



LORD ASHCROFT INTERNATIONAL BUSINESS SCHOOL

MANAGING CONFLICT OF INTERESTS IN PROFESSIONAL ACCOUNTING FIRMS

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***I dedicate this work to my mother (Motoo Maa) and father (Abu Jaan) for
their prayers, support and unconditional love.***

Declaration

I hereby declare that this thesis, presented for the degree of PhD in Accounting, has been composed entirely by myself, is solely the result of my own work and has not been submitted for another degree at Anglia Ruskin University or any other educational institution.

I also confirm that all the information in this document has been obtained and presented in accordance with the research ethics policies of Anglia Ruskin University.

Maria Ishaque

ABSTRACT

This study views *conflict of interests* in professional accounting firms through the lens of behavioural risk management. The research problem driving this study is the accounting professionals' deviant decision-making behaviour due to conflict of interests. Extant literature suggests that the prevalence of said problem is attributable to the ineffective management of conflicting interests – the existing procedures do not account, sufficiently, for the accounting professionals' *independence in fact*. This research builds, primarily, on the work of Moore, Tanlu and Bazerman (2010) and Guiral, Rodgers, Ruiz and Gonzalo (2010). Although they attempted to address the professionals' *independence in fact* by examining the psychological and cognitive impacts of conflict of interests, there still is a lack of understanding about the interaction of conflict of interests with decision-making. Consequently, there have been repeated calls for more research to understand how conflict of interests operates at the level of an individual accounting professional. Accordingly, this study is aimed at examining the process through which conflict of interests affects accounting professionals' decision-making behaviour. To achieve this aim, a cognitive approach has been developed through integration of social cognitive theory and throughput model of decision-making.

This research adopts a quantitative approach to investigation and the data have been collected by conducting a quasi-experiment with 105 professionals from the Big Four accounting firms in the UK. Likert-type items/scales are used to record data as the professionals' self-reports on their perceptions and behaviour. Partial Least Squares-Path Analysis has been implemented for data analysis and hypotheses testing. Following the post-positivists stance, the concern is 'failure to reject' a hypothesis rather than 'proving' it. The empirical results provide that the professionals' *positive outcome expectancy of compliant decision-making* (POE), *perceived difficulty in making compliant decisions* (PD) and *ethical judgements* (EJ) play mediating role in the relationship between *conflict of interests* (CoI) and the *likelihood of deviant decision-making behaviour* (DD). The low POE, high PD and less EJ are evidenced to be the situational cognitive predictors and the high *propensity to morally disengage* (PMD) the dispositional cognitive predictor of DD. Decision-making behaviour is evidenced to be prone to bias due to the significant role of POE and PD in the decision-making process. These results suggest that the process through which CoI affects accounting professionals' decision-making behaviour is governed through the agency of their POE, PD and EJ. During this process, CoI plays biasing role and due to which the deviations from compliant behaviour might occur even undesirably. Therefore, DD is high in case of the professionals who perceive the negative outcomes of compliant decision-making to outweigh its positive outcomes, perceive high difficulty in making the given compliant decision, form a judgement that deviant decision choice is the most ethical and have high propensity of considering unethical behaviour as acceptable. Thus, in the events of conflict of interests, the likelihood of deviant behaviour can be reduced through encouraging amongst professionals the high POE, low PD, high EJ and low PMD.

This study holds significance since it provides the much-needed empirical evidence for the role of accounting professionals' cognitive processes in the relationship between conflict of interests and their decision-making behaviour. The cognitive approach adopted in this study provides a novel perspective for investigating the decision-making process. Moreover, the robust experiment employed for data collection adds to the extant research that lacks in experimental scenarios for addressing conflict of interests. Since all the insights revealed by this study's results are relevant to the professionals' state of mind, these insights can be combined to strengthen their *independence in fact* – to this end, I have proposed a behavioural framework to complement the accounting firms' current efforts for managing conflict of interests. On a practical level, the professional accounting firms, the accounting professionals, the regulators and the other relevant professions can use this study's findings and the new knowledge for making better decisions and to improve their policies.

List of Papers & Presentations

Conference Papers

Ishaque, M., Abdel-Kader, M., Jabbour, M., (2017). Deviant Behaviour due to Biasing Role of Conflict of Interests: Experimental Evidence from the Big Four Accounting Firms. *European Accounting Association*. Valencia, Spain.

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Abbreviations

| | |
|----------|--|
| CD | Compliant Decision-Making Behaviour |
| CoI | Conflict of Interests |
| CoI-1 | Conflict of Interests due to Self-Interest Threat |
| CoI-2 | Conflict of Interests due to Intimidation Threat |
| CoI-3 | Conflict of Interests due to a Combination of Self-Interest and Self-Review Threats |
| CoI-4 | Conflict of Interests due to a Combination of Self-Interest, Intimidation, Self-Review and Familiarity Threats |
| DD | Deviant Decision-Making Behaviour |
| Deloitte | Deloitte Touche Tohmatsu Limited |
| EJ | Ethical Judgement |
| EY | Ernst & Young |
| FRC | Financial Reporting Council |
| IESBA | International Ethics Standards Board for Accountants (IESBA) |
| IFAC | International Federation of Accountants |
| ISO | International Organization for Standardization |
| KPMG | The name ‘KPMG’ was chosen following the merger of KMG (Klynveld Main Goerdeler) with P (Peat Marwick) |
| OSE | Occupational Self-Efficacy |
| PD | Perceived Difficulty in Making Compliant Decisions |
| PLS | Partial Least Squares |
| PMD | Propensity to Morally Disengage |
| POE | Positive Outcome Expectancy of Compliant Decision-Making |
| PwC | PricewaterhouseCoopers |
| SCT | Social Cognitive Theory |
| SEM | Structural Equation Modelling |
| S-O-R | Stimulus-Organism-Response Paradigm |
| SOX | Sarbanes-Oxley Act of 2002 |
| S-R | Stimulus-Response Paradigm |
| TM | Throughput Model of Decision-Making |

CHAPTER 1: INTRODUCTION AND CONTEXT OF STUDY

“Research is creating new knowledge”

Neil Armstrong

1.1 Introduction

This chapter presents an overview of this research. The second section will include background to the study. The motivation for undertaking this study will be discussed in the third section, followed by details of the research problem in the fourth section. The aim and objectives and the corresponding research questions will be included in the fifth section. Research methodology will be introduced in the sixth section. The significance of study will be elaborated in the seventh section and the structure of this thesis will be briefed in the eighth section.

1.2 Research Background

The last two decades have witnessed numerous corporate accounting scandals such as the Enron scandal in 2001, the WorldCom and Tyco scandals in 2002, the Lehman Brothers and Bernie Madoff scandals in 2008, the Autonomy corporation scandal in 2012 and the more recent FIFA corruption and Toshiba accounting scandals in 2015. These and other similar scandals have brought the integrity of accounting professionals and that of the professional accounting firms into question (Tepalagul and Lin, 2014; Church et al., 2015). Conflicts of interests faced by accounting professionals have been playing a central role in such scandals (Clements, Neill and Stovall, 2012; Crump, 2013). The discussions around conflict of interests and resultant deviant behaviour became the area of research in the 1980s, gained hype in 1990s and 2000s and is still a crucial concern. This is because, the instances of deviant behaviour due to conflict of interests in professional accounting firms are still largely pervasive (Ayal and Gino, 2012; Clements, Neill and Stovall, 2012).

The primary responsibility of accountants is to serve and protect the public interest by reporting on the fairness of clients' financial statements – this constitutes the primary interest. Conflict of interests is said to arise if the professionals have any other interest (i.e. secondary interest) that might interfere with their responsibility to protect the public trust (Boyd, 2004; Bazerman and Gino, 2012). According to *The Code of Ethics for Professional Accountants* by the

International Ethics Standards Board for Accountants (IESBA), the primary interest of serving in the best interest of public denotes compliance with five fundamental principles of professional ethics, i.e. integrity, objectivity, professional competence and due care, confidentiality and the professional behaviour. However, the code recognises various threats, that serve as sources of secondary interests, which threaten compliance with the said fundamental principles. The main threats are the self-interest – i.e. due to the financial or other personal interest, self-review – i.e. when professionals have to review their own work, advocacy – i.e. when professionals have to promote the client's position, familiarity – i.e. due to the long-term or close firm-client relations and the intimidation threat – i.e. due to the actual or perceived pressures (IESBA, 2015).

With reference to what constitutes a conflict of interests, Davis (1993) and Gaa (1994) provided that conflict of interests refers to a range of scenarios that pose a risk that an individual in question will compromise the professional judgement. According to Thagard (2007), conflict of interests arises when people have to make decisions that are biased by their personal goals and they are, therefore, prone to neglecting the interest of others. Johnson and Hansen (2011) suggested that the presence of a conflict of interests might lead to the pursuance of secondary at the cost of primary interest. Moreover, Florio (2012) regarded conflict of interests as circumstances where there is a risk that an individual or organisation has incentives to deviate from compliance with the primary interest. Conflicting interests are also viewed as threats to the accounting professionals' integrity, objectivity, professional competence and due care, confidentiality and the professional behaviour (IESBA, 2015). Thus, conflict of interests in accounting firms is likely to result in deviant decision-making behaviour, i.e. behaviour that does not accord with the professional accounting standards or, in other words, is in disagreement with the fundamental principles of professional ethics. These views converge to the stance that conflict of interests is, actually, the risk.

Lo and Field (2009) and Florio (2012) considered the conflict of interests a risk and highlighted the need for identifying, assessing, controlling and monitoring the conflict of interests. They asserted that there is a need for promoting effective risk management practice in this regard. Similarly, Bedard, Deis, Curtis and Jenkins (2008) also support the identification, assessment and control of conflict of interests. In this regard, various researchers (e.g., Moore, Tetlock, Tanlu and Bazerman, 2006; Guiral, Rodgers, Ruiz and Gonzalo, 2010; Moore, Tanlu and Bazerman, 2010) strongly support the adoption of behavioural perspective. Hence, this study

looks at conflict of interests through the lens of behavioural risk management and defines conflict of interests as ‘*a situation involving a disagreement between the accounting profession’s primary interest and the professional’s secondary interest(s) which, in turn, leads to the likelihood of deviant behaviour*’.

In relation to the accounting professionals’ deviant behaviour due to conflict of interests, extant literature suggests that the main focus of existing measures and regulations on professionals’ *independence in appearance*¹ (Nelson, 2004; Moore, Tanlu and Bazerman, 2010; Bazerman and Gino, 2012; Clements, Neill and Stovall, 2012) and minimal focus on their *independence in fact*² (Bazerman and Banaji, 2004; Cain, Loewenstein and Moore, 2005; Guiral, Rodgers, Ruiz and Gonzalo, 2010; Moore, Tanlu and Bazerman, 2010; Ayal and Gino, 2012) are the potential barriers to effectiveness of accounting regulation for dealing with the situations involving conflict of interests. Thus, increased focus on accounting professionals’ *independence in fact* is the suggested response.

Following the suggestions in relevant literature (e.g., Chugh, Banaji and Bazerman, 2005; Moore, Tetlock, Tanlu and Bazerman, 2006; Moore, Tanlu and Bazerman, 2010; Ayal and Gino, 2012), this study intends to address accounting professionals’ *independence in fact* through understanding relationship between conflict of interests and deviant decision-making behaviour and examining the role of professionals’ mental processes towards their decision-making behaviour. To this end, empirical evidence will be sought for; (i) relationship between the conflict of interests due to different threats (to compliance with fundamental principles of professional ethics) and accounting professionals’ deviant decision-making behaviour, (ii) the role of accounting professionals’ cognitive processes towards their decision-making behaviour in the events of conflict of interests and (iii) the biasing role of conflict of interests towards accounting professionals’ decision-making behaviour.

1.3 Research Motivation

This research is primarily motivated by the fact that despite increased regulations, especially

¹ *Independence* of an accounting professional is about taking an unbiased viewpoint in performing audit tests, evaluation of results and in issuing the audit reports (Arens, Beasley and Elder, 2002). Independence implies freedom from conflict of interests (Nelson, 2004). *Independence in appearance* is about the public’s perception that an accounting professional (and accounting firm) is objective in conduct and forms impartial judgements (Dopuch, King, Schwartz, and Zhang, 2003; Salehi, 2009).

