

UNIVERSITY OF LJUBLJANA  
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**THE INFLUENCE OF UNCONSCIOUS MOTIVES ON  
DECISION-MAKING OF AUDITORS**

Ljubljana, September 2013

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## **AUTHORSHIP STATEMENT**

The undersigned MINA GODEC, a student at the University of Ljubljana, Faculty of Economics, (hereinafter: FELU), declare that I am the author of the master's thesis entitled THE INFLUENCE OF UNCONSCIOUS MOTIVES ON DECISION-MAKING OF AUDITORS, written under supervision of izr. prof. dr. Sergeja Slapničar and co-supervision of izr. prof. dr. Eva Boštjančič.

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## INTRODUCTION

The financial crisis has reopened the questions about the auditors' independence and conflict of interests. An independent and unbiased auditor ensures that the claims made by a company about its financial position and the processes behind these claims, are true and fair.

Despite of the profound legislative and regulatory reforms of the audit profession following the accounting scandals at the turn of the century the global financial crisis triggered a series of high-level inquiries and issues into the role and effectiveness of audit according to the Association of Chartered Certified Accountants (hereinafter: ACCA) (2011, pp. 1-2). The reports that many distressed financial enterprises in different countries have received unqualified audit opinions by major auditing firms published shortly before the public declaration of the financial difficulties (Sikka, 2009, p. 869) severely decreased the level of confidence in the financial statement.

As a response to an increasing concern about auditor's conflict of interests arising from the familiarity in long lasting auditor-client relationships, audit firm rotation as a means to mitigate a risk has been intensively discussed in the literature and in the professional and regulatory circles. Under the new proposal draft of the European Commission banks, insurers, and listed companies are required to rotate the audit firm employed every six years, with a four year gap before the firm is rehired. If a company uses more than one auditor the rotation period could be extended to nine years (Brunsden, 2013).

The reason why the audit firm rotation has been a subject of discussion in the last few years lies in the essence of the auditor's independence threat (Slapničar et al., 2012, p. 3). Dart (2011, p. 183) highlights that economic dependence and long tenure leads to impaired auditor's independence. Extent research made by Hackenbrack and Nelson (1996, pp. 54-55), Prentice (2000, p. 1619), Kadous, Kennedy, and Peecher (2003, p. 761), Blay (2005, p. 782), Kadous, Magro, and Spilker (2008, p. 152), and Moore, Tanlu, and Bazerman (2010, p. 40) point out auditors' tendency to serve client's references in case of the ambiguous accounting choices. Moreover, Callao and Jarne (2010, p. 180) report that discretionary accounting and opportunistic behaviour have actually increased after the adoption of International Financial Reporting Standards (hereinafter: IFRS) in Europe.

Incentive theory highlights the role of external stimuli that motivate behaviour. According to Bernstein and Nash (2008, p. 301) people are prone toward behaviours that offer positive incentives and averse toward behaviours associated with negative incentives. Auditor's inclination to serve client's interest decreases with increasing risk for an auditor to be associated with incurring high explicit or implicit costs such as a loss of reputation, license withdrawal or

litigation costs (Slapničar et al., 2012, p. 3). These costs can be viewed as negative incentives within the framework of the incentives theory of motivation. As stated by Johnstone, Sutton, and Warfield (2001, p. 5) auditors' tendency to serve client's preferences arises from direct and indirect incentives. Direct incentives include actual or potential financial benefit or the potential loss of such benefit. Indirect incentives derive from other circumstances which may make it difficult to maintain the objectivity of the auditor. On one side, financial dependence presents incentives that mitigate the auditor's ability to resist client pressure out of a concern that financial relationship would be terminated. On the other side, auditor's inability to be objective may also arise when the auditor has a personal relationship with the client. Personal relationship might create situations in which the auditor is hesitant to act with the professional rigor and unwilling to impair a relationship with the client, thus causing biased judgement (Johnstone et al., 2001, p. 5).

Previous research shows that biased decision-making is caused by an individual's conflict of interest (Moore et al., 2010, p. 46). Two prominent determinants of auditor's biased opinion are financial incentives and personal relationship (Moore et al., 2010, p. 40; Slapničar et al., 2012, p.1). Literature suggests that auditor's independence is closely linked with the financial incentives (DeAngelo, 1981, pp. 115-116, Mednick, & Previts, 1987, p. 236). The influence of financial incentives on auditor's decision-making was examined by Farmer, Rittenberg, and Trompeter (1987, p. 6), Lord (1992, p. 92), Blay (2005, p. 762), Moore, Tetlock, Tanlu, and Bazerman (2006, p. 18), Moore et al. (2010, p. 38), and Slapničar et al. (2012, p. 5). The empirical evidences that the auditor's tendency toward client's preferences is induced by financial incentives are relatively consistent. Although the bias arising from personal relationship has been investigated in psychology, corporate governance and auditing (Morck, 2008, p. 189; Slapničar et al., 2012, p. 4; Bamber, & Iyer, 2007, p. 7), the influence of such incentive on auditor's decision-making process is less understood.

Financial incentives and personal relationship may cause auditor wanting either consciously or unconsciously to arrive at a particular conclusion (Slapničar et al., 2012, p. 1; Moore et al., 2010, p. 46; Nelson, 2004, p. 16). Both types of stimulus create directional goals that lead to bias reasoning (Kunda, 1990, p. 483). The theory of motivated reasoning implies that individuals with directionally motivated goals evaluate and process the information in a biased manner in order to reach a desired conclusion as long as the conclusion can be justified (Kunda, 1990, pp. 482-483; Blay, 2005, p. 766). Justification construction process is an illusion of objectivity, because people are not aware of the process. Consequently, memory search and belief construction is biased by their goals. Through motivated reasoning people accept self-serving attributions in cognitive process that allows them to conclude what they want to conclude (Kunda, 1990, pp. 480-483). According to its author Kunda (1990, p. 482) this mental



process is unconscious. However, the finding that professionals are susceptible to high litigation risk (Kadous et al., 2008, p. 135) casts considerable doubt about that.

The view that one's goals or motives affect reasoning and one's behaviour has a long and a controversial history in psychology (Kunda, 1990, p. 480). Motivation theories presuppose that behaviour is a reflection of a set of underlying needs. Motivation theories use personal characteristics or attributes to explain motivation. Humanistic theorists such as Murray, Maslow, and McClelland viewed internal human needs as the primary driver of human behaviour (Khandekar, 2012, p. 323). McClelland (1953, p. 28) proposed that one's needs are acquired over the time as a result of their experiences. McClelland (1987, pp. 595-600) classified the needs as a need for achievement, a need for power, and a need for affiliation. Motives are considered as stable dispositions that explain a lot about what a person says and does. A motive is defined as an internal state that drives individuals to meet the needs and reduce discontent (Tran, & Ralston, 2006, p. 426). Furthermore, a motive is an affect or emotion that occurs when aroused by a stimulus, and exists both on conscious and unconscious levels (McClelland, 1953, p. 28). Langens and McClelland (1997, p. 1) define the unconscious motive as what an individual unconsciously feels like doing, whereas the conscious motive refers to individual's conscious believes what he should do. According to Murray (1938, pp. 112-114) needs refer to an internal state that is less than satisfactory or lacking in some way. Like motives the needs can also be distinguished as conscious and unconscious. Conscious needs can be recalled and reported while people are unaware of unconscious needs. As proposed by McClelland (1987, p. 147) people differ in the intensity of individual needs and are most motivated in situations which allow them to satisfy the most prominent need. Previous research suggests that unconscious needs influence unconscious motives, which then move individuals toward an actual behaviour (Tran, & Ralston, 2006, p. 426).

Moore et al. (2010, p. 38) hypothesise that financial incentives give rise to conscious bias, whereas personal relationship induces unconscious bias. They were first to analyse the influence of personal relationship between a client and an auditor on auditor's decision-making. While the results of their experimental study do not confirm a significant effect of personal relationship on auditor's decision-making neither in the absence nor in the presence of the financial incentives, they show that the auditors are susceptible to their role and are unable to debias their decision even when in a different role (Moore et al., 2010, pp. 44-45). They propose this finding to indirectly imply unconscious mental process to take place.

Slapničar et al. (2012, p. 1) investigated simultaneous effects of personal relationship and financial incentives on auditor decision-making. By strengthening the measurement of personal relationship the results of their experimental study show that financial incentives are significantly associated with an auditor's choice, while they also fail to confirm the main effect

of personal relationship on auditor's decision-making. Its effect becomes evident after introducing oversight risk. They find that while oversight risk significantly mitigates biased decision-making, personal relationship almost completely offsets this effect. Unlike financial incentives subjects in personal relationship condition were not susceptible to oversight risk. This could be interpreted as an indirect indication of the unconscious bias.

The purpose of this paper is to measure the unconscious motives of an auditor's decision-making more directly. The paper advances the theory of motivated reasoning and the theory of needs through the research on how personal relationship, financially oriented motives, and unconscious motives influenced by unconscious needs, personal values, and personality traits affect decision-making within ambiguous choices. Our study extends the Slapničar et al. (2012, pp. 4-11) and Moore et al. (2010, pp. 38-39) studies by trying to measure whether the bias in personal relationship is indeed unconscious arising from unconscious needs, personal values, and personality traits, or is it conscious based on fear of losing a client and eventually a long-term financial interest. The experiment was designed as a two-period auditor-client sequential game with the manipulation of the relationship measuring individual's decision-making in the role of an auditor. Results of empirical research confirm that a personal relationship has a significant effect on decision-making of auditors. Results show that personal relationship and fear of losing a client positively affect auditor's decision-making in favour of a client while they do not confirm significant influence of friendship, unconscious needs, and money as a value and agreeableness as a personality trait. Our analysis show that bias in personal relationship is conscious, in particular that it is based on fear of losing a client.

The study is an original empirical investigation of the effect of unconscious motives on decision-making of auditors. The findings contribute to the theory and practice of the influence of unconscious motives on auditor's decision-making and towards a better understanding of personal relationship and its effect on auditor's independence. The paper also contributes to the recent regulatory discussions on measures to increase auditors' independence.

The paper is further structured as follows. Section one provides theoretical background and develops the hypotheses. Section two focuses on methodology of the research and the design of the experiment. Section three provides the results of the analysis. Section four discusses the findings and concludes the research.

## **1 LITERATURE REVIEW**

### **1.1 BIASES IN AUDITOR DECISION-MAKING**

Audits play an important role in promoting confidence and reinforcing trust in financial information (AuditQuality, 2005, pp. 4-5).

Unfortunately, in recent years, the audit profession in the EU and around the world has failed to fulfill the principle purpose of the audit. That is to provide an independent opinion on true and fair view of company's actual financial position and to increase the level of confidence of intended users. Sikka (2009, p. 869) reports that many distressed financial enterprises in different countries received unqualified audit opinions issued by major auditing firms on their financial statements published shortly before the public declaration of financial difficulties.

As stated by the Association of Chartered Certified Accountants (hereinafter: ACCA) the audit profession has never had such a high political profile. In the UK, Brussels, Australia, and the US the global financial crisis has triggered a series of high-level inquiries and issues into the role and effectiveness of audit (ACCA, 2011, pp. 1-2; KordaMentha, 2011, p. 2).

In the last decade audit profession has undergone profound legislative and regulatory reforms. The system of public oversight was introduced with Sarbanes-Oxley Act in 2002 in the US and the Statutory Audit Directive in 2006 in the EU (Sarbanes-Oxley Act of 2002; Directive 2006/43/EC). As one of the most radical measures, public oversight was imposed to control the audit quality beyond professional self-regulation (Zaman, & Hočevár, 2009, pp. 61-63). As stated by Chen, Elder, and Liu (2005, p. 121), the auditor's independence is crucial to the integrity of the audit process. Therefore, it was hoped that an efficient public oversight would mitigate the negative effects arising from the impaired auditor's independence (Slapničar, Zaman, & Lončarski, 2012, p. 2). Cohen, Dey, and Lys (2008, pp. 757-759) report that earnings management declined after the reform in the US. Lobo and Zhou (2006, p. 58) found that auditors appear to be more conservative. Quality of auditing and financial reporting have improved since the introduction of the Sarbanes-Oxley Act (DeFond, 2009, p. 107), however, audit failures are still present. According to Slapničar et al. (2012, p. 2) this indicates that the newly implemented oversight mechanisms failed to alleviate an essential element of auditor's conflict of interests. Moreover, drivers of the audit failure in the financial crisis remain the same as those of the large financial scandals at the turn of the century. One could conclude that implemented regulatory changes in the audit profession once again failed to effectively enforce auditor's independence.

Mandatory audit firm rotation as a mean of enhancing the independence and audit quality has been a subject of global discussions. A vast number of National Governments and Institutions (e.g. European Union Commission, the American Institute of Certified Public Accountant, the U.S. Securities and Exchange Commission) began to explore the issue after the beginning of the financial crisis (Cameran, Di Vincenzo, & Merlotti, 2005, p. 5). In most jurisdictions the costs

of audit firm rotation were considered to outweigh the benefits, therefore as a compromise solution the audit partner rotation was introduced. Partner rotation has become an established practice for many countries including the United States, the United Kingdom, Europe, and Australia (Stewart, Kent, & Routledge, 2013, p. 2).

However, in 2011 the audit firm rotation was again in the spotlight and placed back on the agenda by the Public Company Accounting Oversight Board in the US (Public Company Accounting Oversight Board, 2011, pp. 2-3) and the European Commission (European Commission, 2011, pp. 3-4). Opponents of the proposal argue that the mandatory rotation would increase costs without improving the audit quality (Catanach Jr., & Walker, 1999, p. 45). To restore the integrity to the audit profession, Bazerman and Moore (2011, p. 310) believe that audit firms should work for the same client only for a fixed number of years without the possibility to renew the contract or a client being able to terminate it. European Commission Green Paper reviewed the issue and recognized that the situations where the same audit firm has been appointed by a company for decades appears to be incompatible with desirable standards of independence. And even though lead auditors are rotated on a regular basis as currently mandated by the Directive, the threat of familiarity persist (European Commission, 2010, p. 11). Slapničar et al. (2012, p. 22) believe that audit firm rotation would mitigate several threats to auditor independence and therefore not only enhance the independence, but also serve as an additional control mechanism for verifying the quality of the previous auditor.

Under the new proposal draft of the European Commission banks, insurers, and listed companies are required to rotate the audit firm employed every six years, with a four year gap before the firm is rehired. If a company uses more than one auditor the rotation period could be extended to nine years (Brunsden, 2013). In 2013 the European Union took a step toward requiring mandatory audit firm rotation. However, their plans were scaled back by the European Union Lawmakers. The European Parliament's Legal Affairs Committee voted to lengthen the minimum rotation period to fourteen years with an extension option to twenty five years if safeguards are put in place (European Parliament, 2013, pp. 1-2; Brunsden, 2013; Turner, 2013; Tysiac, 2013). By lengthening the minimum rotation period the issue about auditor's conflict of interests and impaired auditor independence due to economic dependency, familiarity in long tenure still persists.

Auditor's independence is considered to be an important element of audit profession due to its impact on the audit quality. Lee and Gu (1998, p. 534) define auditor's independence as a nonpresence of collusion between the auditor and the manager of the client firm. Magee and Tseng (1990, p. 322) define the lack of auditor independence as auditor's decision-making that is not in accordance with his beliefs regarding the reporting policy.

The auditor throughout the audit process closely works with the client. The main task of the auditor is to provide professional and independent opinion on the true and fair financial position of audited company. Since audited financial statement informations are used in decision-making of external stakeholders who are unable to directly observe the audit quality of the firm and establish whether financial informations are without omissions, misstatement, or biases, the reputation of the auditor serves as an important approximation for the quality and accuracy of financial statements and firms' financial performance (DeAngelo, 1981, pp. 115-116).

In the accounting and auditing literature several different threats to the independence of auditors, their impact on earnings management, and auditor's decision-making have been profoundly studied. While agency theory emphasizes deliberate distortions (Gavious, 2007, p. 458) behavioural literature draws attention to auditor's bias due to the cognitive limitations in decision-making process (Blay, 2005, p. 764; Kadous et al., 2003, pp. 760-761; Kadous et al., 2008, p. 134).

Harris (2012) defines the decision-making as a process of sufficiently reducing uncertainty and doubt about alternatives to allow a reasonable choice to be made from them. Forgas (1995, p. 39) identifies four distinct decision-making styles, each characterized by different affect infusion potentials. Author defines affect infusion as the process whereby affectively loaded information exerts an influence on and becomes incorporated into the decision-making process, entering into the deliberation stage and eventually affecting the decision-making outcome. Four identified decision-making styles based on information processing strategies are the direct access to information stored in memory, the heuristic information processing style, the motivated information processing, and the substantive information processing style.

According to Forgas (1995, p. 40), on one side, the direct access of a pre-existing evaluation and motivated processing in service of a pre-existing goal include highly predetermined and directed information patterns to search the information and require little generative, constructive processing, limiting the scope of affect infusion effects. On the other side, when decision-making requires a degree of constructive processing either a heuristic or a substantive generative processing strategy might be used in producing a decision-making outcome.

