strategy. We measure the *cognitive drive* that individuals have to explore and utilize information with the Need for Cognition (*NCOG*) scale (Cacioppo et al. 1996). "Need for cognition" measures one's open-mindedness to information, as well as the disposition to seek that information. It relates to the willingness to exert mental effort to understand the information and its implications and, separate the proverbial "wheat" from the "chaff". However carefully one acquires and analyzes information, individual *risk* preferences, which is a personality variable, may impact the individual's willingness to employ those cognitive and informational resources in context. Accordingly, we then measured financial and investment-related risk perceptions, preferences and behavioral intentions based on a broader survey of risk perceptions and preferences originally developed by the CBEES. The reliability values for the *AOT* and *NCOG* scales were .81 and .81, respectively, using Cronbach's Alpha and standardized values. The CBEES scale adaptation consisted of three subparts. Reliability values for the CBEES risk scale were poor. Since this study uses SEM, we did not sum the three scales for use as unitary item since the reliability values do not serve an important purpose here. Our analysis of the post-meeting questionnaire was factor-analyzed as well. The scale itself had poor reliability, but based on our earlier evaluation of the scale, we had expected that. Given the sets of items in the scale, we then factor analyzed the scale and found that the first three factors were meaningful. We then dropped items from the temporary scales formed by each factor until acceptable reliability values were achieved. The items that loaded on the first factor indicated the respondent's perceptions of his/her counterpart negotiators as threatening, bribing or cajoling. The Cronbach Alpha value for that scale's 4 items was .71. The second scale was interpreted to measure the respondent's perception of the creativity and knowledge of the other party. Its Cronbach alpha equaled .743. The final scale, which seemed to measure the respondent's feeling that he/she did not prepare as well as his/her negotiating counterpart, had a Cronbach Alpha of .593. The alpha values for the first two post-meeting factors are clearly within the acceptable range (see Nunnally 1972.) The third was marginal. We chose to retain it for further analysis anyway.

Table 1 provides a description of the primary variables remaining in the model after factor analysis.

Table 1 Description of major retained variables

Name of a variable	Stage	Description
AOT	1	One of two factors measuring a subject's cognitive makeup. This factor measures the individual's openness to new information and dogmatism/authoritarianism
NCOG	1	One of two factors measuring a subject's cognitive makeup. This factor measures the intellectual drive to understand and solve problems
BENTRISK	1	A variable to measure aspects of risk assessment and preference of subjects
PRE_STRONG	2	How strongly a subject would like to argue to reach her/his pre-meeting net income goal
PRE_INCOME	2	The dollar amount of net income an individual preferred in pre-meeting stage
MEETING_INCOME	3	The dollar amount of net income each group reached through the negotiation
*DIFF_INCOME**	3	This variable measures the difference between an individual's pre-meeting preference for a negotiated net income (*PRE_INCOME*) and the post-meeting achieved preference (*MEETING_INCOME*). And then this variable is standardized to avoid measurement issues
PERCEPT_AGRESSIVNESS	3	Perceptions of other as aggressive, threatening, etc. during meeting
CREATIVE, CLEVER, KNOWLEDGEABLE	3	Perceptions of other's creativity, cleverness, and knowledgeableness
WHO'S BETTER		Perceptions of subject's own abilities and preparation for the negotiation
MEETING_HAPPY	3	How satisfied the subject is with the results of the negotiation

This chart presents basic information of variables. Stage 1 designates that the variables are measured at the first part of the experiment, stage 2 indicates that the variables are measured before the actual negotiation, and stage 3 means that the variables are measure after the negotiation is complete

*Some adjustments have been made because auditors and clients tend to pursue opposite directions

DIFF_INCOME is calculated:

Participants are required to write the pre-negotiation net income that they would like to pursue and the post-negotiation net income that they reached. We calculated the difference between those two net income values. We assumed that auditors tend to reduce the net income, whereas clients have a motivation to increase the value. Therefore, we adjusted the difference between two values as:

Auditors: *ADJ_DIFF_MEETING_INCOME* = −1*MEETING_DIFF_INCOME*

Clients: *ADJ_DIFF_MEETING_INCOME* = *MEETING_DIFF_INCOME*

For example, an auditor gets *MEETING_DIFF_INCOME* which is *MEETING_INCOME* − *PRE_INCOME*, 107,000,000 − 100,000,000 = 7,000,000, so this means that this auditor "loses" 7,000,000 with a client based on the auditor's pre-meeting preference for a net income of $100,000,000. Therefore, the positive value of *MEETING_DIFF_INCOME* presents that auditors' failure. So, we adjust this value by multiplying by negative 1

On the other hand, a client gets *MEETING_DIFF_INCOME* which is *MEETING_INCOME-PRE_INCOME*, of 98,500,000 − 110,000,000 = −11,500,000, so this means that this client "lose" 11,500,000. So, the negative value of *MEETING_DIFF_INCOME* presents that clients' failure and need not be adjusted. Since the dollar value of net income is too high compared with other variables the numbers are standardized using the mean and standard deviation of the samples

Table 2 presents descriptive statistics on the study's major variables. Since we randomly assigned individuals to the audit partner and CEO roles, there was no significant difference between the two groups on the two psychological and one personality-related variable. The variables tied to a role, such as *PRE_INCOME,*

Table 2 Descriptive statistics of variables

Variable	Obs	Mean	SD	Min	Max
NCOG	94	4.23	1.50	1.00	6.00
AOT	94	2.98	1.43	1.00	5.00
BENTRISK	94	2.93	1.43	1.00	5.00
PRE_INCOME	94	102,000,000	4,436,027	94,000,000	112,000,000
MEETING_INCOME	94	102,000,000	2,777,973	94,000,000	110,000,000
PRE-STRONG	94	5.86	0.98	2.00	7.00
DIF_INCOME	94	0.00	1.00	−2.58	5.12
PERCEPT_AGRESSIVENESS	94	3.29	0.95	1.00	5.00
CEATIVE, CLEVER AND KNOWLEDGEBLE	94	2.42	1.14	1.00	5.00
WHO'S BETTER	94	3.04	1.27	1.00	5.00
MEETING_HAPPY	94	5.50	1.21	1.00	7.00

This chart presents descriptive statistics on key variables of use in understanding the results of the experiment. Please note that the range of *NCOG* is from 1 to 6, of *AOT, BENTRISK, PERCEPT_AGRESSIVENESS, CREATIVE, CLEVER AND KNOWLEDGEABLE* and *WHO'S BETTER* are 1–5, and the range of *MEETING_HAPPY* is 1 to 7. *PRE_INCOME* is the dollar value that auditors/clients plan to pursue before the negotiation, and *MEETING_INCOME* is the dollar value agreed on after the negotiation. Those two variables are not used directly in the hypnotized model, but are presented in this table since they indicate important results of the experiment. Except for *PRE_INCOME* (the mean value for auditors = 99,906,383 and for clients = 103,351,064: *P* value of student *t* test < 0.00) all variables are not statistically significant different between auditors and clients *P* value of student *t* test < 0.16. The way to calculate DIF_INCOME is already presented in Table 1

which is the dollar value of income the participant said they wanted to reach during the negotiation itself, differ between auditors and clients. This is understandable given that it was the auditors' task to seek to reduce the unaudited net income and it was the client CEO's task to defend the unaudited net income of $112,000,000. Accordingly, in measuring the outcome of the negotiations, we adjusted for the opposite net income directions the auditors and clients pursued by taking the difference between each participant's pre-meeting income choice (*PRE_INCOME*) and the resulting negotiated *MEETING_INCOME*. We then multiplied the difference by −1 on the auditor's side. For example, an auditor wanted to reach $94,000,000 and a client wanted to exceed $100,000,000 in income, but the mutually agreed upon result was $99,000,000. Accordingly, the negotiated result exceeded the auditor's preference by $9,000,000. This value is calculated by $-1*$ (MEETING_INCOME-PRE_INCOME). On the other hand, the client lost $10,000,000. This value was calculated by $(MEETING\_INCOME - PRE\_INCOME)$. After adjusting the direction, we standardized the dollar value to make it comparable in size to the other variables, creating a variable denoted as *DIF_INCOME*.