² *Independence in fact* denotes actual objectivity and a state of mind characterized by the professional’s unbiasedness and integrity (Dopuch, King, Schwartz, and Zhang, 2003; Salehi, 2009).

in response to numerous accounting scandals in the last two decades, the instances of deviant behaviour due to conflict of interests in professional accounting firms are still prevalent. The bigger as well as the smaller accounting firms are equally likely to be affected by the conflict of interests (Crump, 2013). For instance, the Big Four accounting firms have recently faced heavy fines on account of the conflict of interests – Deloitte was fined \$10m in 2013, PwC was fined \$25m in 2014, EY was fined £250,000 in 2015 and KPMG was fined £390,000 in 2015 (Agnew, 2015; Crump, 2015). Instances like these are a matter of concern for the regulators and policy makers, the professional accounting firms, the professionals and the public. Although it is evident that the accounting regulation has increased, that the firms do not want to be fined due to reputational concerns and that the professionals do not want their integrity to be questioned; the deviations due to conflict of interests do happen and, mostly, undesirably (Moore, Tanlu and Bazerman, 2010). It suggests that there are some serious lapses in existing practices and that there is a need to address this concern.

This study is also motivated by the repeated calls of several researchers (Moore, Tetlock, Tanlu and Bazerman, 2006; Moore, Tanlu and Bazerman, 2010; Ayal and Gino, 2012; Bazerman and Gino, 2012) to examine the conflict of interests as a topic deserving of its own focus. Although the devastating effects of conflict of interests are well-documented (e.g., Boyd, 2004; Pierce and Sweeney, 2004; Favere-Marchesi and Emby, 2005; Daugherty, Dickins, Hatfield and Higgs, 2012), there is a significant lack of research that addresses accounting professionals' *independence in fact* (Wickramasinghe, Hamid, Pirzada and Ahmad, 2015). Surprisingly, the extant research has focused on the professionals' *independence in appearance* when it is evident that since individual professionals experience the conflict of interests, it is important to understand this phenomenon from their perspective.

Moreover, this research is also motivated by a significant gap in the literature, i.e. a lack of understanding about how conflict of interests operates at the level of an individual accounting professional. Addressing this gap is, primarily, about examining the process through which conflict of interests affects accounting professionals' decision-making behaviour. The need to address the identified gap is supported by some experts in the field (e.g., Bazerman and Banaji, 2004; Cain, Loewenstein and Moore, 2005; Tenbrunsel, 2005; Guiral, Rodgers, Ruiz and Gonzalo, 2010; Moore, Tanlu and Bazerman, 2010; Ayal and Gino, 2012). In this regard, this study has attempted to move beyond the behaviourists' *Stimulus-Response (S-R) Paradigm*³

³ The S-R Paradigm provides that '*behaviour is the result of the stimulus*' (Holland, 2008).

(Holland, 2008) to the cognitivists' *Stimulus-Organism-Response (S-O-R) Paradigm*⁴ (Holt et al., 2015) that is well-suited to address the gap towards this study's research problem.

1.4 Research Problem

Having briefed in the background section that professional accounting firms operate within a heavily regulated environment, the deviations of accounting professionals from serving the primary interest of the profession are still largely pervasive. The research problem driving this study is *the accounting professionals' deviant decision-making behaviour due to conflict of interests*. Considering that conflict of interests faced by accounting professionals have been playing a central role in numerous corporate scandals (Clements, Neill and Stovall, 2012; Crump, 2013) and that the bigger as well as the smaller accounting firms are equally likely to be affected by the conflict of interests (Moore, Tanlu and Bazerman, 2010), the epidemic impact of the said problem is evident.

A critical review of literature clarifies that the accounting professionals' deviant decision-making due to conflict of interests is prevalent because of the weaknesses in existing measures implemented for managing conflicting interests (Florio, 2012; Williford and Small, 2013; Tepalagul and Lin, 2014), the limited effectiveness of regulations in dealing with decision-makers' unconscious bias (Bazerman and Banaji, 2004; Cain, Loewenstein and Moore, 2005; Moore, Tetlock, Tanlu and Bazerman, 2006; Guiral, Rodgers, Ruiz and Gonzalo, 2010), the apparent lack of focus on the root causes of conflict of interests (Ayal and Gino, 2012; Bazerman and Gino, 2012) and the lack of focus on psychological and cognitive barriers that professionals experience in the face of conflicting interests (Nelson, 2004; Moore, Tanlu and Bazerman, 2010; Bazerman and Gino, 2012). These studies suggest that the primary reason underlying the pervasiveness of research problem is the ineffective management of conflict of interests in professional accounting firms.

The relevant literature, therefore, suggests that the main focus of existing measures and regulations on accounting professionals' *independence in appearance* (Nelson, 2004; Moore, Tanlu and Bazerman, 2010; Bazerman and Gino, 2012; Clements, Neill and Stovall, 2012) and minimal focus on their *independence in fact* (Bazerman and Banaji, 2004; Cain, Loewenstein

⁴ The S-O-R Paradigm provides that '*in the face of the stimuli, organisms form the cognitive representations (i.e. perceptions and judgements) of the world, and respond through their conduct, actions or behaviour*' (Holt et al., 2015).

and Moore, 2005; Moore, Tetlock, Tanlu and Bazerman, 2006; Guiral, Rodgers, Ruiz and Gonzalo, 2010; Moore, Tanlu and Bazerman, 2010; Ayal and Gino, 2012) are the core reasons for prevalence of the research problem. These reasons serve as potential barriers to the effectiveness of accounting regulation for addressing deviant decision-making behaviour due to conflict of interests.

Because of the various dysfunctional consequences of conflict of interests, it is essential to investigate the research problem driving this study. Such consequences include, but are not limited to, the prioritisation of clients' satisfaction than the professional standards (Boyd, 2004; McMillan, 2004; Reinstein and McMillan, 2004), the maximization of profit/fee (Young, 2005; Pierce, 2007), the deterioration of audit quality (Pierce and Sweeney, 2004; Favere-Marchesi and Emby, 2005; Daugherty, Dickins, Hatfield and Higgs, 2012), the impaired independence of a professional (Ronen, 2010; Bae, Kallapur and Rho, 2013; Ahmad, 2015), the biased decision-making (Guiral, Rodgers, Ruiz and Gonzalo, 2010; Moore, Tanlu and Bazerman, 2010; Bazerman and Gino, 2012), the inadequate paperwork (Willett and Page, 1996; Sikka, 2004), the premature signing-off on audit assignments (Wickramasinghe, Hamid, Pirzada and Ahmad, 2015) and the under-reporting of audit hours (McNair, 1991; Anderson-Gough, Grey and Robson, 2001). Almost every year, the professional accounting firms face heavy fines on account of the deteriorated audit quality due to conflict of interests (Agnew, 2015).

With reference to the research problem, some interconnected gaps have been identified in relation to the accounting professionals' *independence in fact*. In this regard, there is a significant lack of empirical evidence for the relationship between conflict of interests and the professionals' deviant decision-making behaviour, the role of professionals' mental processes towards their decision-making behaviour in the events of conflict of interests and also for the biasing role of conflict of interests. These gaps converge into one substantial gap, i.e. *a lack of understanding about how conflict of interests operates at the level of an individual accounting professional*. The need to address this gap is supported by several researchers (e.g., Cain, Loewenstein and Moore, 2005; Moore, Tetlock, Tanlu and Bazerman, 2006; Guiral, Rodgers, Ruiz and Gonzalo, 2010; Ayal and Gino, 2012). It is expected that the new knowledge will help address the professionals' *independence in fact* in a better manner which, according to Bazerman and Gino (2012), will facilitate effective management of the conflict of interests in professional accounting firms.

Clements, Neill and Stovall (2012) strongly asserted that there is a need for some revolutionary

approach to address the ramifications of conflict of interest. Although this problem of accounting professionals' deviant decision-making is well documented, there remains a clear lack of adequate solutions. Tenbrunsel (2005) suggests that understanding the operation of conflict of interests at the level of an individual accounting professional is about recognising the cognitive obstacles to compliant decision-making and then finding out how to overcome these barriers. Similarly, Moore, Tanlu and Bazerman (2010) call for examining the interaction of conflict of interests with decision-making, as a way to understand how such conflicts operate at the level of an individual professional. Thus, there is a need to understand how the conflict of interests leads to deviant decision-making through the agency of professionals' mental processes. In this regard, the adoption of behavioural risk management perspective (Lo and Field, 2009; Florio, 2012; IESBA, 2015) and particularly the cognitive approach (Lieberman, 2007; Guiral, Rodgers, Ruiz and Gonzalo, 2010) seems promising for addressing the *independence in fact*.

Given the complexity of conflict of interests in a professional environment, there is a growing trend amongst researchers (e.g., Moore, Loewenstein, Tanlu and Bazerman, 2003; Moore and Loewenstein, 2004; Guiral, Rodgers, Ruiz and Gonzalo, 2010; Moore, Tanlu and Bazerman, 2010) to use a combination of cognitive theories and decision-making models, for examining the phenomena surrounding professionals' independence. By combining the *social cognitive theory* (Bandura, 1986) and the *throughput model of decision-making* (Rodgers, 1997), this study adopts the Stimulus-Organism-Response (S-O-R) Paradigm (Holt et al., 2015) for addressing the research problem. The viability of social cognitive theory to investigate cognitive processes of an individual decision-maker (Bandura, 1986; 2006; 2008) and the feasibility of the throughput model to capture decision-making process at an individual's level (Guiral, Rodgers, Ruiz and Gonzalo, 2010) are the main reasons for adopting the cognitive approach. Furthermore, the social as well as the ethical nature of conflict of interests (Finn, Chonko and Hunt, 1988; Mills and Bettner, 1992; Argandona, 2004) also support the adoption of a cognitive stance to address the problem driving this study.

1.5 Aim, Objectives and Research Questions

In order to fill the gap in the extant literature (i.e. a lack of understanding about how conflict of interests operates at the level of an individual accounting professional), *this study is aimed at examining the process through which conflict of interests affects accounting professionals'*

decision-making behaviour. The study considers four main categories of conflict of interests (CoI), i.e. conflict of interests due to self-interest threat (CoI-1), that due to intimidation threat (CoI-2), that due to a combination of self-interest and self-review threats (CoI-3) and the conflict of interests due to a combination of self-interest, intimidation, self-review and familiarity threats (CoI-4).

In order to serve the aim, the objectives of this study and the corresponding research questions to operationalise these are as follows;

1.5.1 First Objective & Research Question

The first objective of this study is to examine the relationship between the conflict of interests and the accounting professionals' likelihood of deviant decision-making behaviour, which has been operationalised with the help of the following research question;

RQ₁: What is the relationship between the conflict of interests and the accounting professionals' likelihood of deviant decision-making behaviour?

This research question will testify the threatening impact of different categories of conflict of interests on the accounting professionals' adoption of compliant behaviour.

1.5.2 Second Objective & Group of Research Questions

The second objective of this study is to understand the role of accounting professionals' cognitive processes towards their decision-making behaviour in the events of conflict of interests, which has been operationalised with the help of the following research question;

RQ₂: What is the role of accounting professionals' cognitive processes towards their deviant decision-making behaviour in the events of conflict of interests?

This question has, further, been categorized into three subgroups.

- **Subgroup-1**

The first subgroup examines the relationship between conflict of interests and the accounting professionals' positive outcome expectancy, perceived difficulty and ethical judgement.

RQ_{1/2.1}: What is the relationship between the conflict of interests and the accounting

professionals' positive outcome expectancy of compliant decision-making?

RQ_{2/2.1}: What is the relationship between the conflict of interests and the accounting professionals' perceived difficulty in making compliant decisions?

RQ_{3/2.1}: What is the relationship between the conflict of interests and the accounting professionals' ethical judgement?

This subgroup will help understand the process through which the relationship between the conflict of interests and the likelihood of their deviant decision-making behaviour is governed.

- **Subgroup-2**

The second subgroup examines the relationship of accounting professionals' positive outcome expectancy, perceived difficulty and ethical judgement with their likelihood of deviant decision-making behaviour.

RQ_{1/2.2}: How in the events of conflict of interests, is the accounting professionals' positive outcome expectancy of compliant decision-making related to their likelihood of deviant decision-making behaviour?

RQ_{2/2.2}: How in the events of conflict of interests, is the accounting professionals' perceived difficulty in making compliant decisions related to their likelihood of deviant decision-making behaviour?

RQ_{3/2.2}: How in the events of conflict of interests, is the accounting professionals' ethical judgement related to their likelihood of deviant decision-making behaviour?