In 1972, Tversky and Kahneman defined the term "cognitive bias". Cognitive bias refers to individual tendency to make systematic judgement errors as a result from information processing shortcuts of heuristics that are embedded into decision-making process (Tversky, & Kahneman, 1974, pp. 1130-1131). Cognitive biases can lead to erroneous judgement in virtually every context in which humans make decisions. According to Knap and Knap (2012, p. 41) it comes to these errors in particularly complex, pressure-packed settings, such as when auditor conduct independent audit.

Knap and Knap (2012, pp. 41-44) believe that cognitive biases affect auditor's independence in several different ways. First of all, auditor has a primary responsibility to assess a wide range of decisions made by others, which have been almost certainly impacted by cognitive biases. As a second, auditor needs to be mindful of how cognitive biases affect many layers of decisions made throughout the audit process. Lastly, cognitive biases can also affect the decision-making process of third parties who pass judgment on the quality of an auditor's performance such as peer reviewers, regulatory authorities, investors, and, occasionally, jurors.

Cognitive biases that may affect auditor's decision-making are conformation bias, availability bias, familiarity bias, anchoring and adjustment bias, uncertainty aversion, framing bias, halo bias, irrational escalation and false consensus bias. Conformation bias in the audit context is described as auditor's tendency to search for and favour evidence which confirms research hypotheses, one's beliefs, or other expectations. Availability bias is a phenomenon that causes the auditor to assess or predict probability of an event based upon how readily an example or instance of that event can be recalled. Familiarity bias is described as a tendency to choose the same alternative decision in a new context of decision-making, which is identical or similar to the decision-making process faced in the past. Anchoring and adjustment bias applies to cases in which an auditor must arrive at a numerical evaluation by starting from an initial value which is subsequently adjusted to arrive at the final calculated value. The adjustment made from the initial "anchor" is often insufficient in such situations. Uncertainty aversion is a tendency for avoiding situations and alternate decisions that involve uncertainty. Framing bias is a bias arising due to a format presentation of information. Halo bias is described as a tendency for one observed or known personal trait or a trait of an object to influence an auditor's perception of other traits of that person or object. Auditor's inclination to make irrational decisions in order to justify rational decisions made in the past represents irrational escalation as one of the cognitive biases. False consensus bias is described as an auditor's tendency to overestimate the degree to which other people agree with them (Knapp, & Knap, 2012, pp. 41-42).

Throughout the 1980s and early 1990s, there was a great interest in the auditing literature focused on examination of the cognitive limitations of auditors and their susceptibility to heuristics and biases described in the psychology literature (Shanteau, 1989, pp. 165-170; Nelson, & Tan, 2005, p. 51; Smith, & Kida, 1991, p. 473), especially those identified by Tversky and Kahneman (1974, pp. 1124-1129) (e.g., anchoring and adjustment, representativeness, and conformation bias). While there are some evidences presented by Smith and Kida (1991, pp. 474-475) that auditors employ these heuristics in their decision-making process, it has been also shown that overt economic self-interest have influenced or biased auditors' decision-making (Moore et al., 2010, p. 41). According to Knap and Knap (2012, p. 41) an exaggerated desire to please a client is not regarded as a cognitive bias, however, it is instead a common symptom of impaired auditor's independence.

Dart (2011, p. 183) believes that the impaired auditor's independence is generated by *inter alia* long tenure and economic dependence. Extant research points out at auditors' inclination towards decision-making in favour of the client (Hackenbrack, & Nelson, 1996, pp. 54-55; Prentice, 2000, p. 1619; Kadous et al., 2003, p. 761; Kadous et al., 2008 p. 152; Blay, 2005, p. 782; Moore et al., 2010, p. 40) if accounting choices are ambiguous.

In an audit profession the auditors are often faced with ambiguous situations in which they are expected to carry out professional judgment. Instead of auditors having to come up with an independent valuation it is more frequent that the client proposes an accounting and the auditor's only job is to decide whether to bless the client's approach as consistent with IFRS in Europe or US Generally Accepted Accounting Principles (hereinafter: GAAP) (Moore et al., 2010, p. 39). From the perspective of psychology, this kind of auditor-client arrangement raises some concerns. According to Dana, Weber, and Kuang (2007, p. 78) and Diekmann, Samuels, Ross, and Bazerman (1997, p. 1068) people are more susceptible and less bound by objectivity when only their consent to someone else's biased judgments is needed, compared to when they have to make an independent evaluation. On the contrary, results of the Moore et al. (2010, p. 39) research on role-conferred biases show no such difference between an evaluation and a consensual task.

In view of Moore et al. (2010, p. 40), Slapničar et al. (2012, p. 1), and Ye, Carson, and Simnett (2011, p. 125) two prominent determinants of auditor's biased opinion are financial incentives and personal relationship.

As mentioned before Forgas (1995, p. 40) identifies one of the decision-making style based on information processing strategies as the motivated information processing. This decision-making style is based on psychological theory of motivated reasoning.

The view that the goals or motives affect reasoning and one's behaviour has a long and controversial history in psychology (Kunda, 1990, p. 480). The theory of motivated reasoning implies that the individuals with directionally motivated goals evaluate and process information in a biased manner in order to reach a desired conclusion as long as the conclusion can be justified (Kunda, 1990, pp. 482-483; Blay, 2005, p. 766). Justification construction process is an illusion of objectivity, because people are not aware that the process of memory search and belief construction is biased by their goals. Through motivated reasoning people accept self-serving attributions in cognitive process that allow them to conclude what they want to conclude (Kunda, 1990, pp. 480-483). While Kunda (1990, p. 482), Nelson (2004, p. 16), Beeler and Hunton (2000, p. 4), and Wilks (2002, p. 53) argue that people's information processing is unconsciously biased by their goals, empirical evidence obtained in accounting context by Blay (2005, p. 764), Kadous et al. (2008, p. 135), and Slapničar et al. (2012, p. 20) indicates that

professionals are susceptible to high litigation risks. Empirical evidence of such sensitivity indicates that auditor's biased reasoning may not be unconsciously motivated.

## 1.2 INCENTIVE THEORY OF MOTIVATION

Motivation is considered to be an inner driving force that initiates, guides and maintains goal-oriented behaviours (Boštjačič, 2007, pp. 55-57).

Incentive theory of motivation stresses the role of external stimuli that motivate behaviour. According to Bernstein and Nash (2008, p. 301) people are prone toward the behaviours that offer positive incentives and averse toward behaviours that is associated with negative incentives. As stated by Johnstone et al. (2001, p. 5) auditor's tendency to serve client's preferences arises from a direct and indirect incentives. Direct incentives include actual or potential financial benefit, or the potential loss of such benefit. Indirect incentives derive from other circumstances which may make it difficult to maintain the objectivity of the auditor. On one side, financial dependence presents incentives that mitigate the auditor's ability to resist client pressure out of a concern that financial relationship would be terminated. On the other side, auditor's inability to be objective may also arise when the auditor has a personal relationship with the client. Personal relationship might create situations in which the auditor is hesitant to act with the professional rigor and unwilling to impair a relationship with the client, thus causing biased judgement (Johnstone et al., 2001, p. 5). While financial incentives increase in long-term relationships, practice risks, loss of reputation, license withdrawal or litigation costs represent negative incentives.

Financial incentives and personal relationship create so-called directional goals that bias auditor's decision-making (Kunda, 1990, p. 483, Slapničar et al., 2012, p. 7). The empirical evidences that financial incentives give rise to conscious bias are relatively consistent. However bias in personal relationship is less understood. The question whether personal relationship induces conscious or unconscious bias still persists. According to McClelland (in Tran, & Ralston, 2006, p. 426) unconscious needs influence unconscious motives, which then move individuals toward an actual behaviour.

## 1.3 THE NEED THEORY OF MOTIVATION

Motivation theories presuppose that behaviour is a reflection of a set of underlying needs. Psychology theorists such as Murray, and McClelland (in Khandekar, 2012, p. 323) viewed internal human needs as the primary driver of human behaviour.



A need theory was first proposed by Murray in 1938, but fully developed by McClelland in 1961 and 1971 (Steers, Mowday, & Shapiro, 2004, p. 381). Murray (in Khandekar, 2012, p. 324) defined needs as the motives toward specific behavioural patterns. Murray (in Khandekar, 2012, pp. 324-325) identified several needs such as need for abasement, achievement, affiliation, aggression, autonomy, counteraction, deference, dominance, exhibition, harm avoidance, infavoidance, nurturance, order, play, rejection, sentience, sex, succourance, and understanding.

In his theory of needs, McClelland (1953, p. 28) argued that needs are acquired over the time as a result of life experiences. According to its author people differ in the intensity of individual needs and are most motivated in situations which allow them to satisfy the most prominent need (McClelland, 1987, p. 147). As McClelland studied the needs of various individuals he classified them as the need for achievement, need for power and need for affiliation (McClelland, 1987, pp. 595-600).

People with high need for achievement have strong desire to excel. They are focused only on their success and do not seek power or approval. Type of people with a high need for achievement, prefer the work that has a moderate chance for success and tend to avoid situations where possibility of success is very low or very high. On one side, low-risk situations are avoided due to the belief that easily attained success is not a true measure of achievement. On the other side, high achievers avoid situations of high risk because the outcome is seen as a result of luck rather than own effort (McClelland, 1987, p. 595).

The need for affiliation reflects in one's tendency to seek harmonious relationships, need to feel accepted by other people and desire to please others (Boštjančič, 2007, p. 25). People with high need for affiliation are considered as being less assertive, more obedient, agreeable, and dependent on other people. They tend to conform to the norms of their work group and prefer working with other people (Boštjančič, 2007, p. 25).

The need for power represents the need and desire to have influence, power, and control over others. High need for power is mainly expressed by the competitive behaviour and individual's tendency to maintain or increase their validity in others. People with high need for power are less susceptible to others, have desire to influence and control others (McClelland, 1987, p. 596, Boštjančič, 2007, p. 24).

Motives are considered as stable dispositions that explain a lot about what a person says and does. A motive is defined as an internal state that drives individuals to meet the needs and reduce discontent (Tran, & Ralston, 2006, p. 426). Furthermore, McClelland (1953, p. 28) argues that a motive is an affect or emotion that occurs when aroused by a stimulus, and exists

both on conscious and unconscious levels. As proposed by McClelland (1987, p. 147) people differ in the intensity of individual unconscious needs and are most motivated in situations which allow them to satisfy currently the most prominent need. Previous research suggests that unconscious needs influence unconscious motives which then push individuals toward an actual behaviour (Tran, & Ralston, 2006, p. 426). Therefore, McClelland's theory of human needs seems to provide a theoretical underpinning of the bias stemming from personal relationship and the investigation whether it is conscious or unconscious.

#### 1.4 VALUES AND PERSONALITY TRAITS

Similar to unconscious need personal values have also a major influence on person's behaviour. While motives are more important for predicting what people will spontaneously do, values are more important for determining what they will cognitively decide should be done (McClelland, 1985, p. 819)

Values serve as one's life orientation and guidelines (Muek, 1993, p. 147). Muek (2000, p. 9) defines values as "generalized and relatively permanent notions of aims and phenomena which we estimate highly and which refer to wide categories of subordinate objects and relations, at the same time directing our interests and our behaviour as life orientations." Values are cognitive representations of human motives (Boštjančič, 2007, p. 62). According to Pogačnik (2002b, p. 33) values do not reflect the current motivation but relatively permanent and long-term motivational orientation.

For better understanding of auditors' behaviour it is important to consider also their personality traits. Personality psychology promotes a systematic approach toward understanding individual differences in behaviour, motivation, and cognition, through the development of comprehensive taxonomies of personality traits (DeYoung et al., 2010, p. 820). The Big Five model represents five fundamental categories of traits that have been identified. The model describes personality as containing five factors defined as dimensions of individual difference that consistently reflect in the actions, thoughts and emotions (Cárdenas, & Stout, 2010, p. 22). The five factors are extraversion, neuroticism, openness, conscientiousness, and agreeableness (John, & Srivastava, 1999, p. 60). The Big Five personality traits are presented in Figure 2 and described below.

Agreeableness is defined as a tendency and a desire of an individual to agree with the others and to get along with other people (John, & Srivastava, 1999, pp. 29-30). This dimension represents traits such as likeability, trust, affection, cooperativeness, tolerance, and empathy (Barrick, & Mount, 1991, p. 4; John, & Srivastava, 1999, p. 17). Haas, Omura, Constable, & Canli (in Corr, DeYoung, & McNaughton, 2013, p. 171) found evidence of agreeableness being associated with emotion regulations. Additionally, there is also some evidence according to DeYoung (2010, p.

1173) that brain systems involved in empathy are also involved in agreeableness as personality trait. Extraversion is defined as an energetic approach toward the social and material world and includes traits such as sociability, assertiveness, activity, and positive emotionality (John, & Srivastava, 1999, p. 30; Barrick, & Mount, 1991, p. 3). Conscientiousness is described as the extent to which individuals are focused on accomplishing goals and maintaining high levels of performance (John, & Srivastava, 1999, p. 30). This dimension represents traits such as self-discipline, responsibility, organization, achievement orientation, planful, and attention to detail (Scholl, 2008; Barrick, & Mount, 1991, p. 4). Neuroticism dimension of personality contrasts emotional stability and even-temperedness with negative emotionality. Neuroticism is characterised by traits such as nervousness, tenseness, moodiness, and temperamentality (John, & Srivastava, 1999, p. 30). Openness is described as an individual's openness to experiences and having wide range of interests (Scholl, 2008). Traits commonly associated with this dimension are being imaginative, adaptable, and intellectual (Barrick, & Mount, 1991, p. 5).

Figure 1: The Big Five Personality Traits

Trait	Description
<b>O</b> penness	Curious, original, intellectual, creative, and open to new ideas.
<b>C</b> onscientiousness	Organized, systematic, punctual, achievement oriented, and dependable.
<b>E</b> xtraversion	Outgoing, talkative, sociable, and enjoys being in social situations.
<b>A</b> greeableness	Affable, tolerant, sensitive, trusting, kind, and warm.
<b>N</b> euroticism	Anxious, irritable, temperamental, and moody.

Source: M. Carpenter, T. Bauer, & B. Erdogan, *Principles of Management*, 2009, p. 106

Prior research shows unconscious needs, motives, personal values, and personality traits influence one's behaviour and are therefore an important element in better understanding auditor's behaviour and biased decision-making.

## 1.5 HYPOTHESES DEVELOPMENT

According to Rennie, Kopp, and Lemon (2010, p. 282), stamina of the auditor-client, relationship results in closeness between auditors and their client. Thompson (1995, p. 849) shows that even the most superficial affiliation in relationship leads to interpretation of ambiguous information in the desirable direction of other person in relationship. Several other

studies reveal that auditor's close relationship with the client deteriorate auditor's independence and quality of auditor's decision-making (Moore et al., 2006, p. 16) and according to Bamber and Iyer (2007, p. 18) creates stronger identification with the client. Additionally, results of the study presented by Bamber and Iyer (2007, p. 18) show that higher identification of auditors with their clients lead to greater possibility of acquiescence to the client preferred treatment. Furthermore, Johnstone et al. (2001, p. 5) argues that personal relationship might cause auditors to favourite personal over professional objectives and also affects auditor's ability to exercise an appropriate level of professional scepticism.

From the theory of motivated reasoning perspective, the belief that one's outcome is dependent on the other person creates directional goals, which elicit motivated reasoning and bias the perception of others (Kunda, 1990, p. 486). Results of the studies presented by Berscheid, Graziano, Monson, and Dermer (1976, p. 987), and Neuberg and Fiske (1987, p. 431) show that outcome dependency influences and enhances impression formation. Erosion of emotions by liking somebody could lead to irrational decision-making that is no longer based on utility maximisation. Slapničar et al. (2012, p. 10) suggest that personal relationship might elicit biased decision-making of auditors beyond the financial incentives being expected from the client.

The results of Moore et al. (2010, p. 39) and Slapničar et al. (2012, p. 11) experimental study do not confirm a significant effect of personal relationship on auditor's decision-making. Thus, the influence of personal relationship is still unclear. Overall, we propose to test the following hypotheses:

H1: Personal relationship positively affects auditor's decision-making in favour of the client.

Furthermore we explore whether auditor's decision-making in favour of the client is conscious or unconscious. We intend to examine this question through study of several different factors.

Since feelings of familiarity and friendship emerge with increased length and closeness of the relationship (Ye et al., 2011, p. 125) we further investigate whether auditor's decision-making in favour of the client is affected by their friendship or simply because of auditor-client interaction in their work relationship. We propose to test the following hypothesis:

H2: Friendship arising from personal relationship with the client positively affects decision-making in favour of the client.

The idea of emotions influencing auditor's independence and consequently affecting their decision-making has not been given much attention by researchers yet. According to Windsor and Kavanagh (2012, p. 28) rationality and emotions are part of human condition and together

influencing decision-making process. Windsor and Kavanagh (2012, p. 1) argue that high level of situational moral intensity such as client's overt economic power over the auditor "sensitizes auditors' emotions that motivate their higher levels of moral reasoning to deliberate a decision to accede or resist the client's unethical demands." Their qualitative study reveals auditors' views and feeling from auditor-client relationship perspective, including exposure of emotions such as fear, trust, and anxiety.