The need for cognition variable (*NCOG)* is measured by 18 questions. Actively open-minded thinking (*AOT*) is measured by 41 questions, divided into three subgroups. In the risk measure, *BENTRISK*, participants were asked to indicate (1) how risky a potential financial transaction is; (2) how rewarding that financial transaction

might be; and (3) how likely they were to engage in that transaction. Given that several of the scales involved multiple questions and since the purpose of the questions was to measure the same factors, each question might be highly correlated with others. While more questions could improve the accuracy of measurement, it would also raise potential problems of multicollinearity and over-fitting. Also, compared with the sample size, without variable reduction, there would be too many questions. Gorsuch (1983) and Hatcher (1994) recommend a minimum subject to item ratio of at least 5:1. Since the sample size is 94, we need about 20 questions to reach reliable results. Therefore, we reduced the number of variables using Principal Component Analysis (PCA). PCA is one of several multivariate statistical techniques used to decrease the number of variables in a data set to a smaller number of dimensions. PCA generates uncorrelated components, where each component is a linear weighted combination of the original variables. By running PCA with Varimax, with a threshold of 1 Eigen value for accepting a factor, we get 6 factors in *NCOG* and 7 in *AOT*, and this result is statistically valid (Bartlett test of sphericity $P < 0.00$). However, since PCA for *BENTRISK* is not valid, we used the original variables. The total number of variables still exceeded 20, but in the early stages of the analysis, it became apparent that *BENTRISK* would not impact other variables in the study. Therefore, as part of the routine iterative processes that characterize the use of structural equation modeling, it was removed from further inclusion in our model.

5 Results and Discussion

Structural Equation Model (SEM) is often described as a combination of exploratory factor analysis and multiple regression (Ullman and Bentler 2001). SEM has been used in social science research, including accounting studies (e.g., Bamber and Iyer 2002). We tested the hypothesized structural model itself using AMOS 16. To evaluate the fit of the resulting measurement model, we followed Bollen's (1989) recommendation to interpret multiple indices of fit. We provide this in Table 2 with Chi-square statistics, the Root Mean Square Error of Approximation (RMSEA), Comparative Fit Index (CFI), and the Standardized Root Mean Square Residual (RMR). The *P* value of the chi-square statistic was insignificant. Specifically, the *P* value of chi-square was .16, exceeding the significance level of .05 for rejection. This *P* value argues that the model suggested by the data did not differ significantly from the model we sought to test. Accordingly, we could not reject the implicit hypothesis that our model matched the data. Since the chi-square value for the model tends to track the size of the sample, and our sample was 94, this result suggests the model's adequacy. SEM also produces other fit indices, most of which exceeded or were close to the recommended cutoff values. The CFI index equaled .87. The threshold value for the CFI index is .9. Although CFI falls below the threshold, it is close. Furthermore, the RMSEA value of .09 was less than the suggested threshold of .10. This also suggests the adequacy of the hypothesized model in matching the data. Other indicators, like RMR, are slightly higher than the threshold (a value of .09 as compared to a suggested lower threshold of .08; see Hu and Bentler 1999). Given the overall results, the model was deemed acceptable. Whereas Fig. 1 shows the *hypothesized* model, Fig. 2 shows the *realized* model, that is, the