This subgroup will help establish the situational cognitive predictors of the likelihood of deviant decision-making behaviour.

- **Subgroup-3**

The third subgroup seeks to examine the interrelationships of accounting professionals' positive outcome expectancy, perceived difficulty and ethical judgement.

RQ_{1/2.3}: How in the events of conflict of interests, are the accounting professionals' positive outcome expectancy of compliant decision-making and their perceived difficulty in making compliant decisions interrelated?

RQ_{2/2.3}: How in the events of conflict of interests, are the accounting professionals' positive outcome expectancy of compliant decision-making and their ethical judgement interrelated?

RQ_{3/2.3}: How in the events of conflict of interests, are the accounting professionals' perceived difficulty in making compliant decisions and their ethical judgement interrelated?

This subgroup will help understand the process through which the relationship of the accounting professionals' cognitive processes with their likelihood of deviant decision-making behaviour is governed.

1.5.3 Third Objective & Research Question

The third objective of this study is to understand the biasing role of conflict of interests towards the accounting professionals' decision-making behaviour, which has been operationalised with the help of the following research question;

RQ₃: Why in the events of conflict of interests, might the accounting professionals' deviant decision-making behaviour be prone to perceptual biases?

This research question will help understand the process through which the unintentional and/or intentional perceptual biases might increase the likelihood of deviant decision-making behaviour, in the events of conflict of interests.

With particular reference to facilitating effective management of conflict of interests, it is expected that the insights obtained through serving the aforementioned aim, objectives and research questions will help develop behavioural interventions to strengthen accounting professionals' *independence in fact*.

1.6 Methodology

This research is explanatory by purpose, fundamental by outcome, deductive by logic and quantitative by the process. The overall quantitative approach to this research has been informed by the interconnectedness of the research paradigm, research methodology and research methods for data collection and analysis. Specifically, this research is underpinned by the postpositivism paradigm, adopts a quasi-experiment as the methodology, is conducted with 105 professionals from the Big Four accounting firms in the UK and uses the Likert-type scales and items to collect data as self-reports on perceptions and behaviour. The statistical technique

for testing theoretical model is the Partial Least Squares (PLS) - Path Analysis, that has been performed using SmartPLS 3.

The choice of postpositivism paradigm is justified by the research questions being addressed by this study. The primary rationale to adopt this paradigm is the concordance between philosophical assumptions of postpositivism and that underlying this study. For instance, the empirical data has been collected through the scientific method of enquiry and using the scales for participants' self-reports. Furthermore, the inclusion of perceptions as the intervening processes implies that imperfect evidence can be established and that the knowledge so gained will be conjectural. Moreover, the process of enquiry draws on deductive approach. Postpositivism also provides that valid knowledge is derived using a scientific method of enquiry (Creswell, 2014). This paradigm is concerned with studying behaviour and developing numeric measures of observations of the cognitive processes (Creswell, 2014). Moreover, it asserts that only the imperfect evidence can be established towards different phenomenon (Littlejohn and Pegler, 2007). Thus, postpositivism is the most appropriate paradigm for this study.

Moreover, the adoption of a quasi-experiment methodology is suitable for this study due to the various advantages of quasi-experiments that are of direct relevance to this study. For instance, Derue, Nahrgang, Hollenbeck and Workman (2012) provide that quasi-experiments allow researchers to use any manipulations they want to. Furthermore, these incorporate features from both the experimental and non-experimental designs in that both the manipulated and measured variables can be brought in. In this way, quasi-experiments tend to maximise the internal and external validity. This study's theoretical framework stresses the need for both the manipulated and measured variables and, therefore, the quasi-experiments are well-suited to this research.

The appropriateness of using Likert-type scales and items for collecting the data as participants' self-reports on their perceptions and behaviour has been established on the basis of provisions by Collis and Hussey (2009), Saunders, Thornhill and Lewis (2009) and Creswell (2014). Similarly, there are some compelling reasons that make the Big Four in the UK an appropriate research context. For instance, these firms represent the largest international services network that offer a wide range of audit and non-audit services (Agnew, 2015; Loxton, 2015) and the mismanagement of conflict of interests in the Big Four is still an active issue of concern (Irvine and Doherty, 2015). Furthermore, these firms are considered the trendsetters in the professional

accounting world and their policies also have an impact on other firms (Crump, 2015).

Following the guidance and provisions by Rudestam and Newton (2007), Field (2009), Hair, Ringle and Sarstedt (2011), Creswell (2014) and Lowry and Gaskin (2014), the statistical technique this study adopts to analyse the empirical data is the Partial Least Squares (PLS) based path analysis. For instance, this study's theoretical model draws on the integration of social cognitive theory with the throughput model of decision-making that is less developed for this study's area of research. Moreover, the goal of this research is the explanation of phenomenon and the sample size is not very large. Furthermore, most of the variables follow a non-normal distribution and the empirical examination is based on a rather complex structural model which also includes interaction effects and intends to compare alternate models. Path analysis has been performed using one of the leading PLS-SEM software programs, i.e. SmartPLS 3 – it works with PLS path modelling algorithm and offers a great deal of data analysis functions.

1.7 Significance of the Study

This study holds specific significance since it has been conducted in response to the repeated calls of several experts in the field (Moore, Tetlock, Tanlu and Bazerman, 2006; Moore, Tanlu and Bazerman, 2010; Ayal and Gino, 2012; Bazerman and Gino, 2012), who have been suggesting the need to examine conflicts of interests as a topic deserving of its own focus and from a behavioural ethics perspective. To this end, this research views conflict of interests in professional accounting firms through the lens of behavioural risk management. In this way, this research provides a new horizon for addressing the longstanding problem of the accounting professionals' deviant behaviour due to conflict of interests. It, particularly, focuses on the professionals' *independence in fact*, in order to complement the existing measures for managing conflict of interests that are, primarily, focused on the professionals' *independence in appearance*.

The further significance of this study is attributable to the much-needed comprehensive cognitive approach it adopts to examine the process through which conflict of interests affects the accounting professionals' decision-making behaviour. Most of the previous studies (e.g., Brandon, 2003; Cohen and Bennie, 2006; Iskandar and Sanusi, 2011; Cabrera-Frias, 2012; Juhari, Mohd-Sanusi, Rahman and Omar, 2013; Afifah, Sari, Anugerah and Sanusi, 2015) have employed a single theory to conduct the research regarding conflict of interests. However,

given the complexity of conflict of interests in a professional environment, some scholars (Moore, Loewenstein, Tanlu and Bazerman, 2003; Moore and Loewenstein, 2004; Guiral, Rodgers, Ruiz and Gonzalo, 2010; Moore, Tanlu and Bazerman, 2010) strongly suggest using a combination of cognitive theories and decision-making models for a better examination of the conflict of interests. Accordingly, this study develops a theoretical framework which integrates the social cognitive theory with throughout model of decision-making, for offering a comprehensive and novel perspective to achieve the aim and objectives of this study.

Most of the previous studies (e.g., Iskandar and Sanusi, 2011; Juhari, Mohd-Sanusi, Rahman and Omar, 2013) have used the behaviourists' *Stimulus-Response* paradigm (Holland, 2008) that implies using cognitive processes as the independent variable (stimulus) and resulting behaviour as the dependent variable (response) – this paradigm does not allow a thorough examination of the phenomenon as complex as conflict of interests. Significantly, this study's theoretical model is underpinned by cognitivists' *Stimulus-Organism-Response* paradigm (Holt et al., 2015) that offers a fresh perspective for addressing the behavioural concerns regarding conflict of interests – this paradigm allows examining the cognitive processes as intervening variables (the organism dimension) between the situations involving conflict of interests as independent variable (the stimulus dimension) and the behaviour as dependent variable (the response dimension). This approach is, perhaps, novel and equally important for facilitating an understanding of how the conflict of interests operate at the level of an individual accounting professional.

This study also holds significance as it provides empirical evidence regarding different categories of conflict of interests. Irrespective of the specific sources, the extant literature has used the term 'conflict of interests' to denote all the conflicting interests originating from different sources. So that this research includes the most prevalent categories of conflict of interests, suggestions from the interviews with four professionals (see Appendix 1 for interview questions), one each from the Big Four accounting firms, were considered. Accordingly, the four categories of conflict of interests have been considered in this research, i.e. conflict of interests due to self-interest threat, that due to intimidation threat, that due to a combination of self-interest and self-review threats and the conflict of interests due to a combination of self-interest, intimidation, self-review and familiarity threats. The consideration of different categories provides strong empirical evidence for the observed relationships and helps ensure the stability of results across different conflict of interests. This unique approach is specific to

this study and it will open new doors for the future research. Moreover, this study provides a direct focus on conflict of interests when most of the extant literature addresses this topic indirectly and, usually, in terms of the professionals' independence (Bedard, Deis, Curtis and Jenkins, 2008).

Another reason for this study's significance is the consideration of, arguably, all the main cognitive processes that are of direct relevance to the events of conflict of interests. Specifically, this study's model includes the positive outcome expectancy of compliant decision-making, the perceived difficulty in making compliant decisions and the ethical judgements as the cognitive processes. So far, none of the studies in the domain of conflict of interests has considered these mental processes simultaneously. Thus, this study attempts to offer a wide-ranging snapshot of the process through which conflict of interests affects accounting professionals' decision-making behaviour. To this end, triangulation of theories (Easterby-Smith, Thorpe and Jackson, 2012) adds to the significance of this study – the social cognitive theory (Bandura, 1986) and the throughput model (Rodgers, 1997), both from the psychology discipline, have been used to explain the accounting professionals' deviant decision-making behaviour.

The difficulty in employing working professionals has remained one of the hindrances for conducting behavioural research in a professional accounting environment. Even the accounting scholars trained in psychology might dismiss research that is not carried out with the highly experienced professionals (Moore, Cain, Loewenstein and Bazerman, 2005). Resultantly, there remains a significant lack of research with the possibility of practical impact. Some researchers (Lichtenstein and Slovic, 1973; Camerer, 2001; Kahneman and Tversky, 2000; Kahneman, 2003) emphasise that the experienced professionals are likely to display same decision-making biases as do the accounting students. However, some others (Libby, Bloomfield and Nelson, 2002; Moore, Cain, Loewenstein and Bazerman, 2005) suggest conducting research with the experienced professionals when the response under examination is strictly context-specific and is developed with individual's experience. Since this study's research questions demand answers in, strictly, the professional accounting context and the responses to conflict of interests are to be examined for reality-based dilemmas, the employment of accounting professionals for this study holds specific significance.

The next section will outline the structure of this thesis.

1.8 Structure of the Thesis

The remainder of the thesis is divided into six more chapters. Chapter 2 presents critical review of the literature relevant to managing conflict of interests in professional accounting firms. Chapter 3 is meant to develop the theoretical model in order to serve this study's aim in relation to filling the gap identified through detailed review of the literature. Chapter 4 details the research paradigm, research methodology and the research methods adopted for seeking answers to this study's research questions. Chapter 5 provides the data analysis procedures that have been applied to the empirical data. Chapter 6 includes discussions of the empirical results. Finally, Chapter 7 draws conclusions on the basis of empirical results and also includes the behavioural framework that has been developed as an outcome of this study.

CHAPTER 2: LITERATURE REVIEW

“Literature review serves as the foundation for entire research.”

(Ellis and Levy, 2008)

2.1 Introduction

The research problem driving this study is the accounting professionals’ deviant decision-making behaviour due to conflict of interests. The background information, as detailed in the previous chapter, revealed that this problem is largely pervasive due to the ineffective management of conflict of interests (Moore, Tanlu and Bazerman, 2010; Ayal and Gino, 2012; Bazerman and Gino, 2012; Clements, Neill and Stovall, 2012). There is a convincing evidence that conflict of interests in professional accounting firms is, actually, the risk (Davis, 1993; Gaa, 1994; Thagard, 2007; Bedard, Deis, Curtis and Jenkins, 2008; Johnson and Hansen, 2011; Florio, 2012; IESBA, 2015). In this regard, adoption of the behavioural ethics perspective is strongly supported by several scholars (e.g., Moore, Tetlock, Tanlu and Bazerman, 2006; Guiral, Rodgers, Ruiz and Gonzalo, 2010; Moore, Tanlu and Bazerman, 2010, Bazerman and Gino, 2012). Therefore, this study intends to view conflict of interests in professional accounting firms through the lens of behavioural risk management.