Fear is an emotion aroused in the presence of threat (Haddad, Pritchett, Lissek, & Lau, 2012, p. 324). According to Windsor and Kavanagh (2012, p. 10) auditor's fear of losing a client further exacerbates the client's economic power over the auditor. Furthermore, Windsor and Kavanagh (2012, p. 10) believe that an auditor's fear of losing the client and consequently financial income may lead auditor to inappropriately consent to client's preferences. We thus propose to test the following hypothesis:

H3: Fear of losing a client positively affects auditor's decision-making in favour of the client.

Another explanation of behaviour and decision-making of auditors can be viewed from dispositional variables such as unconscious needs, personal values and personality traits. Overall, we propose to test the following hypothesis:

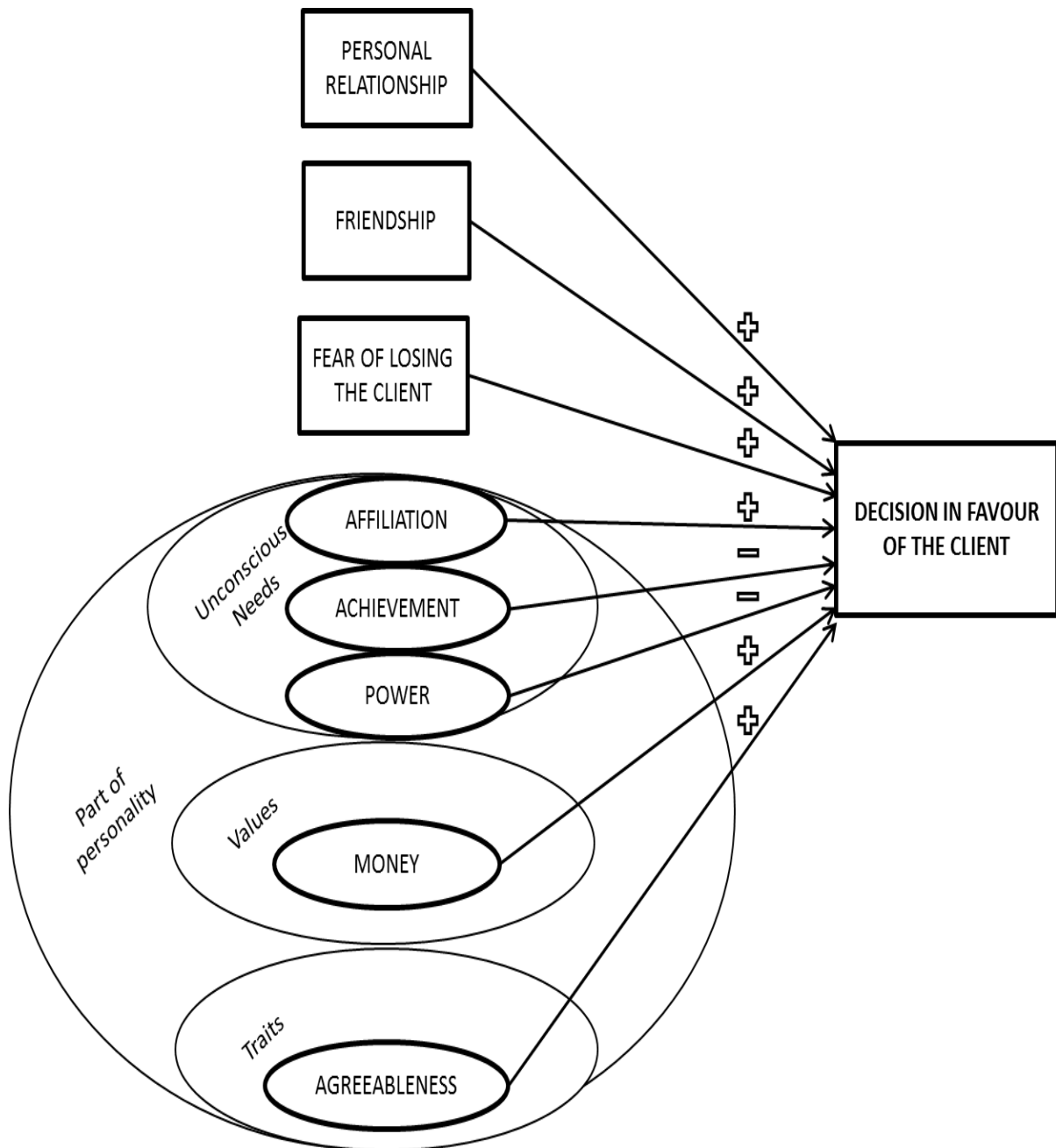
H4: Unconscious need for affiliation influences decision-making in favour of the client while the need for achievement and need for power induce auditor's independence.

H5: Money as an important value positively affects decision-making in favour of the client.

H6: Agreeableness as a strong personality trait positively affects decision-making in favour of the client.

In Figure 3 we present Conceptual model based on proposed hypotheses.

Figure 2: Conceptual Model



## 2 RESEARCH METHODOLOGY

### 2.1 PARTICIPANTS

We conducted a two period experiment with a choice task on students majoring in accounting and finance. Participants were 104 graduate and undergraduate students of the University of Ljubljana, the Faculty of Economics. As a motivation for voluntary participation, students could earn compensation in the amount between 0 to 10 EUR. Average compensation amounted to 5.2

EUR for one hour of participation, which approximately represents the average hourly rate of a student work. Potential earning was high enough that students considered it to be appealing. We inducted undergraduate (46 %) and graduate (54 %) students of accounting and finance to be more acquainted with the decision problem. Their average age is 23.3 years, 59 % of them are female, and their average work experience (including part-time student work) is 4 years. Subjects were randomly assigned in pairs to the roles of auditors and clients, i.e. Chief Financial Officers. Our analysis was primarily focused on decision-making of auditors. However, subjects in the role of the client were also important for implementation of the experimental design. Clients were used to create and intensify the atmosphere of personal relationship in the group where auditors were seated together with their paired client. In a group of non-personal relationship, where auditors were seated alone and paired with an unknown client, clients were used to respond to the auditor's decision in the second period of the experimental procedure.

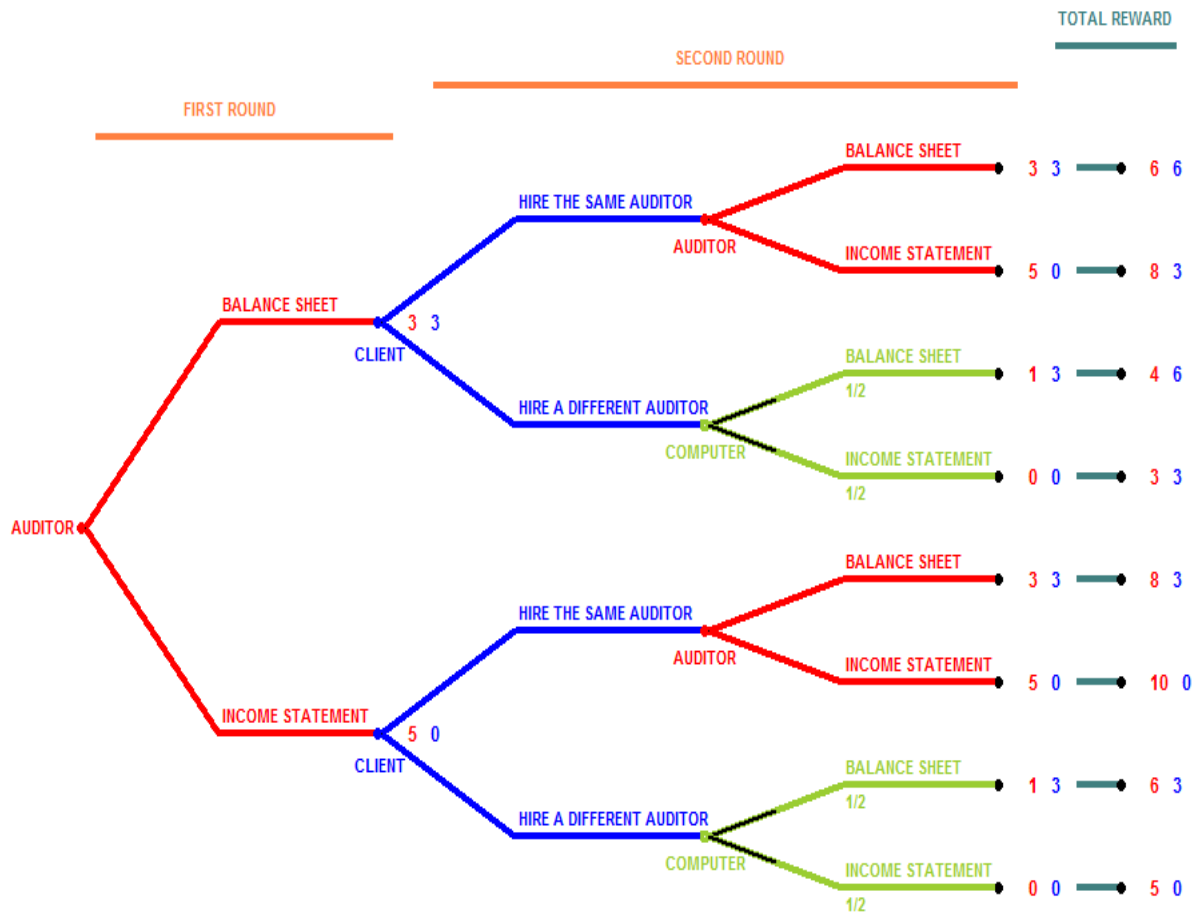
## 2.2 DESIGN

Experiment was designed as a two-player perfect information sequential game. In game theory, this is a game with a strict order of play and in which players know everything that has happened prior to making a decision. In Figure 3 we present our design of auditor-client sequential game, their possible decisions and rewards, using a decision tree.

The experimental scenario was the following: In the first round of the experimental task the auditors were presented with the task in which they had to approve accounting of development costs of the product X as an intangible asset in the balance sheet of the client's company, or as an expense in the income statement of the client's company. Clients seated with the auditor had the financial interest to persuade the auditor to approve the development costs as an intangible asset. In this case auditors would accept rather optimistic predictions about development of product X and its future cash flows. Second option was based on more realistic predictions which would require taking the costs of development to profit and loss account. In line with the theory of motivated reasoning the decision was ambiguous to facilitate directional goals to take place.

The auditor compensation scheme was design such that the auditor could maximise the reward by non-acting in the interest of the client in the first round, but in both rounds he or she could earn slightly more if supporting the client's choices. Client's compensation was dependent on the company's profit. Client's compensation scheme was therefore designed to make them eager to convince auditors to make a decision in their interest in a group with personal relationship. In non-personal relationship there was no communication between an auditor and a client, however, auditors knew that the client's reward is calculated on the basis of their decision. The game was designed to facilitate envisioning auditor-client relationship.

Figure 3: Auditor-Client Game



In the first round we set the game as if the client already hired the auditor. The subjects in the role of auditors had to make a decision. Auditors received 5 EUR as a fixed fee if they chose the option which was not in the interest of the client. As a result clients received 0 EUR. If auditors opted for the option in favour of the client, they earned 3 EUR and so did the clients.

The second round represents the following audit period and the clients had to decide whether to hire the same auditor or a different one, based on the decisions of the auditor from the first round. In both cases, clients' reward could amount to 3 or 0 EUR, depending on the subsequent choice of the auditor or random choice of the computer. The choice of the client to change the auditor or not, depended on perceived probability that the auditor would select the option in the client's interest. Auditors' reward could be the same as in the first round if hired again, but in case of a job loss auditors' reward could be only 1 EUR or 0 EUR with equal probability depending on the random number by a computer. The game was designed such that personal relationship between an auditor and a client could have affect not only on the auditor's decision but also the client's decision.



We designed Auditor-Client Game in Gambit software (McKelvey, McLennan, & Turocy, 2013) and programmed the experiment in E-prime 2.0 software (Psychology Software Tools, Pittsburg, PA).

### 2.3 PROCEDURE

The experiment was conducted mostly on a computer and partially on a paper. Initial instructions and decision-making of auditors and client was done on the computer while experimental task was presented in written form on a paper.

Participants in the role of the auditors were randomly assigned into two groups. In a non-personal relationship group auditors and clients were seated alone in front of the computer without knowing with whom they were paired. In a personal relationship group auditors were seated with the client who was either their friend or was randomly assigned to them.

Following the introduction and initial instructions on the computer, the auditors and the clients read the case and their task. In the next 10 minutes auditors seated with the client were discussing the development of product X, development costs, and the auditor's decision.

After the discussion the auditors and clients indicated auditor's decision in the provided form on the computer. Auditors seated alone took their decisions without any interactions with the client. Auditors knew that in the next period clients could hire a different auditor. On the basis of the auditor's decision, the individual reward for the auditors and clients was displayed on computers, and experimental subjects received their rewards.

After the first round of the experimental task we proceeded with the second round. A new package of instructions was handed to the participants. It contained almost the same task for the auditor as in the first round but with changed circumstances in terms of the order of decision-making and altered regime of financial incentives. After reading the case and their task, the clients first had to decide either to hire the same auditor again or a different one. Another negotiation round took place between the auditors and clients in the condition where they were seated together. After the discussion the auditors and clients indicated client's decision in the provided form on computer. Clients seated alone took their decisions without any interaction with the auditor.

On the basis of the client's decision the second round of the experiment followed. In case the client decided to hire the same auditor the auditor's turn followed. In the second round the decision task was similar – the auditor had to decide how development costs of a different product Y should appear in client's company financials. The reward and procedure of auditor's

decision-making were identical to the one in the first round. If the client decided not to hire the same auditor again, the auditor's and client's reward were randomly determined by the computer without any further decision-making of the auditor. After all decisions were entered in the computer the individual reward for the auditors and clients was displayed and also received.

In the end of the experimental task participants completed questionnaire about several different motivational factors that influenced their decisions, demographic questions and a question, where the role and relationship incentive was manipulated. Participants also completed a questionnaire for measuring their unconscious needs and self-reported personal values and personality traits.

## 2.4 VARIABLES

- *Personal relationship with the client*

We manipulated personal relationship variable (Relat) in the following way: half of the participants were in a non-personal relationship (0) and half of the participants were paired in a personal relationship (1).

- *Friendship*

We manipulated friendship variable only in a personal relationship between the auditor and the client (Friend) in the following way: half (46.2 %) of the auditors were randomly paired with a client who they did not know well (0) and half (53.8 %) of the auditors were paired with a client who was their friend (1).

- *Auditor's decision*

The auditor's decision about supporting or not supporting the client's preference was broadly presented in the design section. It was coded as (A.Dec1) and (A.Dec2) in the first and the second round, respectively. The value 0 indicates that the auditor was more objective and decided that development costs of a product should appear as expenses on the company's the income statement and value 1 if auditor decided in favour of the client and approved development costs as an intangible asset in the balance sheet.

- *Auditor's change in preferences*

Auditor's change in preferences (A.ChangePref) was set to value 0 if auditor made the same decision in the first and second round and value 1 if decision differed.

- *Client's decision*

Client's decision in the second round (C.Dec2) was defined as value 0 if client decided to hire a different auditor and as value 1 if he hired the same auditor again.

- *Unconscious needs*

Unconscious needs were measured as self-reported needs for achievement, affiliation and power. They were measured with 27 items. Items were combined and adapted from different questionnaires reported on high reliability and validity (Boneva et al., 1998, pp. 250-251). Participants had to indicate on a five-point Likert scale their agreement with the statements.

Items measuring the need for achievement were adapted and combined from Work and Family Orientation Questionnaire developed by Spence and Helmreich (1983, pp. 40-42) and Manifest Needs Questionnaire developed by Steers and Braunstein (1976, p. 262). For example, items representing need for achievement are "I work very hard to continually improve my work performance" and "I prefer to do things that require a high level of skill".

Items measuring the need for power were adapted and combined from The Power Motivation Scale developed by Schmidt and Frieze (in Frieze, & Boneva, 2001, p. 85) and Manifest Needs Questionnaire developed by Steers and Braunstein (1976, p. 262). Two examples of the statements representing need for power are "I enjoy planning things and deciding what other people should do" and "I like to have a lot of control over the events around me".

Items measuring the need for affiliation were adapted and combined from Mehrabian Affiliation Tendency Questionnaire (Mehrabian, & Ksionzky, 1974, p. 164) and Manifest Needs Questionnaire developed by Steers and Braunstein (1976, p. 262). For example, items representing need for affiliation are "I enjoy belonging to clubs, groups and other organizations" and "Having friends is very important to me".

- *Personality traits*

Personality traits were measured with Big-Five Inventory scale presented by John and Srivastava (1999, pp. 70-71). Questionnaire consists of 44 items relating to 5 dimensions of personality traits. Participants were presented with number of characteristics that may or may not apply to them. They had to write a number next to each statement to indicate the extent to which they agree or disagree with that statement, 1 meaning strongly disagree and 5 meaning strongly agree. The broad dimension of extraversion encompasses more specific traits as being

talkative, energetic, and assertive. Subscale agreeableness includes traits like being sympathetic, kind, and affectionate. Conscientiousness includes traits like being organized, thorough, and planful. Neuroticism includes traits like tense, moody, and anxious. Openness includes traits like having wide interest, and being imaginative and insightful.