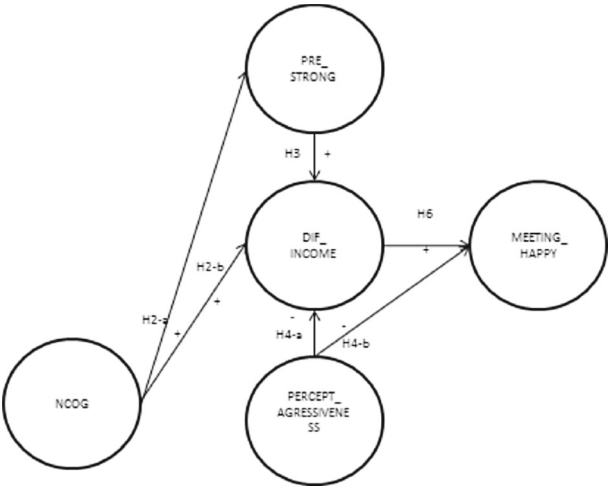

Fig. 2 Realized model

Table 3 Overall fit summary and explained variances for the *entire* model

Goodness of fit 455.07 ($P = 0.16$), df 426	Model	Value indicating acceptable fit
Root mean square error of approximation (RMSEA)	0.09	<0.10
Comparative fit index (CFI)	0.87	>0.90
Incremental fit index (IFI)	0.89	>0.90
Root mean square residual (RMR)	0.02	<0.05

* An acceptable P value is $< .05$, indicating that the hypothesized model does not differ from the model implied by the data with greater than a 5 % chance of concordance by accident

model with significant links preserved. Tables 3 and 4 present information about the testing and the realized model.

Having established that the structural model is supported, we now analyze the individual hypotheses.

Table 4 shows that hypotheses H1a and H1b were not supported. That is, the actively open-minded thinking (*AOT*) characteristic was not associated with *PRE_STRONG* or *DIF_INCOME*. The argument for expecting *AOT* to be related to *PRE-STRONG* and *DIF_INCOME* was that mental flexibility and openness to information may reflect a propensity to see issues from others' perspectives and to adjust one's behavior in response to this or other new information. This was not true here. LeGault (2006) argued that extensive acquisition of information both narrowly and broadly related to specific tasks may assist in the successful analysis and accomplishment of those tasks, but the confining characteristics of our specific case may have limited the ability of the students to bring other information to bear. It may also be that the flexibility of the higher *AOT* scorers tended to diminish their willingness to take strong stands

Table 4 Structural equations results and estimated *individual* coefficients *within* the realized, model

Hypothesis	Independent variable	Dependent variable	Standardized coefficient	*P* value	Conclusion
H1-a	*AOT*	*PRE-STRONG*	−3.60	0.38	Not supported
H1-b	*AOT*	*DIF_INCOME*	−2.84	0.52	Not supported
H2-a	*NCOG*	*PRE-STRONG*	0.99	<0.01	***
H2-b	*NCOG*	*DIF_INCOME*	0.92	0.07	*
H3	*PRE-STRONG*	*DIF_INCOME*	−0.26	0.43	Not supported
H4-a	*PERCEPT_AGRESSIVENESS*	*DIF_INCOME*	−0.87	<0.01	***
H4-b	*PERCEPT_AGRESSIVENESS*	*MEETING_HAPPY*	−0.78	0.02	**
H6	*DIF_INCOME*	*MEETING_HAPPY*	0.33	<0.01	***

*, **, *** significant at $P < 0.1$, $P < 0.05$ and $P < 0.01$

and insist on their preferred, pre-meeting net income goals. This reasoning, of course, suggests that more dogmatic and inflexible negotiators would have been more likely to exert strong efforts to achieve their desired pre-meeting, income goals. That also did not happen. Since the *AOT* scale, with its component subscales of authoritarianism and dogmatism, partially measures personality traits, it is possible that the expression of personality component may have been swamped by field effects. Field effects encompass the situating of the participants in a simulated auditor–client setting with real-world consequences for the client of a qualified or adverse opinion OR a lost merger and for the auditor of client loss or potentially being the target of a lawsuit or additional SEC sanction.

In contrast to the results with H1a and H1b, H2a and H2b were strongly supported. That is, individuals who scored more highly on the need for cognition (*NCOG*) scales were at least marginally significantly more likely to indicate that they would argue strongly for their preferred pre-meeting income. They were also significantly more likely than others to achieve success in the negotiation itself, as measured by the association between the *NCOG* and the *DIF_INCOME* variable ($P < .07$). *NCOG* is an extremely interesting variable, given that the desire to exert a great deal of effort to solve problems and understand situations is highly related to both fluid and crystallized intelligence, and to information acquisition. The results here suggest that this characteristic is also useful in integrating the demands of a structured situation (the situational and role demands present in the auditor–client game used here) with the demands of understanding the motives and aims of one's negotiating counterpart to achieve a desired aim. Accordingly, the mental characteristic of need for cognition has highly desirable real-world outcomes in both the social and professional spheres. Furthermore, the H2a prediction of a positive association between *NCOG* and *PRE_STRONG*, was also supported ($P < .01$). Perhaps engaging in detailed mental exploration of a problem results in greater commitment to argue for the desired solution. The organizational behavior literature has long known that ability is one thing, but the willingness to exert that ability toward a desired goal is another. Like many

other situations, negotiations require both ability and effort. *NCOG* seems to provide the motive power to drive an individual's efforts toward a desired solution.