The second section includes the literature relevant to the critique of existing measures and regulations for managing conflict of interests. The third section reviews the literature informing the relationship between conflict of interests and deviant decision-making behaviour in professional accounting firms. The fourth section will include the literature relevant to the role of accounting professionals’ mental processes towards decision-making in the events of conflict of interests. Identification of gap(s) in the literature will be included in the fifth section, followed by a summary of this chapter in the sixth section.

2.2 Critique of Measures and Regulations for Managing Conflict of interests

Owing to the novelty of behavioural risk management perspective for addressing conflict of interests, there is a need to consolidate the extant literature relevant to the measures and regulations applied for managing conflict of interests in professional accounting firms. Accordingly, this section presents a review of the literature regarding critical take on the

weaknesses in existing measures and regulations and their limited effectiveness towards managing conflict of interests. The purpose is to highlight why, despite numerous measures and regulations, the accounting professionals' deviant decision-making due to conflict of interests is still pervasive. Importantly, this critique will provide guidance about what needs to be done for addressing the research problem driving this study.

2.2.1 Weaknesses in Existing Measures and Regulations

The professional accounting firms are exposed to many measures and regulations for managing conflict of interests. These include professional accounting standards (Tepalagul and Lin, 2014), quality control reviews and inspections (Bedard, Deis, Curtis and Jenkins, 2008) ethical codes of conduct (Clements, Neill and Stovall, 2012) ethics and compliance programs (Florio, 2012), electronic decision aids (Dowling, 2009), the Accounting Consultation Units (Trotman, Wright and Wright, 2005; Bedard, Deis, Curtis and Jenkins, 2008), whistleblowing (Taylor, Zalkin and Curtis, 2013), disclosure of conflict of interests (Healy and Palepu, 2001), continuing professional development (Florio, 2012) and education and training (Williford and Small, 2013), etc. Existing regulations have, however, been largely criticised for not being able to address the accounting professionals' *independence in fact*.

Criticising disclosures as the regulatory measure, Cain, Loewenstein and Moore (2005) argued that, while disclosure promises something for everyone, these do not guarantee that the professionals have acted in the best interest of the public. They further reasoned that the professionals might provide biased advice when they know that the one being advised is aware of the conflict of interests. Arguably, disclosure of non-audit services might make the public more sceptic of audit opinion (Camerer, Loewenstein and Weber, 1989; Strack and Mussweiler, 1997) and it might be perceived that there was a lack of independence – in such instances, there might be *independence in fact* but not the *independence in appearance* (Moore, Tetlock, Tanlu and Bazerman, 2006).

Electronic decision aids have also been criticised for the lack of their practical usefulness. For instance, the main barriers and costs associated with their implementation include over-reliance on systems recommendations, emphasis on ticking-the-box, training to use electronic systems, less cost efficiency for smaller engagements and restricted use due to the perceived difficulty (Dowling, 2009). Such barriers might cause a professional to misuse the system, such as, by selecting input parameters that will favour the desired outcome (Kachelmeier and Messier,

1990).

Some also highlight the limited effectiveness of whistleblowing mechanisms as a measure to manage conflict of interests. In this regard, the usefulness of whistleblowing is believed to be largely affected by the individual factors such as perception of whistleblowing, moral reasoning, the individual's sense of responsibility, locus of control, whistleblowing intentions and position in the firm (Kaplan and Whitecotton, 2001; Chiu, 2003; Tavakoli, Keenan and Cranjak-Karanovic, 2003; Curtis, 2006). Moreover, the propensity of an accounting professional to blow the whistle on wrongdoings is strongly affected by the context in which the wrongdoing occurs (Kaplan and Whitecotton, 2001; Ayers and Kaplan, 2003; Near, Rehg, Scotter Jr and Miceli, 2004). Furthermore, the organisational characteristics and the organisational culture also affect whistleblowing behaviour (Schultz, Johnson, Morris and Dyrnes, 1993; Hooks, Kaplan and Schlutz Jr, 1994; Kaplan and Whitecotton, 2001). Thus, if the right combination of individual, contextual and the organisational characteristics does not exist, whistleblowing is not expected to work in an intended way.

Importantly, some emphasise that several contextual factors have an impact on the effectiveness of measures and regulations for managing conflict of interests. For instance, Bazerman and Gino (2012) and Clements, Neill and Stovall (2012) suggest that since normative tone is reflected through the codes of conduct, conflict of interests cannot be managed effectively unless the accounting firms have improved the codes of conduct for their provisions regarding prioritisation of interests. Furthermore, Florio (2012) and Williford and Small (2013) provided that the effectiveness of measures to manage conflict of interests depends on the strength of ethics and compliance programmes and that these should be executed under strong leadership. Additionally, Florio (2012) and Caldarelli et al., (2012) argue that for regulations and measures to work, it is necessary to establish such an organisational culture that reinforces ethical conduct and does not tolerate anything that casts doubts on the ethical standards.

The aforementioned weaknesses in the existing measures and regulations highlight their limited usefulness for managing conflict of interests. A closer insight into the critique reveals that the main focus of existing measures and regulations on making the accounting professionals appear independent to the public (i.e. *independence in appearance*) is one of the reasons for prevalence of the professionals' deviant behaviour. Ideally, even if there are no such weaknesses (which, in practice, seems highly doubtful), the instances of deviant decision-making are still likely to

prevail due to the reasons underlying limited effectiveness of existing measures and regulations – the following subsection elaborates this stance.

2.2.2 Reasons for Limited Effectiveness of Existing Measures and Regulations

In relation to the problem of accounting professionals' deviant decision-making behaviour due to conflict of interests, research relevant to behavioural ethics provides an insight into the reasons for limited effectiveness of existing measures and regulations towards managing conflict of interests.

Highlighting the insufficiency of existing regulations for addressing the issues related to professionals' independence, Moore, Tetlock, Tanlu and Bazerman (2006) explained how the conflict of interests results in biased decision-making. They argued that since an accounting professional's moral seduction is primarily facilitated by the unconscious psychological processes, increasing the regulations to strengthen their independence does not guarantee the elimination of conflict of interests. They further asserted that the regulations to address audit quality seem insufficient for addressing the issues related to independence because such rules are not the only ways to avoid conflict of interests. In this regard, Bazerman and Gino (2012) strongly asserted that the adoption of behavioural ethics approach is required to address the conflict of interests.

Similarly, Cain, Loewenstein and Moore (2005), Moore, Tetlock, Tanlu and Bazerman (2006) and Guiral, Rodgers, Ruiz and Gonzalo (2010) found that conflict of interests leads to unintentional bias and that more than regulatory efforts are required. Specifically, there is a need to address biased decision-making behaviour in the events of conflict of interests. Moreover, Clements, Neill and Stovall (2012) argued that regulations such as the Sarbanes-Oxley Act has remained only moderately successful in countering the effects of conflict of interests. They strongly asserted that in the absence of revolutionary changes, conflicts of interests are likely to remain in the accounting profession for an indefinite future. Studies regarding the impact of psychological barriers on ethical decisions involving conflict of interests (Chugh, Banaji and Bazerman, 2005) and those examining decision-making in the face of ethical dilemmas (Foot, 1967; Thomson, 1986; Unger, 1996; Greene et al., 2001; Casebeer and Churchland, 2003; Green, Ha and Bullock, 2010) also suggest that the existing safeguards, legislation and regulation have limited effectiveness for treating the devastating

consequences of conflict of interests.

Some probe into more specific details of the reasons underlying the accounting professionals' deviant behaviour due to conflict of interests. For instance, this problem is argued to be largely pervasive due to the ineffectiveness of regulations in dealing with the unconscious bias (Bazerman and Banaji, 2004; Cain, Loewenstein and Moore, 2005; Moore, Tetlock, Tanlu and Bazerman, 2006; Guiral, Rodgers, Ruiz and Gonzalo, 2010), the apparent lack of focus on the root causes of conflict of interests at the level of an individual professional (Bazerman and Gino, 2012; Moore, Tanlu and Bazerman, 2010; Ayal and Gino, 2012) and the lack of focus on psychological and cognitive barriers that an individual professional experiences in the face of conflicting interests (Nelson, 2004; Moore, Tanlu and Bazerman, 2010; Bazerman and Gino, 2012).

The aforementioned reasons for the limited effectiveness of existing measures and regulations highlight their restricted usefulness towards managing conflict of interests. Thus, one of the main reasons for the prevalence of accounting professionals' deviant decision-making behaviour is believed to be the ineffectiveness of existing measures and regulations for dealing with accounting professionals' actual objectivity and state of mind, i.e. their *independence in fact*.

2.2.3 So, What Should Be Done?

A comprehensive review of the literature regarding the critique of measures and regulations for managing conflict of interests provides that the problem of accounting professionals' deviant decision-making behaviour is still largely pervasive. The weaknesses in existing measures and regulations and their limited effectiveness for managing conflict of interests are the core causes of the prevalence of said problem. It can, therefore, be concluded that the accounting professionals' deviant decision-making is largely pervasive due to the ineffective management of conflict of interests in professional accounting firms.

Particularly, the main focus of existing measures on the professionals' *independence in appearance* (Nelson, 2004; Moore, Tanlu and Bazerman, 2010; Bazerman and Gino, 2012; Clements, Neill and Stovall, 2012) and minimal focus on their *independence in fact* (Bazerman and Banaji, 2004; Cain, Loewenstein and Moore, 2005; Moore, Tetlock, Tanlu and Bazerman, 2006; Guiral, Rodgers, Ruiz and Gonzalo, 2010; Moore, Tanlu and Bazerman, 2010; Ayal and

Gino, 2012) are argued to be the potential barriers to the effectiveness of accounting regulation for addressing the deviant behaviour due to conflict of interests. In order to handle these barriers, Bazerman and Gino (2012) suggest adopting behavioural ethics approach.

The aforementioned discussions set the foundation for the remainder of this chapter and provide guidance for what needs to be done for addressing the research problem driving this study. The analysis of critique suggests that one of the possible solutions to research problem could be the increased focus on accounting professionals' *independence in fact*. This, arguably, will facilitate effective management of conflict of interests in professional accounting firms (Moore, Tanlu and Bazerman, 2010; Bazerman and Gino, 2012). Accordingly, this chapter is meant to review what already has been researched regarding the research problem, with specific emphasis on analysing the literature in relation to professionals' *independence in fact*. Some scholars (e.g., Nelson, 2004; Chugh, Banaji and Bazerman, 2005; Moore, Tetlock, Tanlu and Bazerman, 2006; Moore, Tanlu and Bazerman, 2010; Ayal and Gino, 2012) suggest that the accounting professionals' *independence in fact* can be addressed by understanding the relationship between conflict of interests and deviant decision-making behaviour and by examining the role of accounting professionals' mental processes towards decision-making in the events of conflict of interests.

2.3 Conflict of interests and Deviant Decision-Making Behaviour

In the light of suggestions by various researchers (e.g., Nelson, 2004; Chugh, Banaji and Bazerman, 2005; Moore, Tetlock, Tanlu and Bazerman, 2006; Moore, Tanlu and Bazerman, 2010; Ayal and Gino, 2012), this section is meant to review the literature regarding the relationship between conflict of interests and accounting professionals' deviant decision-making. With particular reference to facilitating effective management of conflict of interests, the purpose is to focus on increased understanding of the accounting professionals' *independence in fact*.

Extant literature regarding the relationship between conflict of interests and deviant decision-making behaviour has focused on the professionals' independence and the dysfunctional consequences of impaired independence (For reviews, see Bedard, Deis, Curtis and Jenkins, 2008; Tepalagul and Lin, 2014; Church et al., 2015). Since conflict of interests is an abstract concept, it has been conceptualised in the extant literature using different sources of conflicting interests and mostly as a situation representing a lack of professionals' independence.

Similarly, deviant decision-making behaviour has been represented through a wide range of dysfunctional practices (such as falsification of working papers, inadequate paperwork, prioritisation of client satisfaction than the professional standards, maximisation of profit at the cost of audit quality and issuance of inappropriate audit opinion etc.) With particular reference to the research problem, the following four main strands of research relate conflict of interests originating from different sources to the accounting professionals' decision-making behaviour;

- i. The impact of 'commercialism-induced' conflict of interests on accounting professionals' deviant decision-making behaviour.
- ii. The impact of 'structural arrangements-induced' conflict of interests on accounting professionals' deviant decision-making behaviour.
- iii. The impact of 'workplace pressures-induced' conflict of interests on accounting professionals' deviant decision-making behaviour.
- iv. The impact of 'misaligned rewards-induced' conflict of interests on accounting professionals' deviant decision-making behaviour.