- *Values*

We measured the importance of one's personal values. The respondents were asked to indicate how important is each value to them on a five-point Likert scale, 1 meaning not very important, and 5 meaning very important. They also had to rank values from the most to the least important, 1 meaning the most important value and 7 least important. In our questionnaire we included 7 values, such as society, ethics, power, money, friends, fame and independence, adapted from Pogačnik (2002a, pp. 1-2).

- *Fear of losing client*

With a five-point Likert scale, 1 meaning not influential at all and 5 meaning highly influential, we measured fear of losing the client (coded as A.Fear).

- *Control variables*

With a five-point Likert scale, 1 meaning not influential at all and 5 meaning highly influential, we also measured several different motivational factors as additional explanatory variables that would help us understand what guided decision-making of the participants in the first and second round. We asked auditors and clients about how much have factors such as own reward, reward of the other person in pair, fairness of the reward, company' profit, trust, desire to maintain long-term business relationship, pressure from the other person in pair and the view that income statement presents more objectivity choice influenced their decision-making. Auditors who were rehired in the second round were also asked how client's decision affected their decision-making.

In Table 1 we present summary of all variables measured in our experimental research, description of the variables and basic variable abbreviations. Variables are named in an easy way. The first letter before the dot represents subjects role (A = auditors, C = client) and the last number a round to which the variable refers (1 = first round, 2 = second round, 3 = difference between first and second round). If the variable has the letter T at the end, this refers to sum of both rounds.

Table 1: Variable Abbreviation and Type

Variable	Abbreviation	Variable type
Relationship between auditor and client	Relat	Manipulated independent variable
Friendship between auditor and client	Friend	Independent variable
Auditor's decision in the first round	A.Dec1	Dependent variable for auditor
Auditor's decision in the second round	A.Dec2	Dependent variable for auditor
Client's decision in the second round	C.Dec2	Dependent variable for client
Reward	Rew	Independent variable
Auditor's change of preferences	A.ChangePref	Dependent variable for auditor
Difference in decision made as an auditor and as an advisor	A.Bias	Dependent variable for auditor
Fear of losing the client	A.Fear	Independent variable for auditor in the first round
Need for affiliation	Aff	Independent variable
Need for achievement	Ach	Independent variable
Need for power	Pow	Independent variable
Personal trait agreeableness	Agree	Independent variable
Personal trait extraversion	Extra	Independent variable
Personal trait neuroticism	Neuro	Independent variable
Personal trait openness	Open	Independent variable
Personal trait conscientiousness	Cons	Independent variable
Personal value money	money	Independent variable
Personal value society	society	Independent variable
Personal value friends	friends	Independent variable
Personal value ethics	ethics	Independent variable
Personal value power	power	Independent variable
Personal value fame	fame	Independent variable
Personal value independence	indep	Independent variable
Influence of own reward	Reward	Control variable
Influence of client's reward	A.CReward	Control variable for auditor
Influence of auditor's reward	C.AReward	Control variable for client
Influence of fair reward for both	FairReward	Control variable
Influence of trust	Trust	Control variable
Influence of company's profit	Profit	Control variable
Influence of the desire to maintain a long-term business relationship	A.Longterm	Control variable for auditor
Influence of pressure from a client	A.Cpressure	Control variable for auditor
Influence of pressure from an auditor	C.Apressure	Control variable for client
Influence of belief in more objective choice - development costs as expenses	Objective	Control variable
Influence of client's decision on auditor's decision-making in the second round	A.CDecision	Control variable for rehired auditor

Demographic variables measured are: gender (0 = male, 1 = female), age, field of study (0 = Accounting and Auditing, 1 = Banking and Financial Management) and years of work experience.

## 2.5 METHOD OF ANALYSIS

Data obtained in the experiment were first analysed with descriptive statistics in SPSS. To test the statistical significance of mean difference when comparing the two groups such as relationship, decisions, and biases we used Independent-Samples T Test. To analyse dimensionality of the latent variables principal component and reliability analysis in SPSS was performed. We tested hypotheses in a logistic regression model. Logistic regression model is a multiple regression function with a categorical dependent variable and continuous or categorical independent variables. Simply put, this means that we can predict which of the two categories a person is likely to belong given certain other information (Field, 2009, p.265).

## 3 RESULTS

### 3.1 DIMENSION REDUCTION AND RELIABILITY ANALYSIS

Unconscious needs and personality traits cannot be directly measured. Even though questionnaires are reported to be valid and reliable, our factor analysis shows the need to exclude some items from the constructs based on their low covariance with other measured items. Below we present the results of factor and reliability analysis.

The Big Five Inventory (hereinafter: BFI) for personality traits presented by John and Srivastava (1999, pp. 70-71) measures an individual's extraversion, agreeableness, conscientiousness, neuroticism and openness. A principal component analysis (hereinafter: PCA) was conducted on the original 44 items with orthogonal rotation (varimax). The Kaiser-Meyer-Olkin measure did not verified the sampling adequacy for the analysis, with acceptable KMO = 0.655 ('mediocre' according to Field, 2009, p. 659) but few KMO values for individual items under acceptable limit of 0.5 (Field, 2009, p. 659, 671). Bartlett's test of sphericity shows that the correlation between items were large enough for the PCA,  $\chi^2(946) = 2188.76$ ,  $p < 0.001$ . An initial analysis was run to extract five components, which in combination explained 45.77 % of the variance. While the personality traits extraversion, and neuroticism subscales of the BFI had high reliability, the conscientiousness, and openness subscales had relatively low reliability, Cronbach's  $\alpha = 0.73$ . However, the agreeableness subscale had unacceptable reliability, Cronbach's  $\alpha = 0.09$ . Since the diagonal elements of the anti-image correlation matrix should be above the bare minimum of 0.5 for all variables, we decided to exclude 11 items. To satisfy the reliability thresholds, we excluded 2 more items.

A PCA was conducted on 31 items with a rotation method as a varimax with Kaiser Normalization. The Kaiser-Meyer-Olkin measure verified the sampling adequacy for the analysis, with good (according to Field, 2009, p. 659) KMO = 0.786 and all KMO values for individual items were higher than 0.59, which is above the acceptable limit of 0.5. Bartlett's test of sphericity  $\chi^2(465) = 1411.526$ ,  $p < 0.001$ , indicates that correlations between items were sufficiently large. Five extracted components in combination explained 55.06 % of the variance. The extraversion and neuroticism is reported to be highly reliable, both Cronbach's  $\alpha > 0.81$ . The conscientiousness and openness is also reported to have satisfactory reliance with Cronbach's  $\alpha = 0.74$  and Cronbach's  $\alpha = 0.78$ . Despite of the dropped items the agreeableness had rather low reliability, Cronbach's  $\alpha = 0.54$ .

John and Srivastava (1999, p. 62) report reliability coefficient of the individual subscales of BFI questionnaire to be between 0.79 and 0.86, wherein the agreeableness has the lowest value. Other researchers also show a trend of lower value of Cronbach's  $\alpha$  for the agreeableness subscale (Kovaleva, Beierlein, Kemper, & Rammstedt, 2013, p. 39; Leung, Wong, Chan, & Lam, 2013, pp. 4-5; Novak, 2012, p. 60). Even though the reliability of agreeableness subscale in our analysis is rather low, extracted components of the adjusted questionnaire were used in further analysis and hypotheses testing. Table 2 shows the factor loadings of 31 items after rotation and the value of Cronbach's  $\alpha$  for each subscale in turn.

Table 2: Summary of PCA and Reliability Analysis Results for the BFI Questionnaire (N=104)

		Rotated Factor Loadings				
Items		Extraversion	Neuroticism	Openness	Conscientiousness	Agreeableness
Extraversion	BFI.Q1	<b>.737</b>	.019	.178	.145	.022
	BFI.Q6	<b>.744</b>	-.043	-.013	-.025	.336
	BFI.Q11	<b>.527</b>	-.342	<b>.436</b>	-.024	-.155
	BFI.Q16	<b>.615</b>	-.095	.289	.110	-.116
	BFI.Q21	<b>.708</b>	.097	.189	-.028	-.290
	BFI.Q26	<b>.450</b>	<b>-.568</b>	.191	.123	-.087
	BFI.Q31	<b>.599</b>	-.344	-.076	.146	.093
	BFI.Q36	<b>.703</b>	-.054	-.091	-.154	.331
Neuroticism	BFI.Q4	<b>-.455</b>	<b>.420</b>	.184	.213	-.251
	BFI.Q9	-.149	<b>.762</b>	-.199	-.041	-.103
	BFI.Q14	-.060	<b>.681</b>	.103	-.176	-.242
	BFI.Q19	-.231	<b>.670</b>	.035	.095	-.009
	BFI.Q24	.295	<b>.569</b>	-.105	-.067	-.367
	BFI.Q34	.085	<b>.647</b>	<b>-.431</b>	-.142	-.049
	BFI.Q39	-.049	<b>.636</b>	-.021	-.067	-.387
Openness	BFI.Q5	.197	-.106	<b>.752</b>	.104	-.121
	BFI.Q10	.232	-.196	<b>.616</b>	.151	-.001
	BFI.Q15	-.082	.121	<b>.524</b>	.383	-.189
	BFI.Q20	.075	.048	<b>.714</b>	-.228	-.039
	BFI.Q25	.233	-.170	<b>.545</b>	.220	.131
	BFI.Q40	-.061	-.003	<b>.753</b>	.111	-.006
Conscientiousness	BFI.Q3	.178	-.056	.192	<b>.658</b>	.298
	BFI.Q18	.020	-.175	-.234	<b>.590</b>	-.156
	BFI.Q23	.300	-.308	.233	<b>.576</b>	-.061
	BFI.Q28	-.101	-.191	.364	<b>.552</b>	-.008
	BFI.Q33	.008	.087	.201	<b>.670</b>	.153
	BFI.Q38	-.007	-.047	.048	<b>.691</b>	.153
Agreeableness	BFI.Q12	-.018	-.244	-.149	.156	<b>.690</b>
	BFI.Q17	.023	-.157	.104	<b>-.420</b>	.341
	BFI.Q37	.121	-.142	-.103	.038	<b>.766</b>
	BFI.Q42	<b>.421</b>	-.208	.111	.094	<b>.423</b>
Eigenvalues		6.63	3.74	3.12	2.18	1.40
% of variance		21.37	12.05	10.07	7.03	4.53
$\alpha$		<b>.83</b>	<b>.81</b>	<b>.78</b>	<b>.74</b>	<b>.54</b>

Note. Rotation converged in 7 iterations. Factor loadings over .42 appear in bold. Cronbach's  $\alpha$  appear in bold.



In PCA and reliability analysis of 27-item questionnaire used for measuring unconscious needs (achievement, affiliation and power) we also excluded many items due to unsatisfactory fit with the other items. Table 3 shows the factor loadings of initial 27 items after rotation and the value of Cronbach's  $\alpha$  for each subscale in turn.

Table 3: Summary of PCA and Reliability Analysis Results for the Needs Questionnaire (N=104)

		Rotated Factor Loadings		
Items		Achievement	Affiliation	Power
Achievement	N1	<b>.561</b>	-.159	.136
	N4	<b>.815</b>	.083	.105
	N7	-.064	<b>-.428</b>	.386
	N10	<b>.461</b>	-.071	.112
	N13	<b>.734</b>	-.051	-.002
	N16	.026	.142	.245
	N19	.118	.136	.363
	N22	.216	<b>-.553</b>	.392
	N25	<b>.610</b>	-.128	.082
Affiliation	N3	-.158	.221	.255
	N6	-.266	.295	.145
	N9	-.159	<b>.422</b>	.274
	N12	.123	<b>.633</b>	.294
	N15	<b>-.413</b>	<b>.574</b>	.163
	N18	.054	<b>.499</b>	-.096
	N21	-.001	<b>.407</b>	.178
	N24	-.105	<b>.587</b>	.057
	N27	.172	<b>.713</b>	-.125
Power	N2	<b>.490</b>	.084	.250
	N5	<b>.558</b>	-.065	-.192
	N8	-.150	-.020	<b>.638</b>
	N11	<b>.468</b>	.264	<b>.528</b>
	N14	.156	-.113	<b>.696</b>
	N17	.270	.046	<b>.545</b>
	N20	<b>.401</b>	.324	.109
	N23	<b>-.411</b>	-.284	-.166
	N26	-.187	.017	<b>-.764</b>
Eigenvalues		4.36	3.30	2.35
% of variance		16.13	12.24	8.73
$\alpha$		<b>.65</b>	<b>.69</b>	<b>.09</b>

Note. Rotation converged in 7 iterations. Factor loadings over .40 appear in bold. Cronbach's  $\alpha$  appear in bold.

The Kaiser-Meyer-Olkin measure did not fully verified the sampling adequacy for the analysis, with acceptable KMO = 0.663 but few KMO values under the acceptable limit of 0.5. Bartlett's test of sphericity shows that the correlation between items were large enough for the PCA,  $\chi^2(351) = 917.24$ ,  $p < 0.001$ . In an initial analysis three components were extracted, which in combination explained only 37.10 % of the variance. The items indicating the need for achievement, need for affiliation and need for power had low reliabilities, with Cronbach's  $\alpha < 0.69$ . In particular the subscale measuring the need for power has been found extremely unreliable, with Cronbach's  $\alpha = 0.09$ .

To improve KMO value and reliability of each subscale we decided to exclude 16 items. A PCA was again conducted on 11 items with orthogonal rotation. The Kaiser-Meyer-Olkin measure verified the sampling adequacy for the analysis, with KMO = 0.706 and all KMO values for individual items were higher than 0.62. Bartlett's test of sphericity  $\chi^2(55) = 287.675$ ,  $p < 0.001$ , indicates that correlations between items were sufficiently large for PCA. Three extracted components in combination explained 59.45 % of the variance. The need for achievement subscale is reported to have relatively high reliability, Cronbach's  $\alpha > 0.79$ . The need for affiliation and need for power subscales are less reliable, Cronbach's  $\alpha$  between 0.63 and 0.69. Table 4 shows the factor loadings after rotation and the value of Cronbach's  $\alpha$  for each subscale in turn. Extracted factors of the adjusted questionnaire were used in further analysis and hypotheses testing.

Table 4: Summary of PCA and Reliability Analysis Results for the Adjusted Needs Questionnaire (N=104)

		Rotated Factor Loadings		
Items		Achievement	Affiliation	Power
Achievement	N1	<b>.734</b>	-.040	.074
	N4	<b>.820</b>	.124	.243
	N13	<b>.759</b>	-.045	.088
	N25	<b>.749</b>	-.040	.027
Affiliation	N12	.046	<b>.632</b>	.334
	N15	-.401	<b>.603</b>	.072
	N24	-.020	<b>.744</b>	-.137
	N27	.107	<b>.739</b>	-.062
Power	N11	.296	.229	<b>.743</b>
	N14	.077	-.184	<b>.771</b>
	N17	.027	.035	<b>.771</b>
Eigenvalues		2.99	2.06	1.49
% of variance		27.20	18.69	13.57
$\alpha$		<b>.79</b>	<b>.63</b>	<b>.69</b>

Note. Rotation converged in 5 iterations. Factor loadings over .60 appear in bold. Cronbach's  $\alpha$  appear in bold.

### 3.2 DESCRIPTIVE STATISTICS

Table 5: Descriptive Statistics: First Round

Variable	Relat (%)	Friend (%)	A.Dec1 (%)	A.Rew1 (EUR)	C.Rew1 (EUR)
N	52	26	52	52	52
Mean	.500	.538	.731	3.538	2.192
Std. Error	.070	.100	.062	.124	.186
Median	.500	1.000	1.000	3.000	3.000
Std. Deviation	.505	.508	.448	.896	1.344
Variance	.255	.258	.201	.802	1.805
Minimum	.00	.00	.00	3.00	.00
Maximum	1.00	1.00	1.00	5.00	3.00
Sum	26	14	38	184	114

Table 6: Descriptive Statistics: Second Round

Variable	C.Dec2 (%)	A.Dec2 (%)	A.Rew2 (EUR)	C.Rew2 (EUR)	A.RewT (EUR)	C.RewT (EUR)	A.ChangePref (%)
N	52	37	52	52	52	52	37
Mean	.712	.784	2.596	2.077	6.135	4.269	.216
Std. Error	.063	.069	.211	.194	.196	.312	.069
Median	1.000	1.000	3.000	3.000	6.000	6.000	.000
Std. Deviation	.458	.417	1.524	1.398	1.415	2.250	.417
Variance	.209	.174	2.232	1.955	2.001	5.063	.174
Minimum	.00	.00	.00	.00	3.00	.00	.00
Maximum	1.00	1.00	5.00	3.00	10.00	6.00	1.00
Sum	37	29	135	108	319	222	8

Table 5 and Table 6 show descriptive statistics of several variables based on the round of the experiment. All participants were divided into 52 auditor-client pairs. Half of auditor-client pairs knew each other while other 26 auditors did not know their client. In personal relationship 46.2 % of auditors were matched randomly with their client, while other 53.8 % were paired with a friend as a client. In first round of experimental task 73.1 % of all auditors decided in favour of the client. Average auditor's reward amounted to 3.5 EUR, whereas the client's reward was 2.2 EUR. In the second round 71.2 % of the clients decided to hire the same auditor again. Out of 37 rehired auditors only 10.8 % were those who in the first round did not decide in the interest of the client. Rehired auditors took another decision in the second round and 78.4 % of auditors decided in favour of the client. Change of the auditor's decision in the second round

compared to the first round occurred in 21.6 % of cases. Average reward amounted in 2.6 EUR for auditor and 2.1 EUR for client in the second round and in total 6.1 EUR and 4.3 EUR respectively. Below we present a more detailed analysis of main variables: relationship, auditor's and client's decision and bias made in the role of the advisor.