H3, which postulated that the stronger individuals' stated pre-meeting belief that they will advocate strongly for their preferred position were, the more likely they would be to achieve that position, was not supported. The nonperformance of this hypothesis may be due to many things, including an equally determined counterpart whose own ardor matched and therefore blocked the desired outcomes, or the possibility that individuals in negotiation create their own social facts, leading to changes in their intended behaviors, muting in effect the intended strong advocacy (e.g., Kleinman and Palmon 2009).

H4 takes note that the outcome of a negotiation is only a partial function of the cognitive and personality characteristics, but also reflects the need to negotiate with another whose behaviors obviously will affect the outcome of the negotiation. Perceived behaviors can take a variety of forms and raise many issues in the mind of the counterpart negotiator. Our analysis of the post-meeting questionnaire found three interesting factors, two of which have scale properties that meet the traditional threshold for acceptability. H4, the hypothesis that argued that individuals' perceptions of their negotiating partner's aggressiveness would negatively impact their own success in the negotiation and their happiness with the outcome, was supported. That is, we found that Threatening Perceptions of the Other was negatively related to *DIF_INCOME* ($P < .01$). We also found that Threatening Perceptions of the Other was negatively related to *MEETING_HAPPY*, as might be expected ($P < .01$). Facing an aggressive opponent seems to have soured the atmosphere for the negotiation, leading to negative outcomes for the respondent, both emotionally and in terms of negotiated dollar outcomes. This is, of course, consistent with everyday experience.

H5, which posited that individual risk assessment and perceived rewards will not be related to the outcomes of the auditor–client negotiation, was not consistent with the model and therefore was rejected.

H6 predicted that *DIF_INCOME* would be positively related to the individual's happiness with the meeting (*MEETING_HAPPY*). We found that the closer each individual came to achieving his/her pre-meeting negotiation goals, the more the individual reported being happy with the outcome of the meeting ($P < .02$). We take the confirmation of this hypothesis as indicating the extent to which the participants in this study invested themselves in both the game and achieving a desirable outcome. This finding, along with our observation of the seriousness with which the students participated in the negotiation, argues for the validity of the findings.

The failures of H7 and H8 are interesting. H7 argued that facing an opponent perceived as creative, clever and knowledgeable would lead to less success in achieving a desired net income figure and greater happiness with the meeting. We found no relationship between perceptions of one's opponent as creative, clever and knowledgeable and these two outcomes. Since there was a significant positive association between achieving one's desired net income target and *MEETING_HAPPY*, perhaps having a creative, clever and knowledgeable opponent failed to overcome the sense of loss at not achieving one's target. Finally, H8 failed as well. Given that the scale used to test this hypothesis had marginal reliability, we draw no conclusions from the failure.

6 Conclusion

The relationship between auditors and clients is important, given the use of corporate financial statements in investment and credit allocation. These relationships give rise to difficult interorganizational situations (Kleinman and Palmon 2001) in which the auditor may have to seek the client's acquiescence with revisions to the financial statements that work against the client management's personal and economic interests. Given the value to both sides of maintaining a continuing working relationship, as well as potential legal liability, regulatory sanction, and market punishment for revealed problems in the auditor–client relationship, the two parties may negotiate to arrive at a mutually acceptable resolution. As important as these negotiations are, there has been scant research into the factors that help determine the outcome (see, for example, Kleinman et al. 2003; Salterio 2012; Brown and Wright 2008). Especially missing is research that provides insight into the "black box" of negotiator cognition and its impact on negotiation outcome in the business world. This study seeks to address that lack. As we noted above, citing Brown-Liburd and Wright (2011), auditor–client negotiations take place in three stages: The pre-negotiation planning in which the party's preferred position is formulated; the actual negotiations in which the strategies are employed, and the outcome or final resolution to the negotiation. Kleinman et al. (2003) addressed the first stage using simulated auditor and client teams. Our study encompasses all three stages, making it unique in the literature.