The following subsections review the literature that relates conflict of interests originating from the sources, cited above, to the accounting professionals' decision-making behaviour.

2.3.1 Commercialism-induced Conflict of interests

Commercialism-induced conflict of interests denotes the origin of conflict of interests due to the shift in accounting firms from professionalism to commercialism (Pierce, 2007). Research in this domain examines the impact of 'conflict of interests due to commercialism' on the accounting professionals' deviant decision-making behaviour. According to Boyd (2004), commercialism in accounting firms has its roots in the practice of opinion shopping⁵. The author discussed that as the organisations resorted to opinion-shop for audit services, accounting firms realised that the controllable variable at their disposal was the price – they had to offer audit services at a cheap price. In order to cut the cost of auditing, firms had two main option, i.e. to reduce the labour hours devoted to audit and to reduce the cost per labour hour. Accordingly, the accounting firms reduced their costs by dedicating highly limited hours

⁵ Opinion shopping is the companies' practice of searching for an external auditor who would provide unqualified opinion. The 'unqualified opinion' is an auditor's judgement that the company's financial records are true and fair (Pierce, 2007).

to audit and non-audit services and by hiring the low-cost auditors (such as articling students or junior auditors) – in both the cases, the audit-quality deteriorated. Such commercial pressures gave rise to the conflict of interests for accounting professionals that induced them to deviate from the primary interest of serving in the best interest of the public.

In his review of ethics and accounting firms, Pierce (2007) discussed that the increasing commercial pressures, such as due to the corporate merger movement of the 1960s, gave rise to the dysfunctional consequences for accounting firms. Such dysfunctional consequences included the prioritisation of client satisfaction and maximisation of profit. Some researchers (Boyd, 2004; McMillan, 2004; Reinstein and McMillan, 2004; Young, 2005; Pierce, 2007) agree that the corporate merger movement had put stress on the ability of accounting firms to retain professional integrity. Merging corporations retained one of the two previous auditors and resorted to opinion shopping. The accounting firms, resultantly, became commercialised and accounting professionals were perceived to be serving the clients' interests.

The merger activity within the accounting profession itself, in the 1970s and 1980s (such as the merger of big eight to form the then big five) also distorted their professionalism. The objective of such merger, according to Boyd (2004), was to achieve bigger revenues, the concentration of power and ability to push the competition out from consultancy and management advisory enterprises. Thus, the firms started organising them in business-like structures, with client satisfaction as their priority (Stumpf, Doh and Clark, 2002; Boyd, 2004).

Further to the aforementioned devastating impacts of commercialism, several studies (e.g., Willett and Page, 1996; Brown, 2002; Boyd, 2004; Pierce and Sweeney, 2004) asserted that commercial pressures also deteriorated the audit quality. These studies indicate that the shift from professionalism to commercialism made accounting professionals deviate from their professional duties, which also implies deviation from compliant behaviour or from serving in the best interest of the public. Some researchers (Beattie, Brandt and Fearnley, 1999; Beattie and Fearnley, 2002; Stumpf, Doh and Clark, 2002; Boyd, 2004; McMillan, 2004; Reinstein and McMillan, 2004; Young, 2005; Pierce, 2007) posited that commercial pressures led accounting firms to provide non-audit services, which created conflict of interests for the professionals and resulted in their deviant behaviour.

Therefore, commercialism is considered one of the causes of deviation from professionalism and it has been evidenced to lead to many dysfunctional consequences. Overall, the literature

suggests that commercialism-induced conflict of interests lead to the accounting professionals' deviant decision-making behaviour that is characterised by dysfunctional practices, including the prioritisation of client satisfaction, the maximisation of the fee, the deterioration in audit quality and the deviation from professional duties. However, there still is a lack of empirical evidence to form definite conclusions about the relationship between conflict of interests and accounting professionals' deviant decision-making behaviour – this is also because commercialism represents just one of the sources of conflict of interests.

2.3.2 Structural Arrangements-induced Conflict of interests

Conflict of interests induced by structural arrangements denotes the origin of conflict of interests due to the accounting firms' various organisational features such as long-term relationships with clients, employment of former auditors by the clients, provision of non-audit services and hiring and firing of accounting professionals by the clients (Boyd, 2004). Research in this domain examines the impact of 'conflict of interests due to structural arrangements' on the accounting professionals' deviant decision-making behaviour.

2.3.2.1 Conflict of interests due to Client-Firm Relation

The close relationship of accounting firms with the clients' management and their keenness to please the clients for ensuring a regular stream of income are believed to be the important reasons for impairment of professionals' independence in relation to the conflict of interests (Arel, Brody and Pany, 2006). The *Code of Ethics for Professional Accountants* (IESBA, 2015) provides that due to a long-term relationship between the client and the firm, various threats such as self-interest threats (e.g., due to financial or other personal interest) and familiarity threats (e.g., firm's preference to serve clients due to close ties with them) are likely to arise.

The archival and behavioural studies have focused on the long tenure of the client-firm relationship as a potential source of conflict of interests and have examined their impact on accounting professionals' deviant decision-making behaviour. Most of these studies have used deterioration in audit quality as a proxy for deviant behaviour. Audit quality, in turn, has been assessed with the help of the appropriateness or inappropriateness of the professionals' decisions and judgements towards different concerns such as proposed audit adjustments (Hatfield, Jackson and Vandervelde, 2011), types of audit opinions (Geiger and Raghunandan, 2002) and decisions on the purchased goodwill (Favere-Marchesi and Emby, 2005) etc.

In order to infer the effects of conflict of interests, archival approaches analyse data on the professionals' previous decisions (Nelson, 2004). In this regard, Mautz and Sharaf (1961) found that the tenure of the auditor-client relationship is positively associated with conflict of interests and the subsequent reduction in audit quality. Similarly, some others (e.g., Deis and Giroux, 1992; Bedard and Johnstone, 2010; Daugherty, Dickins, Hatfield and Higgs, 2012) also argue that the longer audit tenure leads to poor audit quality and they suggested a rotation of the engagement partner. On the contrary, Geiger and Raghunandan (2002) examined the association between the type of issued audit opinion and the length of audit tenure – they found more audit reporting failures in the early years of client-firm relationship and suggested that partners' rotation might not be beneficial. Similarly, Johnson, Khurana and Reynolds (2002) and Bamber and Iyer (2007) also agreed that the longer the auditor's tenure, the better the financial reporting. Overall, archival studies remain inconclusive of the association of tenure of the client-firm relationship with that of the professionals' deviant behaviour.

Several behavioural studies have conducted experiments to examine the decision-making behaviour of accounting professionals (Nelson, 2004). For instance, Dopuch, King and Schwartz (2001) used experimental methods to examine the extent to which auditor independence is affected in different regimes of rotation and retention of accounting firms. They found that the auditors tend to be more biased in favour of the clients during the regimes that do not require rotation. Similarly, Favere-Marchesi and Emby (2005) reported that compared to new partners, the continuing partners are less likely to conclude that the purchased goodwill might be impaired. Moreover, Hatfield, Jackson and Vandervelde (2011) examined the impact of prior audit involvement and client pressure on the proposed audit adjustments and concluded that partners' rotation had positive effects on audit quality. Overall, behavioural research suggests that longer tenure of the client-firm relationship leads to poor audit quality.

Although the literature remains inconclusive of the association between the tenure of client-firm relationship and the audit quality, both the archival and behavioural research indicate that the possibility of conflict of interests in such situations is likely to threaten audit quality. However, there still is a lack of empirical evidence to form definite conclusions about the relationship between conflict of interests and the accounting professionals' deviant decision-making behaviour.

2.3.2.2 Conflict of interests due to Employment Opportunities with Clients

Prior to the collapse of Enron in 2001, it was a common practice of clients to hire the former accounting professionals. The main reasons for clients to do so were, arguably, to benefit from the professionals' knowledge of clients' business, their understanding of the financial reporting process and their awareness of the clients' information systems (Beasley, Carcello and Hermanson, 2000). However, the employment of former members is believed to be the cause of impaired independence of the professional. Thus, the employment opportunities with clients might give rise to conflict of interests with the primary interest of the profession on one hand (i.e. serving in the best interest of public) and the secondary interest (i.e. serving in the best interest of the client) on the other. The practice of employing former accounting professionals was discouraged with the implementation of SOX in 2002 that prohibited clients from hiring their former auditors for up to a period of one year after an audit, termed the *cooling off period*. Nonetheless, employment with clients after cooling off period is still an issue of concern (Ahmad, 2015; Wickramasinghe, Hamid, Pirzada and Ahmad, 2015).

Some survey-based and archival studies have focused on employment opportunities with clients as a potential source of conflict of interests and have examined their impact on accounting professionals' deviant decision-making. Several earlier surveys-based studies (Imhoff, 1978; Firth, 1980, Koh and Mahathevan, 1993; Fearnley, Brandt and Beattie, 2002; Geiger, North and O'Connell, 2005; Lennox, 2005) suggest that employment opportunities with clients might induce the accounting professionals to serve the client's interests due to their impaired independence. This indicates a possible positive relationship between 'conflict of interests due to the employment opportunities with clients' and the professionals' deviant decision-making behaviour.

Some other studies (Behn, Carcello, Hermanson and Hermanson, 1999; Beasley, Carcello, Hermanson and Lapides, 2000; Menon and Williams, 2004) agree that employing the former professionals is likely to result in the loss of independence and scepticism. Such employment opportunities might induce the professionals to prioritise clients' interests. However, Geiger, North and O'Connell (2005) did not find evidence for relationship between the hiring of former accounting professionals and the aggressive financial reporting. Overall, archival studies about the relationship between 'conflict of interests due to employment opportunities with clients' and the professionals' deviant decision-making remain inconclusive.

The *International Federation of Accountants* (IFAC) provides that hiring of former professional accountants gives rise to the self-interest and familiarity threats. These threats

imply the presence of conflict of interests that gives rise to a deviation from serving the primary interest of the profession (Ahmad, 2015; Wickramasinghe, Hamid, Pirzada and Ahmad, 2015). However, there is a lack of empirical evidence to form definite conclusions about the relationship between conflict of interests and the accounting professionals' deviant decision-making behaviour. Importantly, the extant literature (Johnson and Hansen, 2011; Ahmad, 2015, Wickramasinghe, Hamid, Pirzada and Ahmad, 2015) draws attention towards the *Code of Ethics for Professional Accountants* (IESBA, 2015), for addressing the issues surrounding conflict of interests and the professionals' independence.

2.3.2.3 Conflict of interests due to Provision of Non-Audit Services

The provision of non-audit services is believed to result in an impaired independence of the professionals, due to the possibility of conflict of interests in such a situation. Based on the belief that provision of non-audit services harms the actual or perceived quality of an audit, the current rules under SOX do not allow accounting firms to offer non-audit services. However, under certain circumstances, the accounting firms are permitted to provide some non-audit services and due to which conflict of interests arises (Bedard, Deis, Curtis and Jenkins, 2008; Tepalagul and Lin, 2014; Church et al., 2015). In relation to this study's research problem, the extant research has focused on non-audit services as a potential source of conflict of interests and has also examined their impact on accounting professionals' deviant behaviour. Most of these studies have used deterioration in audit quality as a proxy for the professionals' deviant behaviour. Audit quality, in turn, has been assessed with the help of different indicators such as the types of issued audit opinion, objective versus subjective decision-making and the prioritisation of public interest versus the clients' interest etc.

Frankel, Johnson and Nelson (2002) and Ruddock, Taylor and Taylor (2004) agreed that the higher fee for non-audit services leads to a conflict of interests and induces accounting firms to provide non-audit services. However, some researchers (Craswell, Stokes and Laughton, 2002; Geiger and Rama, 2003; Skaife, LaFond and Mayhew, 2003; Defond and Francis, 2005; Callaghan, Parkash and Singhal, 2009) do not support significant association between the higher non-audit fee and the quality of audit opinions. Some others (Sharma and Sidhu, 2001; Kinney, Palmrose and Scholz, 2004) support this relationship in certain circumstances. According to Canning and Gwilliam (1999), provision of non-audit services leads to subjectivity, lack of independence and the prioritisation of clients' interests. Likewise, Bazerman and Gino, (2012) suggested that provision of non-audit services leads to the biased

decision-making.