### *3.2.1 DIFFERENCES IN VARIABLES BETWEEN PERSONAL AND NON-PERSONAL RELATIONSHIP SUBGROUPS*

Table 7 shows means of several different variables depending on the relationship. We will highlight only several variables where the difference between two observed groups is significant.

Descriptive statistics in Table 7 show that in the personal relationship 92.3 % of the auditors accepted the decision in favour of the client, whereas in non-personal only 53.8 % of them accepted such a decision. In personal relationship 96.2 % of the clients decided to hire the same auditor again, whereas in non-personal relationship only 46.2 % of auditors were hired again. The auditors and the clients in a non-personal relationship on average earned less than those in personal. However, the difference in total reward earned is significant only for those in a role of a client. The influence of fear of losing the client does not differ between two observed groups of relationship. The difference between the two groups is noticeable but insignificant from auditor's change in preferences point of view. In the personal relationship 12.0 % of auditors changed their decision in the second round prior to the first round while 41.7 % of rehired auditors made such change. Control variables such as auditors' desire to maintain a long-term business relationship with the client and mutual trust had significantly greater effect on decision-making of auditors in personal relationship than in non-personal. Importance of client's reward, fairness of the reward, and pressure from a client also show significant influence on auditors' decision-making in the first round based on a relationship with the client.

Table 7: Descriptive Statistics: Relationship

Variable	PERSONAL RELATIONSHIP			NON-PERSONAL RELATIONSHIP			DIFFERENCE	
	N	Mean	Std. Error	N	Mean	Std. Error	Mean	Std. Error
<b>Friend</b>	26	.538	.100	26	.000	.000	<b>.538**</b>	.100
<b>A.Dec1</b>	26	.923	.053	26	.538	.100	<b>.385*</b>	.113
<b>C.Dec2</b>	26	.962	.039	26	.462	.100	<b>.500**</b>	.107
A.Dec2	25	.840	.075	12	.667	.142	.173	.161
A.RewT	26	6.385	.193	26	5.885	.339	.500	.390
<b>C.RewT</b>	26	5.192	.355	26	3.346	.450	<b>1.846*</b>	.574
A.ChangePref	25	.120	.066	12	.417	.149	-.297	.163
A.Fear	26	3.000	.248	26	2.885	.268	.115	.365
A.Reward1	26	3.308	.234	26	2.923	.260	.385	.349
<b>A.CReward1</b>	26	3.000	.222	26	2.077	.207	<b>.923*</b>	.303
<b>A.FairReward1</b>	26	3.885	.238	26	2.962	.239	<b>.923*</b>	.337
<b>A.Longterm1</b>	26	4.154	.173	26	3.154	.297	<b>1.000*</b>	.344
<b>A.Trust1</b>	26	4.000	.235	26	1.923	.221	<b>2.077**</b>	.323
<b>A.CPressure1</b>	26	1.962	.225	26	1.231	.128	<b>.731*</b>	.259
A.Profit1	26	3.038	.232	26	2.654	.222	.385	.321
A.Objective1	26	2.808	.229	26	3.308	.282	-.500	.363
A.Reward2	25	3.120	.254	12	3.667	.376	-.547	.449
A.CReward2	25	2.920	.215	12	2.417	.358	.503	.397
A.FairReward2	25	3.600	.216	12	2.833	.386	.767	.410
A.Longterm2	25	3.800	.208	12	3.500	.399	.300	.407
<b>A.Trust2</b>	25	3.800	.231	12	2.167	.405	<b>1.633**</b>	.435
A.CPressure2	25	2.120	.260	12	1.417	.229	.703	.409
A.Profit2	25	2.920	.199	12	2.917	.398	.003	.397
A.Objective2	25	2.760	.233	12	2.667	.414	.093	.441
A.CDecision2	25	3.800	.224	12	3.500	.435	.300	.440

Note. \*  $p < 0.05$ ; \*\*  $p < 0.001$ ; Significant differences and variables appear in bold.

### 3.2.2 ANALYSIS OF THE AUDITOR'S AND CLIENT'S DECISION

Table 8 shows means of several different variables depending on the decision made by the auditor in the first round. Descriptive statistics show that 63.2 % of the auditors who accepted the decision in favour of the client were in personal relationship, while only 14.3 % of auditors who made objective decision were under such incentive. Auditors who accepted the decision in favour of the client were in 86.8 % cases hired again, whereas only 28.6 % of auditors were rehired after their decision not in the interest of the client. Auditors, who have decided in favour of the client in the first round, on average, earned in total 0.6 EUR less than those, who were objective. The difference in total reward earned based on the decision made is insignificant.

However, the auditor's decision in the first round significantly affected total reward earned by client. Table 8 also shows that 50 % of auditors not inclined toward client's preferences in the first round decided in favour of the client in the second round, whereas only 18.2 % of auditors changed their decision in opposite direction from biased to objective. The difference is, however, insignificant.

In investigating the reasons why auditors supported the client's preference beyond personal relationship, we find the significant influence of fear of losing the client. Furthermore, we also find significant influence of several additional explanatory variables. Importance of own and client's reward, fairness of the reward, mutual trust, and desire to maintain long-term business relationship, company's profitability, and pressure from a client affected auditor's decision-making in favour of the client. Those who decided not in favour of the client were significantly more influenced by the view that development costs as expenses represent more objective choice and more fair accounting treatment. While there is no significant difference in unconscious needs, personal values and personality traits between two groups of decision, auditors who decided in favour of the client are seen as less achievement oriented, have lower need for power, stronger need for affiliation, are more agreeable, and more value money than those who made the objective decision.

Table 8: Descriptive Statistics: Auditor's Decision 1

	DECISION IN FAVOUR OF THE CLIENT			MORE OBJECTIVE DECISION			DIFFERENCE	
Variable	N	Mean	Std. Error	N	Mean	Std. Error	Mean	Std. Error
<b>Relat</b>	38	.632	.079	14	.143	.097	<b>.489**</b>	.125
<b>Friend</b>	38	.342	.078	14	.071	.071	<b>.271*</b>	.106
<b>C.Dec2</b>	38	.868	.056	14	.286	.125	<b>.583**</b>	.137
A.Dec2	33	.818	.068	4	.500	.289	.318	.218
A.RewT	38	5.974	.205	14	6.571	.465	-.598	.509
<b>C.RewT</b>	38	5.368	.201	14	1.286	.412	<b>4.083**</b>	.458
A.ChangePref	33	.182	.068	4	.500	.289	-.318	.218
<b>A.Fear</b>	38	3.342	.193	14	1.857	.254	<b>1.485**</b>	.354
<b>A.Reward1</b>	38	3.474	.163	14	2.143	.376	<b>1.331**</b>	.351
<b>A.CReward1</b>	38	2.947	.177	14	1.429	.137	<b>1.519**</b>	.304
<b>A.FairReward1</b>	38	3.921	.162	14	2.071	.267	<b>1.850**</b>	.312
<b>A.Trust1</b>	38	3.447	.238	14	1.643	.248	<b>1.805**</b>	.344
<b>A.Longterm1</b>	38	4.289	.125	14	1.929	.245	<b>2.361**</b>	.253
<b>A.Profit1</b>	38	3.158	.175	14	2.000	.257	<b>1.158**</b>	.328
<b>A.CPressure1</b>	38	1.789	.178	14	1.071	.071	<b>.718**</b>	.191
<b>A.Objective1</b>	38	2.500	.159	14	4.571	.228	<b>-2.071**</b>	.296
A.Ach	38	-.022	.874	14	.140	1.045	-.162	.288
A.Aff	38	.003	1.013	14	-.047	.824	.050	.303
A.Pow	38	.017	.967	14	.231	1.122	-.214	.316
A.Extra	38	-.113	.940	14	.267	.966	-.380	.296
A.Neuro	38	.005	1.040	14	-.265	1.163	.271	.336
A.Open	38	-.055	.970	14	.203	1.171	-.258	.321
A.Cons	38	-.017	.977	14	-.141	.868	.124	.297
A.Agree	38	.065	.891	14	-.213	1.110	.278	.298
A.society	38	4.263	.123	14	3.857	.206	.406	.238
A.ethics	38	4.316	.131	14	4.500	.203	-.184	.249
A.power	38	3.658	.121	14	4.000	.182	-.342	.228
A.money	38	3.474	.135	14	3.286	.163	.188	.244
A.friends	38	4.816	.091	14	4.643	.169	.173	.182
A.fame	38	3.316	.137	14	3.071	.245	.244	.269
A.indepen	38	4.711	.075	14	4.786	.114	-.075	.141
A.gender	38	.447	.082	14	.286	.125	.162	.150
A.age	38	23.368	.296	14	23.429	.739	-.060	.659
A.study	38	.474	.082	14	.571	.137	-.098	.159
A.experience	38	3.442	.434	14	2.500	.830	.942	.873

Note. \*  $p < 0.05$ ; \*\*  $p < 0.001$ ; Significant differences and variables appear in bold.

Table 9: Descriptive Statistics: Client's Decision

Variable	HIRE THE SAME AUDITOR			HIRE A DIFFERENT AUDITOR			DIFFERENCE	
	N	Mean	Std. Error	N	Mean	Std. Error	Mean	Std. Error
<b>Relat</b>	37	.676	.078	15	.067	.067	<b>.609**</b>	.103
<b>Friend</b>	37	.378	.081	15	.000	.000	<b>.378*</b>	.081
<b>A.Dec1</b>	37	.892	.052	15	.333	.126	<b>.559**</b>	.136
A.Dec2	37	.784	.069	0				
<b>A.RewT</b>	37	6.649	.191	15	4.867	.307	<b>1.782**</b>	.357
<b>C.RewT</b>	37	5.027	.286	15	2.400	.600	<b>2.627**</b>	.588
A.ChangePref	37	.216	.069	0				
C.Reward2	37	3.865	.209	15	3.733	.358	.132	.400
<b>C.AReward2</b>	37	2.919	.195	15	1.600	.289	<b>1.319**</b>	.358
<b>C.FairReward2</b>	37	3.730	.218	15	2.133	.256	<b>1.596**</b>	.380
<b>C.Trust2</b>	37	4.054	.194	15	1.933	.345	<b>2.121**</b>	.374
C.Profit2	37	3.703	.159	15	3.933	.284	-.231	.308
<b>C.APressure2</b>	37	2.757	.210	15	1.867	.291	<b>.890*</b>	.379
C.Objective2	37	2.730	.153	15	2.733	.384	-.004	.413
C.Ach	37	.042	.930	15	-.179	1.428	.220	.334
C.Aff	37	.085	.938	15	-.175	1.302	.260	.322
C.Pow	37	-.085	.953	15	-.049	1.144	-.036	.309
C.Extra	37	.165	.902	15	-.369	1.319	.534	.317
C.Neuro	37	.133	1.018	15	-.094	.672	.227	.241
C.Open	37	.060	.852	15	-.200	1.275	.260	.358
C.Cons	37	.084	1.000	15	-.031	1.235	.115	.328
C.Agree	37	-.006	1.186	15	.050	.661	-.057	.326
<b>C.society</b>	37	4.351	.124	15	3.667	.211	<b>.685*</b>	.236
C.ethics	37	4.324	.123	15	4.333	.159	-.009	.218
C.power	37	3.703	.154	15	3.533	.215	.169	.279
<b>C.money</b>	37	3.351	.118	15	2.867	.165	<b>.485*</b>	.213
C.friends	37	4.649	.130	15	4.600	.163	.049	.229
C.fame	37	3.027	.180	15	2.733	.206	.294	.312
C.indepen	37	4.649	.088	15	4.600	.163	.049	.173
C.gender	37	.405	.082	15	.467	.133	-.061	.154
C.age	37	23.486	.945	15	22.667	.513	.820	1.527
C.study	37	.541	.083	15	.667	.126	-.126	.153
C.experience	37	5.514	.901	15	3.167	.713	2.347	1.493

Note. \*  $p < 0.05$ ; \*\*  $p < 0.001$ ; Significant differences and variables appear in bold.

Table 9 shows means of several different variables depending on the decision made by the client in the second round. Descriptive statistics show that 67.6 % of clients who decided to hire the



same auditors again were in personal relationship, whereas 93.3 % of clients who decided to hire a different auditor were in non-personal relationship. The difference is significant. Out of 37 rehired auditors 89.2 % were those who were in the first round inclined toward client's preferences. Auditor's decision in the first round significantly affected the client's decision whether to hire the same auditor again or not. In the second round 78.4 % of rehired auditors decided in favour of the client and 21.6 % of the auditors changed their decision compared to the first round. Mutual trust had a significant effect on clients' decision-making to hire the same auditor. Similar, the importance of auditor's reward and fairness of the reward significantly more influenced client's decision to hire the same auditor. While there is no significant difference in unconscious needs and personality traits between two observed groups, the clients who decided to hire again the same auditor significantly more value society and money.

Table 10 shows means of several different variables depending on the decision made by the rehired auditor in the second round. Descriptive statistics show that 72.4 % of auditors who accepted the decision in favour of the client in the second round were in the personal relationship, while 50 % of auditors who made more objective decision were in such a relationship. However, the difference is insignificant. Descriptive statistics also show that 93.1 % of auditors made the same biased decision in favour of the client in the first and second round, while 75.0 % of auditors changed their decision to more objective decision in the second round. The auditor's decision in the second round was significantly influenced by being re-hired again. Acceptance of the decision in favour of the client was significantly more influenced by auditors' desire to maintain long-term business relationship with the client and by mutual trust.

We also find significant influence of the client's reward, fairness of the reward, and pressure from a client on auditor's decision-making in favour of the client, whereas those who did not decide in favour of the client in the second round were significantly more influenced by the view that development costs as expenses represents more objective choice and fair accounting.

Table 10: Descriptive Statistics: Auditor's Decision 2

Variable	DECISION IN FAVOUR OF THE CLIENT			MORE OBJECTIVE DECISION			DIFFERENCE	
	N	Mean	Std. Error	N	Mean	Std. Error	Mean	Std. Error
Relat	29	.724	.084	8	.500	.189	.224	.188
Friend	29	.379	.092	8	.375	.183	.004	.199
A.Dec1	29	.931	.048	8	.750	.164	.181	.171
<b>A.RewT</b>	29	6.138	.096	8	8.500	.327	<b>-2.362**</b>	.341
<b>C.RewT</b>	29	5.793	.144	8	2.250	.491	<b>3.543**</b>	.512
<b>A.ChangePref</b>	29	.069	.048	8	.750	.164	<b>-.681*</b>	.171
<b>A.CDecision2</b>	29	4.103	.181	8	2.250	.366	<b>1.853**</b>	.395
A.Reward2	29	3.448	.208	8	2.750	.620	.698	.654
<b>A.CReward2</b>	29	3.103	.181	8	1.500	.267	<b>1.603**</b>	.374
<b>A.FairReward2</b>	29	3.690	.186	8	2.125	.398	<b>1.565**</b>	.411
<b>A.Longterm2</b>	29	4.103	.160	8	2.250	.313	<b>1.853**</b>	.345
<b>A.Trust2</b>	29	3.552	.251	8	2.250	.491	<b>1.302*</b>	.543
A.Profit2	29	3.000	.192	8	2.625	.498	.375	.447
<b>A.CPressure2</b>	29	2.069	.238	8	1.250	.164	<b>.819*</b>	.289
<b>A.Objective2</b>	29	2.414	.189	8	3.875	.479	<b>-1.461*</b>	.437
A.Ach	29	-.091	.811	8	.257	1.128	-.348	.353
A.Aff	29	.089	1.042	8	-.347	.968	.436	.411
A.Pow	29	-.052	.981	8	-.209	1.003	.157	.393
A.Extra	29	-.018	1.003	8	-.023	.802	.004	.386
A.Neuro	29	.064	.854	8	-.178	1.846	.243	.672
A.Open	29	-.070	.911	8	.410	1.496	-.480	.421
A.Cons	29	-.185	1.023	8	.036	.576	-.221	.380
A.Agree	29	.032	.876	8	-.223	1.013	.255	.362
A.society	29	4.241	.154	8	4.125	.295	.116	.332
A.ethics	29	4.345	.134	8	4.125	.398	.220	.327
A.power	29	3.690	.150	8	3.750	.250	-.060	.315
A.money	29	3.414	.153	8	3.375	.375	.039	.350
<b>A.friends</b>	29	4.759	.118	8	5.000	.000	<b>-.241*</b>	.118
A.fame	29	3.414	.168	8	3.375	.183	.039	.337
<b>A.indepen</b>	29	4.724	.084	8	5.000	.000	<b>-.276*</b>	.084
A.gender	29	.379	.092	8	.250	.164	.129	.195
<b>A.age</b>	29	22.862	.324	8	25.375	.822	<b>-2.513*</b>	.750
<b>A.study</b>	29	.586	.093	8	.125	.125	<b>.461*</b>	.156
A.experience	29	2.769	.467	8	4.813	1.401	-2.044	1.144

Note. \*  $p < 0.05$ ; \*\*  $p < 0.001$ ; Significant differences and variables appear in bold.