To accomplish this end, we employed structural equation modeling, a tool also used by Kleinman et al. (2003). SEM has become an increasingly common tool in accounting studies due to its ability to examine the relationship between sequences of actions that take place across time. Examining that relationship helps to develop an understanding of what the data suggests might be true AND helps to clarify what may not be true of these relationships. In SEM, the researcher specifies a hypothesized model in advance and then tests the data against the model, seeking to refine the model to one consistent with the data. In this effort, the researcher learns which future paths to follow and which paths to avoid. That was true here as well, given that some of our variables did not work as hypothesized. Thus, research builds upon itself in the effort to find out more. In its ability to deal with rich environments and ascertain which paths deserve future efforts, SEM serves as a powerful tool for the auditing and accounting researcher. However, despite its flexibility, SEM has not, to our knowledge, been used previously to explore the interrelationship of variables in an auditor–client negotiation setting. This study has demonstrated how SEM can be used to study the inputs to the auditor–client negotiation and provide a better understanding of how these inputs determine the ultimate outcome to the negotiation.

In this study, we examined the impact of cognitive variables and individual risk assessment and disposition on the outcomes of simulated auditor–client negotiations, using MBA and MS in Accounting students as surrogates for auditing partners and client CEOs. We also examined the impact of perceptions of each party's behavior during the meeting and on the meeting outcome and satisfaction with the meeting. We found that need for cognition, arguably the most important cognitive variable, which measures the enthusiasm with which the individual approaches thinking through and

trying to solve problems, significantly influenced negotiation success, measured as the closeness between each negotiator's pre-negotiation preferred outcome and the realized post-negotiation outcome. By contrast, actively open-minded thinking, the other cognitive variable, had no impact on success in the negotiations or the strength with which each role player's preferred net income figure was argued. The risk assessment and disposition variable had no impact on any of the variables. In practical terms, this suggests the importance to firms of selecting individuals who are willing and (given the connections between need for cognition and intelligence) able to work hard at thinking through problems in these negotiations. Open-mindedness, though, did not seem to have an impact. The value of the need for cognition is further highlighted by the influence that the Threatening Perceptions of the Other post-meeting variable had on both the success of the negotiations and satisfaction (happiness) with the negotiation results. Facing a negotiating counterpart whose behavior was perceived as threatening or manipulative reduced the negotiator's chance of a successful outcome and satisfaction with the meeting's result. Given that this is a structural equation analysis, this result implies that the other's behavior had an impact on the outcome regardless of the need for cognition. This conclusion further underscores the usefulness of SEM in studying auditor–client negotiations.

Any research effort is limited in the scope of variables that can be studied due to participant patience, boredom, and other human factors. Accordingly, every effort makes piecemeal attempts to understand the human behaviors that come together to create an outcome. This study extends prior auditor–client negotiation work first by using human subjects, rather than having humans interface with a computer. Second, we avoid problems that arise from using archival research, which forces the researcher to infer motivation from data based on a rationale *expected* to be typical in the rational homo economicus model of man. Third, through the use of SEM, we can explore the impact of personal qualities and behaviors, as well as other-person behaviors on the outcome of the negotiation. Given that negotiation is ultimately a human activity, human cognitive qualities and interpersonal interactions must factor into our understanding of the outcome of auditor–client negotiations.

With respect to future auditor–client negotiation research, we believe that SEM should be more widely used. Furthermore, future research should incorporate both client teams and auditor teams making decisions that negotiators can later bring into contention with the other side. Introducing elements of accountability should strengthen the inferences that can be drawn from the research. No research can hope to incorporate all variables of interest. Inevitably, research must combine pieces gathered from many sources so that, when reviewed, a complete picture of the phenomenon can be seen.

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