Importantly, Beattie and Fearnley (2002) argued that provision of non-audit services gives rise to the self-interest threats (e.g., due to financial interest), self-review threats (e.g., when professionals have to review their own work), advocacy threats (e.g., when professionals promote client's position), familiarity threats (e.g., due to close client-firm relations) and intimidation threats (e.g., due to the actual or perceived pressures such as when professionals feel pressurised to prioritise their clients' interests). Again, this draws attention towards the *Code of Ethics for Professional Accountants* that adopts *threats and safeguards approach*⁶ (Johnson and Hansen, 2011; IESBA, 2015) to address the issues surrounding conflict of interests and the professionals' independence.

Overall, the relationship between conflict of interests due to provision of non-audit services and the professionals' deviant decision-making behaviour remain inconclusive. There is a lack of empirical evidence to form definite conclusions about the relationship between conflict of interests and the accounting professionals deviant decision-making behaviour – this is also because providing the non-audit services represents just one of the sources of conflict of interests. Notably, the extant literature (e.g., Beattie and Fearnley, 2002; Johnson and Hansen, 2011) also supports the adoption of threats and safeguards approach, for addressing the conflict of interests in professional accounting firms.

2.3.2.4 Conflict of interests due to Hiring and Firing of Firms by Clients

The client's audit committee is responsible to hire and fire the professional accounting firms. The audit committee, supposedly, works independently of the client's management. In practice, however, the management exerts considerable influence on the hiring and firing decisions. Thus, the committee's decision to hire and fire the professionals is largely affected by the management's preferences (Lennox, 2003). The *Code of Ethics for Professional Accountants* (IESBA, 2015) provides that in situations where clients hold the power to hire and fire firms, various threats to compliance with fundamental principles of professional ethics are likely to arise. The main threats are the self-interest (e.g., the firms' priority to remain hired), advocacy threats (e.g., when professionals promote client's position) and intimidation threats (e.g., due

⁶ The threats and safeguards approach involves identification of possible threats to the fundamental principles of professional ethics (i.e. integrity, objectivity, professional competence and due care, confidentiality and the professional behaviour) and then applying appropriate safeguards to counter the effects of such threats (IESBA, 2015).

to the actual or perceived pressures). The hiring and firing of accounting professionals by the clients is believed to create conflict of interests, that tends to impair the professionals' independence (Abdel-Khalik, 2002; Bazerman, Loewenstein and Moore, 2002; Mayhew and Pike, 2004; O'Connor, 2004; O'Connor, 2006; Ronen, 2010; Bae, Kallapur and Rho, 2013).

The extant research focuses on the hiring and firing of accounting professionals by the clients as a potential source of conflict of interests and examines its impact on the professionals' deviant behaviour. In this regard, most of the studies have discussed conflict of interests in relation to the independence of accounting professionals. Using the issuance of negative audit opinion as a proxy for professionals' decision-making behaviour, Moore, Tetlock, Tanlu and Bazerman (2006) found that the accounting firms have incentives to avoid the provision of a negative audit opinion about the clients who hire them. This implies that conflict of interests due to hiring and firing by clients leads to deviant decision-making behaviour. Similarly, other studies (e.g., Levinthal and Fichman, 1988; Seabright, Levinthal and Fichman, 1992; Bazerman, Morgan and Loewenstein, 1997; Ronen, 2010; Bae, Kallapur and Rho, 2013) also held that hiring and firing by the clients tend to impair the professionals' independence. In such situations, accounting professionals are perceived to be serving the interests of their clients.

Overall, extant literature agrees that conflict of interests due to the clients' hiring and firing of the firms lead to deviant decision-making behaviour. Therefore, the literature suggests that since clients have the power to hire and fire accounting firms, they are likely to have considerable influence on how the services are delivered. There, however, is a lack of empirical evidence to form definite conclusions about the relationship between conflict of interests and the accounting professionals' deviant decision-making behaviour.

2.3.3 Workplace Pressures-induced Conflict of interests

Workplace pressures-induced conflict of interests denotes the origin of conflict of interests due to various workplace pressures such as the commercial pressures (Pierce, 2007), time pressure (Sikka, 2004), obedience pressure (Davis, DeZoort and Kopp, 2006) and social pressure (Bazerman, Morgan and Loewenstein, 1997). Research in this domain examines the impact of 'conflict of interests due to various workplace pressures' on the accounting professionals' deviant behaviour. Researchers have used different proxies for deviant behaviour such as incomplete testing of samples and falsification of working papers (Kelley and Margheim, 1990; Malone and Roberts, 1996; Willett and Page, 1996; Sikka, 2004), premature signing-off on

audit assignments (Otley and Pierce, 1996), inadequate paperwork (Carcello, Hermanson and McGrath, 1992), under-reporting the audit hours (Dirsmith and Covalleski, 1985; McNair, 1991; Anderson-Gough, Grey and Robson, 2001) and opinion shopping (Boyd, 2004).

Pierce (2007) provided that conflict of interests due to workplace pressures lead to a wide range of dysfunctional practices that threaten the quality of audits and encourage the provision of non-audit services in the best interest of the clients. In both the instances, the primary interest of the accounting profession is believed to be compromised. Several researchers (Willett and Page, 1996; Brown, 2002; Boyd, 2004; Pierce and Sweeney, 2004; Pierce, 2007) associated commercial pressures faced by accounting firms to the deteriorated audit quality. Time pressure and the time budgets (McNair, 1991; Malone and Roberts, 1996; Willett and Page, 1996; Anderson-Gough, Grey and Robson, 2001; Sikka, 2004) and the obedience pressure (Davis, DeZoort and Kopp, 2006) are also believed to result in dysfunctional behaviour. The common theme underlying these studies is that various workplace pressures give rise to the conflict of interests that lead to dysfunctional practices.

Moreover, the accounting professionals form close relationships with their clients and, thus, face immediate social pressures to comply with their wishes. In such situations, serving the client's interests becomes more compelling than the future probabilistic disincentives (Bazerman, Morgan and Loewenstein, 1997). This suggests that it is, basically, the pressures underlying firm-client relations that tend to affect decision-making behaviour of the professionals. Several studies (Moore, Loewenstein, Tanlu and Bazerman, 2003; Moore and Loewenstein, 2004; Beattie, Fearnley and Brandt, 2005; Moore, Cain, Loewenstein and Bazerman, 2005; Moore, Tetlock, Tanlu and Bazerman, 2006; Moore, Tanlu and Bazerman, 2010) and the *Audit Quality Inspection Annual Reports* from 2011 - 2015 (Financial Reporting Council, 2016) reveal that various workplace pressures serve as the sources of secondary interests for the professionals. These secondary interests interfere with the primary interest of accounting profession and, resultantly, give rise to the conflict of interests. The extant research on individual decision-maker as a unit of analysis (e.g., Gonzalez, Dana, Koshino and Just, 2005; Jepma and López-Solà, 2014) suggests that workplace pressures have their roots in fear of loss.

Overall, there is an evidence of a positive relationship between conflict of interests due to various workplace pressures and the professionals' deviant decision-making behaviour. Importantly, the literature also suggests that the pressures underlying structural arrangements

(such as the firm-client relation) act as a disincentive to compliant decision-making behaviour. Such workplace pressures have their roots in fear of loss and give rise to a conflict of interests for accounting professionals – there is a need to empirically investigate the effect of conflict of interests on decision-making behaviour in a professional accounting environment.

2.3.4 Misaligned Rewards-induced Conflict of interests

Misaligned rewards-induced conflict of interests denotes the origin of conflicting interests due to ‘the reward systems that are misaligned with the primary interest of accounting profession’. According to Amali (2010), the main motivators used by the firms for encouraging desired behaviour include goal setting, acknowledgement of employees’ achievements, delegation of authority and the monetary rewards. Research in this domain examines the impact of ‘conflict of interests due to various reward structures’ on the accounting professionals’ deviant decision-making behaviour characterised, mainly, by the unethical behaviour.

Pierce (2007) reported that a number of conflicts of interests in accounting firms originated within their marketing activities that were encouraged by the internal reward systems and the cultural norms of the firms. Likewise, Goto (2004) investigated the association of reward structures with ethical behaviour and found that the right reward structures were positively related to the ethical behaviour and negatively to the unethical behaviour. Similarly, Wyatt (2004) asserts that the firms’ internal culture of greed gives rise to the behavioural changes and that no legislation can solve the problem unless firms themselves make efforts. In this regard, Schminke, Arnaud and Kuenzi (2007) argued that it is necessary to encourage an environment where ethical behaviour is rewarded. Thus, in situations involving a conflict of interests, the motivational and control structures are of immense importance in aligning the goals of accounting professionals with that of the primary interest of the profession – this, arguably, will encourage the compliant decision-making behaviour.

Fearnley, Hines, McBride and Brandt (2002) and Green and Zimiles (2013) provided that most of the conflict of interests in relation to reward systems involves financial motives, but may also involve advancement and recognition. Arguably, even if an accounting firm has a good reputation and high standards, individuals within the firm may feel pressurised to engage in behaviour that is not in accordance with the professional ethical standards. Amali (2010) provided that the immediate causes of unethical (or deviant) behaviours include incorrect implementation of motivators, simultaneous use of motivators and the absence of appropriate

controls in the workplace. This suggests that the misaligned incentives (i.e. incentives misaligned with primary interest of the accounting profession) give rise to the conflict of interests that increase the instances of unethical or deviant decision-making. Moreover, the misaligned incentives underlying reward systems act as a disincentive to compliant decision-making behaviour.

With particular reference to the role of misaligned incentives as a facilitator of deviant decision-making, several studies (Moore, Loewenstein, Tanlu and Bazerman, 2003; Moore and Loewenstein, 2004; Beattie, Fearnley and Brandt, 2005; Moore, Cain, Loewenstein and Bazerman, 2005; Moore, Tetlock, Tanlu and Bazerman, 2006; Moore, Tanlu and Bazerman, 2010) and the *Audit Quality Inspection Annual Reports* from 2011 - 2015 (Financial Reporting Council, 2016) reveal that misaligned incentives serve as the sources of secondary interests for the professionals. These secondary interests interfere with the primary interest of the profession and give rise to the conflict of interests. Extant research on individual decision-maker as a unit of analysis (e.g., Gonzalez, Dana, Koshino and Just, 2005; Jepma and López-Solà, 2014) suggests that the accounting professionals would respond differently to what they deem rewarding and to what they consider fearsome, i.e. they would react differently depending on whether the misaligned incentives are rooted in the temptation for gain or in fear of loss – the *framing effect*.

Overall, the literature provides evidence that the conflict of interests due to incorrectly implemented rewards systems leads to the accounting professionals' deviant decision-making behaviour. Nonetheless, more empirical evidence is still needed to form definite conclusions about the relationship between conflict of interests and the accounting professionals' deviant decision-making behaviour. Furthermore, literature also reveals that the reward systems based on misaligned incentives with roots in temptation for gain and/or those with roots in fear of loss give rise to a conflict of interests for accounting professionals. With particular reference to the misaligned incentives, there is a need to empirically investigate the effect of conflict of interests on decision-making behaviour in professional accounting firms.

2.3.5 Conflict of interests and Deviant Decision-Making: Overall Analysis

A critical analysis of the literature asserts that, overall, there is a lack of empirical evidence for the relationship between conflict of interests and the accounting professionals' deviant decision-making behaviour. The focus of extant literature on the four broad sources of conflict

of interests (i.e. commercialism, structural arrangements, workplace pressures and the misaligned rewards) does not provide sufficient insight into the root causes underlying these sources. The said root causes, according to the reviewed literature, are the workplace pressures with roots in fear of loss, the misaligned incentives with roots in temptation for gain and the misaligned incentives with roots in fear of loss. Interestingly, commercialism and the structural arrangements are also argued to be underpinned by the workplace pressures and the misaligned incentives. Moreover, the *Code of Ethics for Professional Accountants* provides that the structural arrangements give rise to five main threats (i.e. self-interest, intimidation, self-review, familiarity and the advocacy threats) to fundamental principles of professional ethics.