Table 11 shows means of different variables depending on the auditor's change in preferences. Descriptive statistics show that 37.5 % of auditors who changed their decision in the second round were in the personal relationship, while 75.9 % of auditors who made the same decision in both rounds were in such relationship. The personal relationship had a significant effect on auditor's change in preferences. Change in auditor's preferences seems to be influenced by the decline of the desire to maintain long-term business relationship with the client, aspect of client's and own fair reward, and increasingly influenced by the view that income statement represents more objective choice and fair accounting. However, difference in unconscious needs have insignificant effect on preferences change.

Table 11: Descriptive Statistics: Auditor's Change in Preferences

	CHANGE IN PREFERENCES			SAME PREFERENCES			DIFFERENCE	
Variable	N	Mean	Std. Error	N	Mean	Std. Error	Mean	Std. Error
<b>Relat</b>	8	.375	.183	29	.759	.081	<b>-.384*</b>	.181
A.Reward3	8	.125	.611	29	-.069	.121	.194	.622
A.CReward3	8	-.250	.590	29	.034	.145	-.284	.608
A.FairReward3	8	-1.000	.681	29	-.276	.098	-.724	.688
A.Trust3	8	.000	.500	29	-.207	.091	.207	.308
A.Longterm3	8	-1.000	.845	29	-.207	.115	-.793	.853
A.Profit3	8	-.625	.375	29	-.069	.148	-.556	.342
A.CPressure3	8	.000	.500	29	.138	.129	-.138	.354
A.Objective3	8	.500	.866	29	-.069	.110	.569	.873
A.Ach	8	.049	1.005	29	-.034	.865	.083	.357
A.Aff	8	-.286	1.076	29	.072	1.023	-.357	.413
A.Pow	8	.318	1.070	29	-.197	.934	.515	.385
A.Extra	8	.172	1.014	29	-.072	.946	.244	.384
A.Neuro	8	.007	2.014	29	.013	.763	-.006	.726
A.Open	8	.642	1.058	29	-.133	1.013	.775	.408
A.Cons	8	-.062	.638	29	-.158	1.018	.096	.381
A.Agree	8	-.353	1.199	29	.068	.800	-.420	.357
A.society	8	4.250	.313	29	4.207	.152	.043	.332
A.ethics	8	4.500	.378	29	4.241	.137	.259	.326
A.power	8	3.750	.250	29	3.690	.150	.060	.315
A.money	8	3.625	.324	29	3.345	.159	.280	.347
A.friends	8	4.875	.125	29	4.793	.115	.082	.230
A.fame	8	3.500	.189	29	3.379	.168	.121	.336
<b>A.indepen</b>	8	5.000	.000	29	4.724	.084	<b>.276*</b>	.084

Note. \*  $p < 0.05$ ; \*\*  $p < 0.001$ ; Significant differences and variables appear in bold.

### 3.3 HYPOTHESES TESTING

In the hypothesis 1 we investigate whether a personal relationship with the client affects decision-making of auditors in the first round of the experiment. The results of logistic regression in Table 12 confirm a significant effect of personal relationship on the auditor's decision ( $F = 2.77$ ,  $p = 0.006$ ).

Table 12: Logistic Regression: H1. Dependent Variable: Auditor's Decision 1

Auditor's Decision 1	Coef.	Robust Std. Err.	z	P >  z	[ 95 % Conf. Interval ]	
Personal Relationship	2.331	.843	2.77	.006	.679	3.982
_cons	.154	.397	.39	.698	-.624	.933

Note. Number of obs. = 52; Wald  $\chi^2(1) = 7.65$ ; Prob >  $\chi^2 = 0.0057$ ; Pseudo  $R^2 = 0.1748$ .

In the hypothesis 2 we further explore whether this affect is a result of a friendship between an auditor and a client. Descriptive statistic show that 92.9 % (Std. Error = 0.071) of auditors who were paired with their friend as a client decided in favour of the client, whereas 91.7 % (Std. Error = 0.083) of auditors randomly paired in personal relationship also accepted such a decision. The results of logistic regression in Table 13 show insignificant effect of friendship on auditor's decision ( $F = 0.11$ ,  $p = 0.911$ ) while the significance of personal relationship persists ( $F = 1.99$ ,  $p = 0.046$ ).

Table 13: Logistic Regression: H2. Dependent Variable: Auditor's Decision 1

Auditor's Decision 1	Coef.	Robust Std. Err.	z	P >  z	[ 95 % Conf. Interval ]	
Personal Relationship	2.244	1.127	1.99	.046	.035	4.453
Friendship	.167	1.487	.11	.911	-2.747	3.081
_cons	.154	.397	.39	.698	-.624	.933

Note. Number of obs. = 52; Wald  $\chi^2(2) = 7.64$ ; Prob >  $\chi^2 = 0.0219$ ; Pseudo  $R^2 = 0.1750$ .

In the hypothesis 3 we explore whether fear of losing a client influences auditor's decision. The results of logistic regression in Table 14 confirm a significant effect of fear of losing the client ( $F = 3.72$ ,  $p = 0.000$ ) and marginally significant personal relationship ( $F = 1.92$ ,  $p = 0.055$ ) on auditor's decision-making in favour of the client.

Table 14: Logistic regression: H3. Dependent Variable: Auditor's Decision 1

Auditor's Decision 1	Coef.	Robust Std. Err.	z	P >  z	[ 95% Conf. Interval ]	
Personal Relationship	2.788	1.450	1.92	.055	-.055	5.630
Friendship	1.008	1.757	.57	.566	-2.436	4.451
Fear of Losing the Client	1.529	.411	3.72	.000	.723	2.336
_cons	-4.082	1.137	-3.59	.000	-6.311	-1.854

Note. Number of obs. = 52; Wald  $\chi^2(3) = 19.18$ ; Prob >  $\chi^2 = 0.0003$ ; Pseudo  $R^2 = 0.4661$ .

In the hypothesis 4 we investigate the influence of unconscious needs on auditor's decision-making. We hypothesize that unconscious need for affiliation induces auditor's inclination toward client's preferences while high need for achievement and high need for power elicits auditor's independence. The results of logistic regression in Table 15 do not confirm the significant influence of unconscious need for affiliation ( $F = 1.03$ ,  $p = 0.305$ ), achievement ( $F = -1.17$ ,  $p = 0.240$ ) or power ( $F = -1.22$ ,  $p = 0.221$ ) on auditor's decision whereas personal relationship ( $F = 2.76$ ,  $p = 0.006$ ) and fear of losing the client ( $F = 3.25$ ,  $p = 0.001$ ) are significant.

Table 15: Logistic Regression: H4. Dependent Variable: Auditor's Decision 1

Auditor's Decision 1	Coef.	Robust Std. Err.	z	P >  z	[ 95% Conf. Interval ]	
Personal Relationship	3.439	1.244	2.76	.006	1.000	5.877
Friendship	1.668	1.543	1.08	.280	-1.356	4.691
Fear of Losing the Client	1.888	.581	3.25	.001	.749	3.026
Need for Affiliation	.603	.588	1.03	.305	-.548	1.755
Need for Achievement	-.886	.755	-1.17	.240	-2.366	.593
Need for power	-.496	.405	-1.22	.221	-1.290	.298
_cons	-5.082	1.764	-2.88	.004	-8.539	-1.625

Note. Number of obs. = 52; Wald  $\chi^2(6) = 16.15$ ; Prob >  $\chi^2 = 0.0130$ ; Pseudo  $R^2 = 0.5278$ .

Even though significant effect of unconscious needs is not confirmed, coefficients in Table 15 show positive direction of need for affiliation and negative direction of need for achievement and need for power on auditor's decision-making in favour of the client as hypothesized.

Furthermore, with hypothesis 5 we investigate the effect of money as a personal value on auditor's decision-making. We predict that money as an important value influences decision-making in favour of the client. The results of logistic regression in Table 16 do not confirm a significant influence of money ( $F = 1.45$ ,  $p = 0.146$ ). However, coefficients show assumed direction for money as hypothesized. The influence of a personal relationship ( $F = 3.18$ ,  $p =$

0.001) and fear of losing the client ( $F = 3.85$ ,  $p = 0.000$ ) on decision-making of an auditor are remain significant.

Table 16: Logistic Regression: H5. Dependent Variable: Auditor's Decision 1

Auditor's Decision 1	Coef.	Robust Std. Err.	z	P >   z	[ 95% Conf. Interval ]	
Relationship	3.733	1.175	3.18	.001	1.431	6.036
Friendship	1.879	1.694	1.11	.267	-1.442	5.200
Fear of losing the Client	2.121	.552	3.85	.000	1.040	3.203
Need for Affiliation	.576	.743	.78	.438	-.880	2.032
Need for Achievement	-1.013	.723	-1.40	.161	-2.430	.405
Need for Power	-.920	.602	-1.53	.127	-2.100	.261
Value Money	1.073	.739	1.45	.146	-.375	2.522
_cons	-9.241	2.587	-3.57	.000	-14.310	-4.171

Note. Number of obs. = 52; Wald  $\chi^2(7) = 25.67$ ; Prob >  $\chi^2 = 0.0006$ ; Pseudo  $R^2 = 0.5545$ .

In the hypothesis 6 we further explore the influence of personality trait agreeableness on decision-making. We hypothesise that agreeableness as a strong personality trait of the auditor influences decision-making in favour of the client. The results of logistic regression in Table 17 do not confirm a significant influence of agreeableness ( $F = -1.19$ ,  $p = 0.233$ ). However, personal relationship ( $F = 2.80$ ,  $p = 0.005$ ) and fear of losing the client ( $F = 3.28$ ,  $p = 0.001$ ) are still significant.

Table 17: Logistic Regression: H6. Dependent Variable: Auditor's Decision 1

Auditor's Decision 1	Coef.	Robust Std. Err.	z	P >   z	[ 95% Conf. Interval ]	
Relationship	4.227	1.508	2.80	.005	1.271	7.184
Friendship	2.541	1.691	1.50	.133	-.774	5.856
Fear of Losing the Client	2.635	.802	3.28	.001	1.062	4.208
Need for Affiliation	1.130	1.012	1.12	.264	-.854	3.113
Need for Achievement	-1.258	.685	-1.84	.066	-2.601	.084
Need for Power	-1.059	.634	-1.67	.095	-2.302	.185
Value Money	1.059	.748	1.42	.157	-.407	2.525
Trait Agreeableness	-.779	.654	-1.19	.233	-2.060	.502
_cons	-10.577	3.223	-3.28	.001	-16.893	-4.261

Note. Number of obs. = 52; Wald  $\chi^2(8) = 19.66$ ; Prob >  $\chi^2 = 0.0117$ ; Pseudo  $R^2 = 0.5818$ .

In a full model we see that the need for achievement and the need for power are marginally significant (below 10%) with negative coefficient as predicted.

In table 18 we present summary of logistic regression of hypotheses testing.

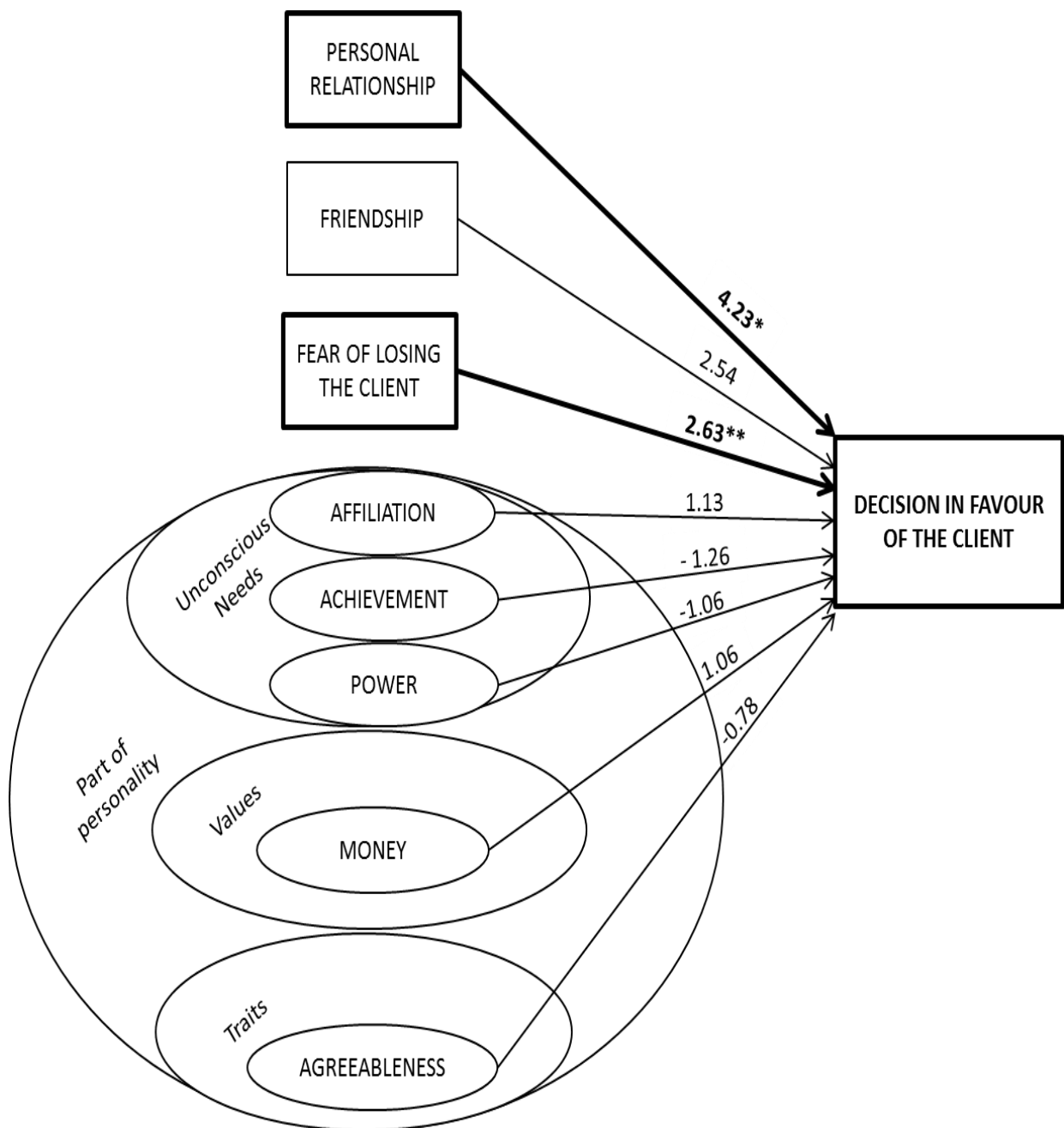
Table 18: Summary of Logistic Regressions: H1-H6. Dependent Variable: Auditor's Decision

Auditor's Decision 1	H1	H2	H3	H4	H5	H6
Personal Relationship	<b>2.330*</b> ( 0.843 )	<b>2.244*</b> ( 1.127 )	2.788*** ( 1.450 )	<b>3.439*</b> ( 2.244 )	<b>3.733**</b> ( 1.175 )	<b>4.227*</b> ( 1.508 )
Friendship		0.167 ( 1.487 )	1.008 ( 1.757 )	1.668 ( 1.543 )	1.879 ( 1.694 )	2.541 ( 1.691 )
Fear of Losing the Client			<b>1.529**</b> ( 0.372 )	<b>1.888**</b> ( 0.581 )	<b>2.121**</b> ( 0.552 )	<b>2.635**</b> ( 0.802 )
Affiliation				0.603 ( 0.588 )	0.576 ( 0.743 )	1.130 ( 1.012 )
Achievement				-0.886 ( 0.755 )	-1.013 ( 0.723 )	-1.258 ( 0.685 )
Power				-0.496 ( 0.405 )	-0.920 ( 0.602 )	-1.059 ( 0.634 )
Value Money					1.073 ( 0.739 )	1.059 ( 0.748 )
Agreeableness						-0.779 ( 0.654 )

Note. \* p < 0.05; \*\* p < 0.001; \*\*\*p = 0.055; Significances lower than 0.05 appear in bold.

Overall, the results confirm persistence significance of personal relationship and fear of losing a client, but insignificant effect of friendship, unconscious needs, and money as a value and agreeableness as a personality trait. In Figure 4 we present Empirical model.

Figure 4: Empirical Model



Note: \*  $p < 0.05$ ; \*\*  $p < 0.001$ ; Significances lower than 0.05 appear in bold.



### *3.3.1 ADDITIONAL TEST*

To measure whether bias in the auditor's decision-making is conscious or unconscious we adopted the change of role approach (adopted from Moore et al., 2010, p. 42; Slapničar et al., 2012, p. 14). According to Lord, Lepper, and Preston (1984, p. 1231) the induction of a consider-the-opposite strategy have greater corrective effect of one's bias than more demanding alternative instructions to be as fair and unbiased as possible.

We asked the auditors and clients to consider the role of an advisor. They had to advise their friend who would participate in the experiment and would be in the same role as they were but in a different condition regarding the relationship. More specifically, we asked auditors in a personal relationship what they would advise their friend, participating in experiment as an auditor but seated alone, to decide in first round and in second round if rehired. Auditors in a non-personal relationship were asked to advise a friend seated together with his or her friend as a client on what to decide in first round and in second round if rehired.

The difference between the decisions made as an auditor and as an advisor (A.Bias) in either first or second round was defined as value 0 if auditor made the same decision and as value 1 if there was a change in the auditor's decision in the role of an advisor.

Table 19 shows means of different variables depending on the presence of bias in the decision-making as an auditor and as an advisor. Descriptive statistics show that 64.0 % of the auditors who made different decision in the role of the advisor were in personal relationship, while only 37.0 % of auditors who made the same decision as in the role of advisor were in such a relationship. Relationship had great effect on bias made in role of the advisor.

Table 19: Descriptive Statistics: Auditor vs. Advisor

	BIAS			NO BIAS			DIFFERENCE	
Variable	N	Mean	Std. Error	N	Mean	Std. Error	Mean	Std. Error
<b>Relat</b>	25	.640	.098	27	.370	.095	<b>.270***</b>	.136
Friend	25	.360	.098	27	.185	.076	.175	.124
<b>A.RewT</b>	25	5.680	.236	27	6.556	.289	<b>-.876*</b>	.377
A.Ach	25	-.161	1.042	27	.191	.763	-.352	.252
A.Aff	25	-.157	.965	27	.126	.950	-.283	.266
A.Pow	25	.041	1.201	27	.106	.802	-.065	.285
A.Extra	25	-.191	1.012	27	.155	.880	-.346	.262
A.Neuro	25	.198	.721	27	-.314	1.278	.512	.291
A.Open	25	-.170	1.026	27	.185	1.009	-.355	.282
A.Cons	25	-.086	1.050	27	-.017	.848	-.069	.264
A.Agree	25	.023	.920	27	-.041	.997	.064	.267
A.society	25	4.200	.153	27	4.111	.154	.089	.217
A.ethics	25	4.480	.165	27	4.259	.147	.221	.220
<b>A.power</b>	25	3.520	.143	27	3.963	.136	<b>-.443*</b>	.197
A.money	25	3.400	.153	27	3.444	.154	-.044	.217
A.friends	25	4.720	.136	27	4.815	.093	-.095	.162
A.fame	25	3.160	.149	27	3.333	.185	-.173	.240
A.indepen	25	4.640	.098	27	4.815	.076	-.175	.124
A.gender	25	.400	.100	27	.407	.096	-.007	.139
A.age	25	23.120	.362	27	23.630	.447	-.510	.581
A.study	25	.560	.101	27	.444	.097	.116	.141
A.experience	25	3.016	.483	27	3.348	.606	-.332	.783

Note. \*  $p < 0.05$ ; \*\*  $p < 0.001$ ; \*\*\*  $p = 0.053$ ; Significant differences and variables appear in bold.

## CONCLUSION

Mautz and Sharaf (1961, p. 208) state that "...the greatest threat to [auditor] independence is a slow, gradual, almost casual erosion of [their] honest disinterestedness." Similar, The Metcalf Committee report (U.S. Senate, 1976, p. 21) notes that "long association between a corporation and an accounting firm may lead to such a close identification of the accounting firm with the interests of its client's management that truly independent action by the accounting firm becomes difficult." The notion above suggests that the auditor's independence is affected by long audit tenure due to the reduction of auditor's objectivity regarding a client over time. Ye, Carson, and Simnett (2006, p. 10) allege that personal relationship between auditor and client, to the extent of developing loyalty or emotional bond, would consciously or unconsciously affect auditor's independence and objectivity.

The aim of this study is to provide empirical evidence to the theoretical and regulatory debates how to mitigate the threats arising from auditor's conflict of interest, in particular the conflicts from personal relationship. In order to implement effective regulatory measures to improve auditor's independence and audit quality it is important to understand what stimulate auditor's decision-making. The need to question the effectiveness of the measures derives from the proposal draft of the European Commission on mandatory audit firm rotation with rotation period of six years, which has been recently lengthen by the European Parliament's Legal Affairs Committee to the minimum rotation period to fourteen years.

To analyse the issue we attempted to measure the unconscious motives of an auditor's decision-making more directly. The paper advances the theory of motivated reasoning and the theory of needs through the research on how personal relationship, business oriented motives, and unconscious motives influenced by unconscious needs, personal values, and personality traits affect decision-making within ambiguous choices. Our study extends the Slapničar et al. (2012, pp. 4-11) and Moore et al. (2010, pp. 38-39) studies by trying to measure whether the bias in personal relationship is indeed unconscious arising from unconscious needs, personal values, and personality traits, or is it conscious based on fear of losing a client. The experiment was designed as a two-period auditor-client sequential game with the manipulation of the relationship measuring individual's decision-making in the role of an auditor.

We find that relationship between an auditor and a client has a significant effect on decision-making of auditors. The subjects in the role of an auditor that were in a group with personal relationship were significantly more inclined toward decision-making in favour of the client. Since feelings of familiarity, friendship, emerge with increased length of the relationship (Ye et al., 2011, p. 125) we further investigate whether auditor's inclination to submit to the volition of the client is a result of friendship or is simply a result of auditor-client pursuing financial

interest. We find that friendship has no significant influence on auditor's decision-making. The decision-making of subjects who were paired and seated together with their friend as a client did not differ from decision-making of subjects who were randomly paired and seated together with an unknown client. This finding suggests that auditor's inclination toward client's preferences is simply a result of auditor-client interaction in personal relationship.

Windsor and Kavanagh (2012, p. 10) believe that an auditor's fear of losing the client and consequently financial income may lead auditor to inappropriately consent to client's preferences. Results of our empirical research confirm a significant effect of fear of losing a client on auditor's biased decision-making in favour of the client.

Results of our empirical research do not confirm any significant influence of unconscious needs, personal values or personality traits on auditor's decision-making.

Prior research shows that personal relationship creates so-called directional goals that give rise to motivated reasoning. Through motivated reasoning auditors seemingly objectively justify accounting choices in a manner they correspond to client's preferences. According to its author (Kunda, 1990, p. 482) this mental process is unconscious. However, the finding that professionals are susceptible to high litigation risk (Kadous et al., 2008, p. 135) casts considerable doubt about that. Moore et al. (2010, p. 38) and Slapničar et al. (2012, p. 11) believe that while financial incentives give rise to conscious bias, personal relationship induces unconscious bias. Our descriptive analyses and results of a model testing, in particular strong and persistent influence of fear of losing a client, and insignificant unconscious motives and personality traits suggest that the bias in personal relationship is conscious as long-term relationship ultimately serves to both parties to pursue financial interest.

Despite carefully conducted experimental analysis the results are to be weighed in the light of the limitations of our study. The first limitation of the study is that subjects who were involved in the experiment were students asked to take on the role of an experienced auditor instead of actual certified auditors. However, we tried to control this limitation to some extent by inviting only accounting and finance students to participate in experiment who are most familiar with the audit profession and regulation. Students had on average 4 years of work experiences and many of them have worked as audit assistants in audit firms. Another limitation of our study is also in terms of the number of participants. Even though 104 subjects participated in our research, only 52 were in the role of auditor. Such a small sample limits the power of statistical tests regarding the significance of the factors in the model.

Our findings imply that mandatory audit firm rotation could be an effective tool to mitigate auditor's conscious bias arising from personal relationship. The effect of fear of losing a client

could be eliminated with mandatory audit firm rotation only in the presence of fixed rotation period. We believe that recent regulatory proposal on mandatory audit firm rotation with minimum rotation period of fourteen years is not an effective measure to restore the integrity of the audit function and to enhance auditor independence and improve audit quality.

As proposed already by Bazerman and Moore (2011, p. 310) “*auditing firms (not just lead auditors) should work on a contract for fixed number of years that cannot be terminated by the client or renewed.*”

## POVZETEK

V preteklosti je revizijsko dejavnost pretreslo veliko škandalov, ki so omajali zaupanje v kapitalske trge ter pokazali na pomanjkljivo neodvisnost revizorjev in kakovost revidiranja družb. Poglavitni razlog, ki je privedel do omenjenega problema, predstavlja predvsem navzkrižje interesov, s katerim se vsak dan pri svojem delu soočajo revizorji (Nelson, & Tan, 2005, str. 67). Vsled opisanega so se mnoge države odločile za novo zakonodajo.

Poglavitni namen zakonskih sprememb je bil povrniti zaupanje v verodostojnost računovodskih izkazov in s tem tudi v revizijsko stroko, ter tako poskrbeti, da bi revizorji delovali čim bolj strokovno, pošteno, nepristransko ter neodvisno (Slapničar, Zaman, & Lončarski, 2012, str. 2; Zaman, & Hočevvar, 2009, str. 67). Omenjene zakonske spremembe se nanašajo predvsem na sprejetje zakona Sarbanes-Oxley v ZDA leta 2002 in Direktive 2006/43/ES v Evropski uniji leta 2006 (Sarbanes-Oxley Act of 2002; Directive 2006/43/EC; Zaman, & Hočevvar, 2009, str. 78).

Navkljub temeljitim zakonodajnim in regulativnim spremembam in uvedbi javnega nadzora nad revizijo (Zaman, & Hočevvar, 2009, str. 61-63) rezultati raziskave avtorja Sikka (2009, str. 869) kažejo, da so mnoga podjetja v različnih državah prejela pozitivno revizijsko mnenje tik pred javno objavo o finančnih težavah. Po mnenju Slapničar et al. (2012, str. 2) prisotnost revizijskih škandalov opozarja na dejstvo, da vpeljan sistem javnega nadzora ni uspešno rešil problema in ublažil nevarnosti, ki izhajajo iz revizorjevega navzkrižja interesov.

Obvezna rotacija revizijskih družb kot sredstvo za krepitev neodvisnosti revizorjev in kakovosti revizije je bila tako predlagana v ZDA (Public Company Accounting Oversight Board, 2011, str. 2-3) in Evropski uniji (European Commission, 2011, str. 3-4) v letu 2011. Nasprotniki predloga o obvezni rotaciji revizijskih družb trdijo, da bi obvezna rotacija povečala zgolj stroške pri čemer pa se kakovost revizije ne bi izboljšala (Catanach Jr., & Walker, 1999, str. 45). Po drugi strani pa Slapničar et al. (2012, str. 4) ugotavlja, da bi obvezna rotacija revizijskih družb ublažila številne nevarnosti, in sicer predvsem finančno odvisnost, domačnost in dolgotrajnost odnosa z naročnikom, ki ogrožajo neodvisnosti revizorjev. S tem se ne bi izboljšala le neodvisnost revizorjev, temveč bi predlagan mehanizem služil tudi kot dodaten kontrolni mehanizem za preverjanje kakovosti dela predhodnega revizorja.

V skladu z osnutkom predloga Evropske komisije (angl. *European Commission*) o obvezni rotaciji revizijskih družb, bi morale banke, zavarovalnice in druga podjetja, zamenjati revizijsko družbo minimalno vsakih šest let, s štiri letnim premorom preden bi lahko isto revizijsko družbo ponovno najele (European Parliament, 2013, str. 1-2).

Tekom celotnega procesa revizije revizor sodeluje z naročnikom. Njegova glavna naloga pa je podati strokovno in neodvisno mnenje o resničnem in poštenem finančnem položaju revidiranega podjetja. Revizijska stroka služi javnosti, kajti revizorjevo mnenje o računovodskih izkazih vpliva na veliko število uporabnikov letnega poročila, ki na podlagi tega mnenja sprejemajo poslovne odločitve, zato je toliko bolj pomembno delovanje revizorjev v skladu s poklicno etiko ter standardi, ki zavezujejo revizijsko stroko, in ne v interesu lastnikov oziroma uprave (Odar, 2005, str. 7-8). Vendar pa poglobljene raziskave kažejo na dejstvo, da so revizorji nagnjeni k služenju interesom naročnika v primeru dvoumnih odločitev (Blay, 2005, str. 782; Hackenbrack, & Nelson, 1996, str. 54-55; Kadous, Kennedy, & Peecher, 2003, str. 761; Kadous, Magro, & Spilker, 2008, str. 152; Moore, Tanlu, & Bazerman, 2010, str. 40; Slapničar et al., 2012, str. 21).

Glavna dejavnika, ki poglobljevata na revizorjevo pristranskost, sta finančna spodbuda (angl. *financial incentive*) in osebni odnos z naročnikom (angl. *personal relationship*) (Slapničar et al., 2012, str. 4; Johnstone, Sutton, & Warfield, 2001, str. 5).

Ideja, da cilji oziroma motivi vplivajo na utemeljevanje posameznikove odločitve, ima dolgo in sporno zgodovino v socialni psihologiji (Kunda, 1990, str. 480). Revizorjeva finančna odvisnost od naročnika in medsebojni odnos z naročnikom ustvarjata tako imenovane usmeritvene cilje (angl. *directional goals*), ki spodbudijo motivirano utemeljevanje (angl. *motivated reasoning*) (Kunda, 1990, str. 483). Teorija motiviranega utemeljevanja (angl. *theory of motivated reasoning*) napoveduje, da posamezniki z usmerjenimi cilji pristransko obdelajo informacijo, z namenom dosega objektivne podpore za želeni cilj (Kunda, 1990, str. 482-483; Blay, 2005, str. 766). Preko motiviranega sklepanja posameznik sprejme pripise pri obdelavi podatkov, ki mu najbolj ustrezajo in ki omogočajo, da doseže zaključek h kateremu stremlje (Kunda, 1990, str. 480-483). Avtor teorije motiviranega utemeljevanja (Kunda, 1990, str. 482) je prepričan, da je ta kognitiven proces nezavedni. Navkljub navedenemu pa raziskave kažejo, da so strokovnjaki dovzetni na veliko tveganje kazenskega pregona (Kadous et al., 2008, str. 135), kar vzbuja resen dvom o nezavednosti procesa.

Moore et al. (2010, str. 38) trdi, da finančne spodbude pri odločanju revizorjev povzročijo zavedno pristranskost, medtem ko je pristranskost zaradi osebnega odnosa nezavedna. Omenjen avtor je prvi preučeval vpliv osebnega odnosa med revizorjem in naročnikom in vpliv finančnih spodbud na odločanje revizorja. Kljub temu, da rezultati njihove eksperimentalne raziskave ne potrjujejo značilnega vpliva osebnega odnosa na odločanje revizorjev, pa je moč opaziti, da so revizorji dovzetni za vlogo v kateri so. Posledično revizorji niso sposobni spremeniti odločitve iz pristranske v nepristransko niti v drugi vlogi (Moore et al., 2010, str. 44-45).

Podobno Slapničar et al. (2012, str. 1) raziskuje vpliv osebnega odnosa in finančnih spodbud na odločanje revizorjev. Kljub izboljšanju merjenja osebnega odnosa v primerjavi z raziskavo Moore et al. (2010, str. 44), rezultati eksperimenta ne potrjujejo značilnega vpliva samega odnosa na odločanje revizorjev, pri čemer pa je vpliv finančnih spodbud statistično značilen.

Medtem, ko so raziskovalci enotnega mnenja, da finančne spodbude povzročijo zavedno pristranskost pri odločanju revizorjev, je pristranskost, ki izhaja iz osebnega odnosa, manj raziskana. Vprašanje, ali osebni odnos povzroči zavedno ali nezavedno pristranskosti se tako še vedno postavlja.

Motivacijske teorije predpostavljajo, da je posameznikovo vedenje odraz nezavednih potreb. McClelland (v Boštjančič, 2007, str. 56) definira motiv kot ponavljajočo se skrb za ciljno stanje, ki temelji na naravni spodbudi oziroma skrbi, ki spodbuja, selekcionira in usmerja vedenje. McClellandova teorija interpretira človekovo motivacijo s tremi nezavednimi potrebami. Teorija temelji na predpostavki, da se pri vsakem človeku pojavljajo tri potrebe, in sicer potreba po dosežkih, moči in druženju. Potreba po dosežkih (angl. *need for achievement*) predstavlja potrebo po odličnosti in uspešnosti. Potreba po moči (angl. *need for power*) je odraz notranje moči povezane z zunanjo reakcijo in se odraža kot potreba oziroma želja po nadzoru in vplivanju na druge. Potreba po druženju (angl. *need for affiliation*) pa je definirana kot potreba po pripadnosti, druženju, oziroma želji po odprtih, toplih in prijateljskih odnosih. McClelland (1987, str. 147) pojasnjuje, da se ljudje razlikujejo v intenzivnosti individualnih potreb, pri čemer pa so najbolj motivirani v situacijah, ki jim omogočajo zadovoljevanje najbolj izražene nezavedne potrebe.

Za boljše razumevanje vedenja revizorjev je pomembno upoštevati tudi vpliv osebnih vrednot in osebnostnih lastnosti. Vrednote in osebnostne lastnosti imajo podobno kot nezavedne potrebe pomemben vpliv na posameznikovo vedenje.

Musek (1993, str. 147) definira vrednote, kot življenjska vodila in smernice. Pogačnik (2002b, str. 33) meni, da vrednote ne odražajo trenutne motivacije, temveč relativno trajno in dolgoročno motivacijsko orientacijo posameznika. Na drugi strani pa se osebnostne lastnosti, kot so sprejemljivost (angl. *agreeableness*), ekstrevertnost (angl. *extraversion*), nevroticizem (angl. *neuroticism*), vestnost (angl. *conscientiousness*) in odprtost (angl. *openness*) (John, & Srivastava, 1999, str. 60), dosledno odražajo skozi dejanja, misli in čustva (Cárdenas, & Stout, 2010, str. 22).