The aforementioned revelations indicate a logical connection among the four broad sources of conflict of interests (i.e. commercialism, structural arrangements, workplace pressures and the misaligned rewards), the root causes underlying the sources of conflicting interests (i.e. the workplace pressures with roots in fear of loss, the misaligned incentives with roots in temptation for gain and the misaligned incentives with roots in fear of loss) and the threats emanating from the structural arrangements (i.e. self-interest, intimidation, self-review, familiarity and the advocacy threats). In this regard, an in-depth insight into the *Code of Ethics for Professional Accountants* (IESBA, 2015) and the relevant literature (e.g., Beattie and Fearnley, 2002; Juhari, Mohd-Sanusi, Rahman and Omar, 2013; Ahmad, 2015) suggest that the root causes underlying the self-interest, self-review, advocacy, familiarity and intimidation threats are the misaligned incentives with roots in temptation for gain, that with roots in fear of loss and the workplace pressures with roots in fear of loss. Therefore, conflict of interests originates due to the threats to compliance with the fundamental principles of professional ethics – these threats serve as the sources of secondary interest and are underpinned by the misaligned incentives with roots in temptation for gain, the misaligned incentives with roots in fear of loss and the workplace pressures with roots in fear of loss.

As highlighted in the review, there is a need for more empirical evidence for the relationship between conflict of interests and the accounting professionals' deviant decision-making. In order to do so, the coherent operationalisation of conflict of interests is required since the extant literature is devoid of the much-needed focus on the root causes underlying conflict of interests. In this regard, application of the *threats and safeguards approach* has been suggested for addressing the conflict of interests (Johnson and Hansen, 2011; IESBA, 2015). Remarkably, this approach is of direct relevance to facilitate effective management of conflict of interests

since it follows a risk-based approach (Johnson and Hansen, 2011; Ahmad, 2015). Therefore, conflicts of interests due to various threats need to be empirically examined for their possible relationship with the accounting professionals' deviant decision-making behaviour. It is expected that this approach will provide a better focus on the professionals' *independence in fact* (Bazerman and Banaji, 2004; Cain, Loewenstein and Moore, 2005; Guiral, Rodgers, Ruiz and Gonzalo, 2010; Moore, Tanlu and Bazerman, 2010; Ayala and Gino, 2012).

2.4 Role of Mental Processes towards Decision-Making Behaviour

This section is meant to review the literature regarding the role of accounting professionals' mental processes towards decision-making behaviour in the events of conflict of interests. With particular reference to facilitating effective management of conflict of interests, the purpose is to focus on increased understanding of the accounting professionals' *independence in fact*, so as to develop behavioural interventions for strengthening it. It is worth mentioning that the examination of mental processes is an area of cognitive psychology that is aimed at understanding the cognitive or information processing mechanisms from a psychological perspective (Cherry, 2016). As such, the distinction between psychological and cognitive processes tends to fade away within the domain of cognitive psychology – this is because, all the cognitive processes are underpinned by the psychological explanations (Newman and Just, 2005; Lieberman, 2007).

Extant literature regarding the role of accounting professionals' mental processes towards decision-making behaviour is focused on the psychological and cognitive effects of conflict of interests on professional's behaviour (e.g., Moore, Tetlock, Tanlu and Bazerman, 2006; Guiral, Rodgers, Ruiz and Gonzalo, 2010) and the conscious and unconscious aspects of decision-making in situations involving conflict of interests (e.g., Cain, Loewenstein and Moore, 2005; Chugh, Banaji and Bazerman, 2005). Since conflict of interests is an abstract concept, it has commonly been conceptualised in the extant literature as a situation representing a lack of professional's independence. Moreover, deviant decision-making has mostly been conceptualised as a behaviour that is not in conformity with the required professional ethical standards.

2.4.1 Psychological and Cognitive Effects of Conflict of interests

Regarding the cognitive psychology of conflict of interests, Bazerman, Loewenstein and Moore

(2002) provided that various perceptual biases, including the selective perception bias, escalation of commitment bias, plausible deniability and discounting of information bias act as the barriers to compliant decision-making. In this regard, Moore, Tetlock, Tanlu and Bazerman (2006) used moral seduction theory to emphasise the psychological effects of conflict of interests. They explained why accounting professionals are unaware of how morally compromised they have become due to conflict of interests. According to them, potential threats to the independence of auditors are posed by three structural features, i.e. hiring and firing of auditors by clients, auditors taking jobs with clients and simultaneous provision of the audit and non-audit services. They asserted that in the presence of these structural arrangements, auditors become morally seduced to serving their self-interests, due to some psychological barriers, including unconscious bias due to conflict of interests, selective perception, the barriers posed by workplace pressures and the barriers imposed by partners who prefer maximising the billable hours. Notably, these studies affirm that the structural arrangements affect decision-making behaviour through the agency of professionals' mental processes.

Likewise, Chugh, Banaji and Bazerman (2005) drew attention towards the impact of psychological barriers on ethical decisions involving conflict of interests. The authors asserted that ethical decisions are biased by the psychological barriers, including decision-makers' stubborn view that since they are ethical, deserving and competent, they are not susceptible to conflict of interests. Such barriers increase the risk that an otherwise visible conflict of interests will not be recognised by that person. Closely related are the studies examining decision-making in the face of ethical dilemmas (Foot, 1967; Thomson, 1986; Unger, 1996; Greene et al., 2001; Casebeer and Churchland, 2003; Green, Ha and Bullock, 2010) – the recurring theme of these studies is that the decision outcome in any given situation is affected by the decision-maker's subjective experience of given dilemmas or the conflict of interests' situations. These studies have important implications for the need to empirically investigate the role of mental barriers on an accounting professional's decision-making behaviour.

In order to examine the role of perceptions towards the accounting professionals' decision-making in the face of conflict of interests, Guiral, Rodgers, Ruiz and Gonzalo (2010) conducted an experimental study with 80 experienced accounting professionals. They focused on the cognitive psychology of conflict of interests and developed a cognitive approach by connecting throughput model to the moral seduction theory. In agreement with the relevant ethical

decision-making research (e.g., Rodgers and Gago, 2001; 2006; Rodgers, 2006; 2009), they affirmed that decision-making in situations involving conflict of interests is an outcome of the interaction of information, perception, judgement and the decision choice. They found that conflict of interests affects judgement and decision-making through the agency of involuntary bias, including self-fulfilling prophecy effect, perceived litigation risk exposure and the perception of whistleblowing function. However, they pointed out their weak operationalisation of conflict of interests and suggested the need for more research to understand the cognitive effects of conflict of interests.

Highlighting the significance of employees' perceptions regarding ethical codes of conduct, some researchers (Ponemon, 1992; Windsor and Ashkanasy, 1995; Shafer, Morris and Ketchand, 2001; Jones, Massey and Thorne, 2003) assert that the employees form their perceptions of ethical climate and of how peers would do in a similar situation. Likewise, the role of ethical predispositions as the sources of bias in decision-making (Reiter, 1996; Bay, 2002; McPhail, 2006) and cognitive moral development (Greene et al., 2001, 2004; Casebeer and Churchland, 2003; Ashkanasy, Windsor and Trevino; 2006) have also received attention. For instance, Ashkanasy, Windsor and Trevino (2006) found that the managers with low cognitive moral development who perceived that their organisations overlooked unethical behaviour made less ethical decisions. Most of the research pertains to general organisations and there is a need for empirical evidence regarding the role of cognitive processes, with particular reference to decision-making behaviour in a professional accounting environment.

2.4.2 Conscious and Unconscious Aspects of Decision-Making

The studies in this domain revolve around the idea of limitations on the conscious mind and the power of the unconscious mind, both of which are central to making ethical decisions involving conflict of interests. In this regard, Schneider and Shiffrin (1977) proposed a distinction between the controlled (conscious) and automatic (unconscious) processes in the brain. Where controlled processes represent the conscious deliberations (Greene et al., 2001; Casebeer and Churchland, 2003), automatic processes in the brain are much faster than conscious deliberations and occur with little or no awareness (Bargh, Chaiken, Raymond and Hymes, 1996; Bargh and Chartr, 1999). The distinction between conscious and unconscious processes has been given different labels, i.e. rational and experiential systems (Kirkpatrick and Epstein, 1992), type I and type II processes (Kahneman and Frederick, 2002) and reflective and reflexive (Lieberman, 2003). These studies imply that decision-making in the situations

involving conflict of interests is an outcome of both the conscious and the unconscious mental processes – there, however, is a lack of empirical evidence in this regard.

Furthermore, differentiation between the controlled cognitive and the automatic affective processes prevails in the psychology (e.g., Zajonc, 1980; Zajonc, 1984; Zajonc and McIntosh, 1992) and the neuroscience literature (e.g., Panksepp, 1998; LeDoux, 1999; Wagar and Thagard, 2004; Damasio, 2006). There is a growing evidence that behaviour is affected by both the controlled cognitive processes (Wolford, Miller and Gazzaniga, 2000) and the automatic affective processes (Schneider and Shiffrin, 1977; Bargh, Chaiken, Raymond and Hymes, 1996; Bargh and Chartr, 1999). Moll et al. (2005) found that ethical decision-making draws on the integration of the processes in unconscious as well as the conscious regions of the brain. In this regard, Chugh, Banaji and Bazerman (2005) explained the phenomenon of *bounded ethicality* which implies that the ethical decisions involving conflict of interests are likely to introduce bounds on conscious thinking and the biases in unconscious thinking. There, however, is a need for more research in this regard.

Overall, the provisions of extant literature have important implications to explain why in the events of conflict of interests, the deviations from compliant behaviour might occur even undesirably. Particularly, there is a need to examine the role of accounting professionals' intentional and unintentional cognitive processes and also the role of biases towards their decision-making behaviour in situations involving conflict of interests.

2.4.3 Role of Mental Processes towards Decision-Making: Overall Analysis

A critical review of the literature regarding the role of accounting professionals' mental processes towards decision-making behaviour in the events of conflict of interests highlighted two main concerns. First, there is a significant lack of empirical evidence for the role of accounting professionals' cognitive processes towards decision-making in the events of conflict of interests. Secondly, there also is a lack of empirical evidence for the biasing role of conflict of interests towards accounting professionals' decision-making behaviour. Particularly, the cognitive processes and biases need to be viewed in terms of their intentional (conscious) and unintentional (unconscious) influences on the professionals' decision-making behaviour. Arguably, empirical evidence for the role of professionals' mental processes towards decision-making behaviour will provide a better focus on their *independence in fact* – this is what the proponents (e.g., Bazerman and Banaji, 2004; Cain, Loewenstein and Moore,

2005; Guiral, Rodgers, Ruiz and Gonzalo, 2010) suggest for addressing the problem of deviant decision-making behaviour in professional accounting firms.

Although the existing professional accounting literature does not provide clear guidance on the specific types of cognitive processes that should be examined, it does suggest the need to specifically focus on the professionals' perceptual biases. It further suggests that the conflict of interests affects decision-making behaviour by giving rise to the interrelated cognitive processes (see Wagar and Thagard, 2004). Furthermore, the extant literature also guides towards the potential theories that can be used to understand the role of mental processes. The Throughput model (Rodgers and Gago, 2001; 2006; Rodgers, 2006; 2009; Guiral, Rodgers, Ruiz and Gonzalo, 2010), the moral seduction theory (Moore, Tetlock, Tanlu and Bazerman, 2006) and their combination (Guiral, Rodgers, Ruiz and Gonzalo, 2010) have been employed in this regard. While throughout model seems relevant, the focus of moral seduction theory is more on the psychological explanations of mental processes – arguably, its close cognitive counterpart, i.e. social cognitive theory (Bandura, 2006) seems quite promising for examining the role of cognitive effects of conflict of interests. In this regard, Bazerman and Gino (2012) strongly suggest the adoption of the behavioural ethics approach.

2.5 Gap(s) in the Literature

The research problem driving this study is the accounting professionals' deviant decision-making behaviour due to conflict of interests. Literature has been critically reviewed to determine what has already been done regarding this research problem. In this regard, some interrelated significant gaps have been identified.

Analysis of literature regarding the critique of existing measures and regulations for managing conflict of interests (Bazerman and Banaji, 2004; Cain, Loewenstein and Moore, 2005; Moore, Tetlock, Tanlu and Bazerman, 2006; Guiral, Rodgers, Ruiz and Gonzalo, 2010; Moore, Tanlu and Bazerman, 2010; Ayal and Gino, 2012) revealed the first gap, i.e. a considerable lack of research pertaining to the accounting professionals' *independence in fact*. Thus, this study intends to address their *independence in fact* by facilitating understanding of the relationship between conflict of interests and deviant decision-making behaviour and of the role of accounting professionals' mental processes towards their decision-making behaviour.