Predhodne raziskave kažejo, da nezavedne potrebe vplivajo na nezavedne motive, le-te pa usmerjajo posameznikovo vedenje in vplivajo na njegovo odločanje (Tran, & Ralston, 2006, str. 426). Upoštevanje navedeno McClellandova teorija predstavlja teoretični temelj za raziskovanje



pristranskosti, ki izhaja iz osebnega odnosa ter za preučitev vprašanja ali je gre za zavedni ali nezavedni kognitiven proces.

Poglaviten namen predmetne raziskave je zagotoviti empirične dokaze k teoretičnim in regulativnim razpravam o ublažitvi nevarnosti, ki izhajajo iz navzkrižja interesov revizorjev, še posebej tistih, ki se porajajo zaradi osebnih razmerij med revizorjem in naročnikom. Za izvajanje učinkovitih regulativnih ukrepov za izboljšanje neodvisnosti revizorjev in zagotavljanje kakovosti revizije je pomembno razumeti kateri so tisti dejavniki, ki spodbudijo pristranskost in odločanje revizorja v korist naročnika. Iz vsebine nedavnega predloga Evropske komisije o obvezni rotaciji revizijskih družb, ki spreminja minimalno rotacijsko dobo s 6 let na 14 let (European Parliament, 2013, str. 1- 2), se nam upravičeno poraja resen dvom o učinkovitosti in smotrnosti tovrstnega regulativnega ukrepa.

Da bi analizirali problem, smo v naši raziskavi poskušali izmeriti revizorjeve nezavedne motive in njihov vpliv na odločanje revizorjev bolj direktno. Predmetna raziskava je osnovana na podlagi teorije motiviranega utemeljevanja in teorije o nezavednih potrebah kot jih je definiral McClelland ter predstavlja nadgradnjo dela Slapničar et al. (2012, str. 4-11) in Moore et al. (2010, str. 38-39). Namen raziskave je ugotoviti ali je pristranskost v osebnem odnosu resnično nezavedna, kot posledica vpliva nezavednih potreb, osebnih vrednot in osebnostnih lastnosti, ali gre za zavedno pristranskost pri odločanju revizorjev, kot posledica strahu pred izgubo naročnika.

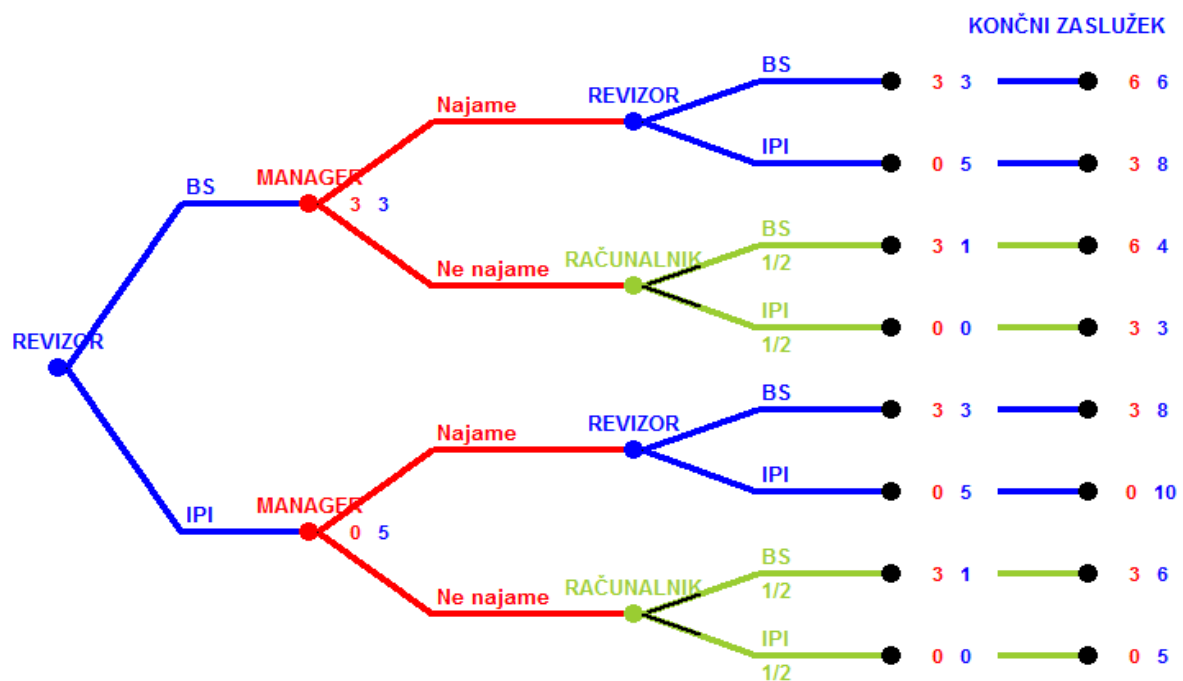
Eksperimentalna raziskava je osnovana v okviru teorije iger, in sicer kot zaporedna igra revizorja in naročnika z manipulacijo odnosa (osebni in neosebni). V eksperimentu je sodelovalo 104 študentov Ekonomske fakultete, polovica v vlogi revizorja in polovica v vlogi naročnika. Revizorji in naročniki so bili razdeljeni v pare. V skupini z neosebnim odnosom (angl. *non-personal relationship*) smo pare naključno določili, pri čemer revizorji niso vedeli kdo je njihov naročnik in so neodvisno sprejemali odločitve. V skupini z osebnim odnosom (angl. *personal relationship*) smo v polovici primerov revizorje dali v pare skupaj s prijateljem v vlogi naročnika, in polovico parov revizor-naročnik naključno določili. V skupini z osebnim odnosom so revizorji in njihovi naročniki sedeli drug zraven drugega. Eksperimentalna igra je potekala v dveh krogih.

V prvem krogu je bila naloga revizorja sprejeti odločitev o tem, kako je potrebno prikazati strošek razvoja produkta X v izkazih družbe naročnika. Revizorji so se morali odločiti ali se strinjajo s predlogom naročnika, da se strošek razvoja produkta prikaže v bilanci stanja (BS) kot neopredmeteno sredstvo, ali zahtevajo, da je potrebno strošek razvoja prikazati v izkazu poslovnega izida (IPI) kot strošek, kar je imelo negativen vpliv na dobiček revidirane družbe. Revizorji v neosebnem odnosu so odločitev sprejeli neodvisno od naročnika, medtem ko so

revizorji v osebnem odnosom, nalogo najprej prediskutirali z naročnikom in šele nato sprejeli odločitev. Revizorji in naročniki so glede na izbrano odločitev revizorja prejeli ustrezen zaslužek. V drugem krogu so bile razmere malenkost spremenjene. Najprej se je moral odločiti naročnik ali bo revizorja ponovno najel ali ne. V primeru, če se je naročnik odločil, da istega revizorja ponovno najame, je nato igra potekala enako kot v prvem krogu. Revizor se je moral ponovno odločiti, kako je potrebno prikazati strošek razvoja produkta Y v izkazih družbe naročnika. V nasprotnem primeru, torej če se je naročnik odločil najeti drugega revizorja, pa je računalnik naključno določil zaslužek naročnika in revizorja, ki ga naročnik ni ponovno najel. Po končanem drugem krogu igre in prejetem zaslužku so nato sodelujoči v eksperimentu izpolnili še izhodni vprašalnik povezan s samim eksperimentom in vplivom kontrolnih spremenljivk ter vprašalnike za merjenje nezavednih motivov, vrednot in osebnostnih lastnosti.

Na Sliki 5 je prikazano drevo odločitev v igri med revizorjem in naročnikom (managerjem).

Slika 5: Igra Revizor-Naročnik



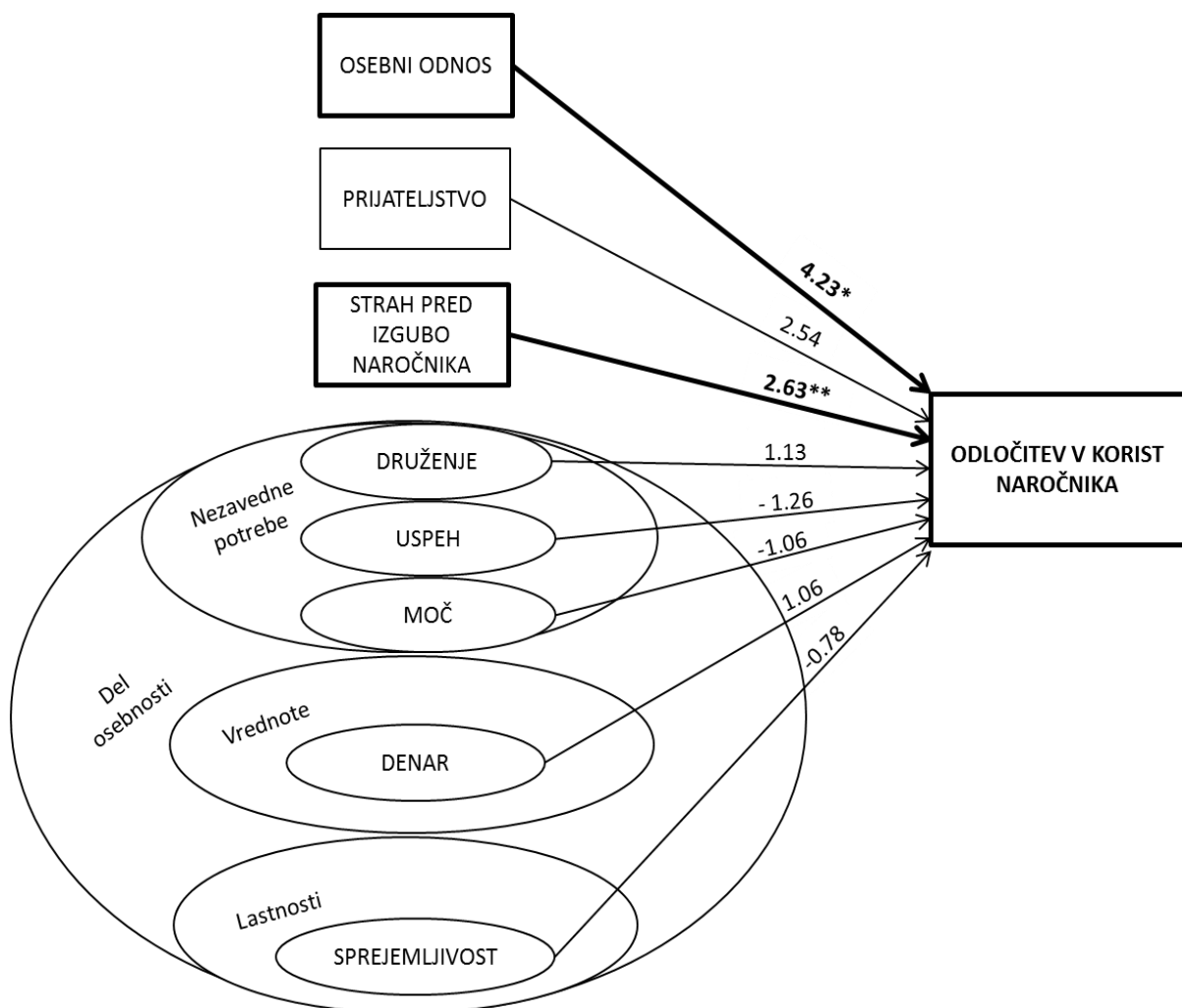
Z analizo pridobljenih podatkov smo prišli do ugotovitve, da ima osebni odnos med revizorjem in naročnikov značilen vpliv na odločanje revizorja. Eksperimentalni subjekti v vlogi revizorja, ki so bili v osebnem odnosu z naročnikom, so bili bistveno bolj nagnjeni k sprejemanju pristranske odločitve v korist naročnika.

Ker se domačnost in prijateljstvo razvije z dolžino odnosa (Ye, Carson, & Simnett, 2011, str. 125), smo naprej raziskovali ali je pristransko odločanje revizorjev posledica prijateljstva ali

zgolj interakcije med revizorjem in naročnikom. Na podlagi rezultatov analize pridobljenih podatkov smo ugotovili, da prijateljstvo nima pomembnega vpliva na odločanje revizorja. Odločitve eksperimentalnih subjektov v vlogi revizorja, ki so bili v paru skupaj s svojim prijateljem, se ni razlikovalo od odločitev tistih revizorjev v skupini z osebnim odnosom, ki so bili naključno dani skupaj v pare in se niso dobro poznali. Na podlagi opisanega zaključujemo, da je revizorjeva nagnjenost k zadovoljevanju preferenc naročnika preprosto posledica interakcije med revizorjem in naročnikom in ne prijateljstva v osebnem odnosu.

Windsor in Kavanagh (2012, str. 10) sta mnenja, da strah pred izgubo naročnika in posledično finančnega prihodka, lahko privede revizorja do neprimerne soglašanja z željami naročnika. Rezultati naše empirične raziskave potrjujejo pomemben vpliv strahu na pristransko odločanje revizorja v korist naročnika. Nadaljnja analiza ne potrdi pomembnega vpliva nezavednih potreb, osebnih vrednot in osebnostnih lastnosti na pristransko odločanje revizorja. Na Sliki 6 je prikazan empirični model, ki temelji na podlagi rezultatov testiranja hipotez.

Slika 6: Empirični model



**Legenda:** \*  $p < 0.05$ ; \*\*  $p < 0.001$ .

Osební odnos doprinese k nastanku usmerjenih ciljev, ki spodbudijo motivirano utemeljevanje, kar pripelje do pristranskega odločanja (Kunda, 1990, str. 483). S pomočjo motiviranega utemeljevanja revizorji navidezno objektivno sprejemajo računovodske odločitve, in sicer v smeri, da ugodijo željam naročnika. Po prepričanju Kunda (1990, str. 482) je opisan kognitiven proces nezaveden. Moore et al. (2010, str. 38) in Slapničar et al. (2012, str. 11) menita, da finančne spodbude povzročijo pri revizorju zavedno motivirano utemeljevanje in posledično odločanje v korist naročnika, medtem ko osebni odnos z naročnikov povzroči nezavedno pristranskost. Rezultati naše empirične raziskave nam ponujajo diametralno nasprotné zaključke, in sicer, da pristransko odločanje revizorja v korist naročnika izhaja iz strahu pred izgubo naročnika, in da je pristranskost v osebnem odnosu zavedna.

Veljavnost rezultatov naše empirične raziskave je potrebno tehtati in objektivno ovrednotiti v povezavi z omejitvami raziskave. Kot prvo omejitev empirične raziskave je potrebno izpostaviti dejstvo, da v eksperimentu niso sodelovali pooblaščení revizorji, kar bi rezultatom dodalo večjo težo, temveč dodiplomski in podiplomski študentje Ekonomske fakultete v Ljubljani, ki so se morali vživeti v vlogo izkušenega revizorja. Ob tem pa je potrebno izpostaviti, da smo poizkusili nadzorovati navedeno omejitev tako, da smo k sodelovanju v predmetnem eksperimentu povabili študente s smeri računovodstva in financ, ki so dejansko, gledano s teoretičnega znanja ter poznavanja področja revizije, najbolj seznanjeni s poklicem revizorja ter z zakonskimi predpisi s tega področja. Sodelujoči študentje so imeli v povprečju 4 leta delovnih izkušenj. Ob tem gre izpostaviti tudi dejstvo, da so številni študentje, ki so sodelovali v našem eksperimentu, delali kot pripravniki v revizorskih družbah v Sloveniji.

Druga omejitev predmetnega eksperimenta, ki jo je brez vsakršnega dvoma potrebno omeniti, je v smislu števila subjektov, ki so sodelovali v eksperimentu in število pridobljenih empiričnih podatkov. Navkljub dejstvu, da je v eksperimentu sodelovalo 104 udeležencev, je le polovica od udeležencev bilo postavljenih v vlogo revizorja. Tako majhen vzorec omejuje moč statističnih testov dejavnikov vključenih v model.

Rezultati naše analize nakazujejo, da bi ukrep obvezne rotacije revizijskih družb lahko predstavljal učinkovit ukrep, ki bi s prekinitvijo odnosa pripomogel k zmanjšanju pristranskega odločanja v korist naročnika zaradi vpliva osebnega odnosa. Vendar menimo, da bi omenjen ukrep bil lahko učinkovit zgolj na način, da bi bilo obdobje rotacije v naprej določeno. Na takšen način bi se zmanjšalo vpliv strahu pred izgubo naročnika na odločanje revizorja. Glede na opisano in predstavljene rezultate menimo, da nedavni regulativni predlog – obvezna rotacija revizijskih družb z minimalnim obdobjem rotacije 14 let, nikakor ne predstavlja učinkovitega ukrepa, ki bi ponovno vzpostavil zaupanje v revizijsko dejavnost in ob enem okrepil neodvisnost revizorjev in kakovost revizije.

Kot sta predlagala že Bazerman in Moore (2011, str. 310), bi morale revizijske družbe sodelovati z istim naročnikom le določeno število let, brez možnosti podaljšanja pogodbe o sodelovanju ali možnosti predhodne prekinitve pogodbe s strani naročnika.

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