The analysis of literature regarding the relationship between conflict of interests and deviant

decision-making behaviour (e.g., Bae, Kallapur and Rho, 2012; Daugherty, Dickins, Hatfield and Higgs, 2012; Green and Zimiles, 2013; Jepma and López-Solà, 2014; Wickramasinghe, Hamid, Pirzada and Ahmad, 2015) provide that there is a lack of empirical evidence to form definite conclusions about the relationship between conflict of interests and the accounting professionals' deviant decision-making. Particularly, the conflict of interests due to various threats (to compliance with the fundamental principles of professional ethics) needs to be empirically examined for their possible relationship with the professionals' deviant decision-making behaviour. Accordingly, this study will provide empirical evidence for the relationship of 'conflict of interests due to different threats' with the accounting professionals' deviant decision-making behaviour.

The analysis of literature regarding the role of professionals' mental processes towards decision-making behaviour (e.g., Green, Ha and Bullock, 2010; Guiral, Rodgers, Ruiz and Gonzalo, 2010; Moore, Tanlu and Bazerman, 2010; Ayal and Gino, 2012; Bazerman and Gino, 2012) highlights a significant lack of empirical evidence for the role of accounting professionals' cognitive processes towards decision-making behaviour in the events of conflict of interests and also a lack of empirical evidence for biasing role of conflict of interests. Accordingly, this study will provide empirical evidence for the role of accounting professionals' cognitive processes towards decision-making behaviour in the events of conflict of interests and also for the biasing role of conflict of interests.

Thus, in relation to the professionals' *independence in fact* towards addressing their deviant decision-making behaviour due to conflict of interests, four interconnected gaps exist in the literature. First, there is a significant lack of research pertaining to the professionals' *independence in fact*. Second, there is a lack of empirical evidence for the relationship between conflict of interests and the accounting professionals' deviant decision-making behaviour. Third, there is a considerable lack of empirical evidence for the role of accounting professionals' cognitive processes towards their decision-making behaviour in the events of conflict of interests. Fourth, the biasing role of conflict of interests towards accounting professionals' decision-making behaviour needs to be empirically examined. These four gaps converge into one substantial gap, i.e. *a lack of understanding about how conflict of interests operates at the level of an individual accounting professional*, that needs to be filled-in in order to generate new knowledge for addressing the research problem. It is expected that the new knowledge will help address the accounting professionals' *independence in fact* in a better

manner, which according to Moore, Tanlu and Bazerman (2010) and Bazerman and Gino (2012) will facilitate effective management of conflict of interests in professional accounting firms.

In order to fill the above-mentioned main gap in the literature, *this study is aimed at examining the process through which conflict of interests affects accounting professionals' decision-making behaviour*. In order to serve this aim, the main objectives of this study are;

1. To examine the relationship between conflict of interests and the accounting professionals' likelihood of deviant decision-making behaviour.
2. To understand the role of accounting professionals' cognitive processes towards their decision-making behaviour in the events of conflict of interests.
3. To understand the biasing role of conflict of interests towards the accounting professionals' decision-making behaviour.

Notably, the literature does not provide a clear guidance on the specific types of cognitive processes that should be examined, it does suggest seeking guidance from various models and theories, including the throughput model of decision-making and the moral seduction theory or its close cognitive counterpart, i.e. the social cognitive theory. The theoretical framework, to be detailed in the next chapter, will specify the cognitive processes that are of particular relevance to this study's aim and objectives.

2.6 Summary

The research problem driving this study is the accounting professionals' deviant decision-making behaviour due to conflict of interests. This chapter examined what already has been said or researched about the research problem and identified the gaps in the extant literature. Accordingly, literature relevant to the critique of existing measures and regulations for managing conflict of interests in professional accounting firms, the literature informing the relationship between conflict of interests and deviant decision-making behaviour in professional accounting firms and the literature pertaining to the role of accounting professionals' mental processes towards deviant decision-making behaviour were discussed. These discussions led to the identification of gap(s) in the existing strands of research. So as to fill the gap for generating new knowledge in relation to the research problem, the corresponding

aim and objectives were also specified.

The next chapter will develop a theoretical framework to address the identified gap. Particularly, the framework will serve as a filtering tool for selecting appropriate research questions and will also set the boundaries of the work, through specification of the cognitive processes that are of particular relevance to this study.

CHAPTER 3: THEORETICAL FRAMEWORK

“A theoretical framework is a frame of reference that is a basis for observations, definitions of concepts, research designs, interpretations and generalisations, much as the frame that rests on a foundation defines the overall design of a house”

(LoBiondo-Wood and Haber, 1998, p. 141)

3.1 Introduction

This chapter is meant to develop the theoretical framework for addressing the aim and objectives of this study. It serves as a filtering tool to set the boundaries of this work, through specification of the cognitive processes that are of particular relevance to this study. The theoretical model draws on integration of the *social cognitive theory* (Bandura, 1986; 2006; 2008) with the *throughput model of decision-making* (Rodgers, 1997; Rodgers and Gago, 2001; 2006; Rodgers, 2006; 2009; Guiral, Rodgers, Ruiz and Gonzalo, 2010), that provides a cognitive approach for understanding the process through which conflict of interests affects accounting professionals’ decision-making behaviour.

The second section will introduce the social cognitive theory, followed by the throughput model of decision-making in the third section. The fourth section will discuss and justify the conceptual connections between the social cognitive theory and the throughput model. The theoretical model will be presented in the fifth section, followed by hypotheses development in the sixth section. Finally, the seventh section will summarise this chapter.

3.2 Social Cognitive Theory

The social cognitive theory (Bandura, 1986) explains how an individual acquires and maintains a certain behaviour. Particularly, the behaviour is determined on the basis of its reciprocal interaction with the environmental and the cognitive/personal factors. The environmental factors are characterised by the context in terms of facilitators and inhibitors of behaviour. Further, the cognitive factors are represented by the cognitive constructs (such as perceived self-efficacy, perceived outcome expectancy and the judgement). Thus, the social cognitive theory establishes that human behaviour is regulated through cognitive processes, in a given social context. It, therefore, provides an account of the sociocognitive determinants of behaviour. Bandura (1986, 2006, 2008) has repeatedly verified the viability of social cognitive

theory in explaining the reciprocity between the environment, the cognitive factors and the behaviour. The following constructs and provisions of social cognitive theory are of particular relevance to this study;

i. Self-efficacy: This implies the confidence individuals have in their ability to take actions and to overcome the barriers (Bandura, 2006). When measured across magnitude, self-efficacy beliefs are conceptualised as perceived difficulty. The theory suggests that the higher the accounting professionals' perceived difficulty in performing a given task, the lower is the likelihood of executing that task. Perceived difficulty represents a situational cognitive process, since it is specific to the given context (Bandura, 2006; 2008).

ii. Expectancies: These are the values individual assigns to a given incentive or an outcome of performing a certain behaviour (Bandura, 1986). For instance, if the accounting professionals feel that positive outcomes of performing a certain behaviour will outweigh its negative outcomes, they are motivated to adopt such behaviour. Positive outcome expectancy also represents a situational cognitive process, as it is context-specific (Bandura, 2006; 2008).

iii. Moral Judgement: Judgement involves evaluation of conduct or behaviour against the internal moral standards and the perceived situational circumstances. The said moral standards draw attention towards another important cognitive construct of social cognitive theory, i.e. individual's 'propensity to morally disengage' which is the tendency to consider immoral behaviour as acceptable. The theory also provides that moral judgement represents a situational cognitive process and that professionals are likely to display moral behaviour if they form moral judgements (Bandura, 1996; 2002; 2006; 2008).

iv. In person-environment reciprocal interaction, the individual's cognitions, beliefs and ideas are modified by external factors from the environment. Similarly, an environment is also shaped by how individuals solve problems, form judgements or make decisions (Bandura, 1986; 2008). The accounting professionals – their cognitive processes are in continuous interplay with the environment they work in.

v. In person-behaviour reciprocal interaction, the cognitive processes and behaviour of an individual interact. For instance, accounting professionals' perception that deviant behaviour is acceptable in their work environment is likely to induce them to deviate from compliant behaviour. Similarly, if the professionals' deviant behaviour is encouraged, they are likely to modify their perception of what constitutes ethical or unethical behaviour (Bandura, 1986;

1996).

vi. In environment-behaviour reciprocal interaction, external factors can change the behaviours or the way such behaviours are displayed. Similarly, behaviour can also modify the environment in which it is exhibited. For instance, workplace pressures to adopt deviant behaviour might induce an accounting professional to adopt it. Moreover, the way professionals behave is highly likely to affect the cultural and ethical values in their work environment (Bandura, 1986; 1996).

The aforementioned concepts clarify that the cognitions or thought processes of an individual play a central role in performing any behaviour and that brain is an incredible network of information processing and interpretation. This suggests that the individual's cognitive processes intervene between the environment and their behaviour, in a particular context (Conner, 2010). Figure 3.1 depicts the interactions between the behaviour, the environment and the cognitive factors.

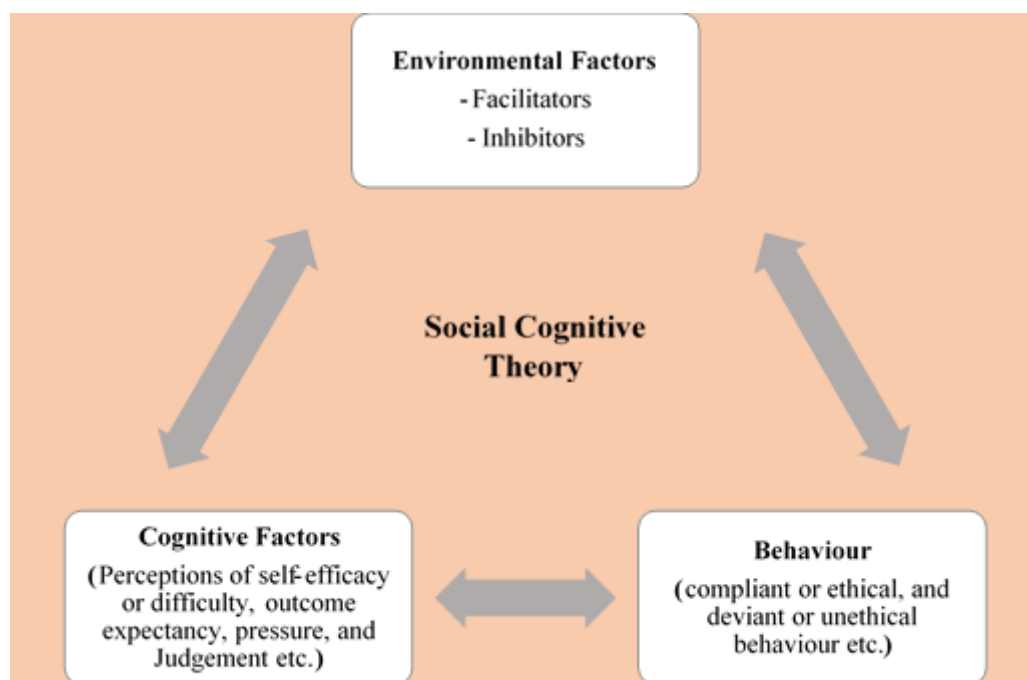


Figure 3.1: Constructs of Social Cognitive Theory

Interestingly, the literature reviewed in the previous chapter can be fitted within the frame of social cognitive theory. For instance, the literature on a critique of measures and regulations for managing conflict of interests in professional accounting firms (i.e. weaknesses in the existing measures and regulations and the reasons for the limited effectiveness of existing

measures and regulations for managing conflict of interests) pertains to the environmental factors in social cognitive theory. Similarly, literature related to the impact of conflict of interests on accounting professionals' deviant decision-making behaviour relates to the environmental factors and the behaviour concept in social cognitive theory. Moreover, literature regarding the role of accounting professionals' mental processes towards decision-making behaviour (i.e. psychological and cognitive effects of conflict of interests and the conscious and unconscious aspects of decision-making in situations involving conflict of interests) belongs to the cognitive factors in social cognitive theory. Most of the extant research falls in the domain of environmental factors and, as already elaborated in literature review chapter, more research is needed in relation to the cognitive factors.

Overall, the discussions in this section suggest that when confronted with conflict of interests, the accounting professionals' performance of the behaviour (i.e. compliant versus deviant) is affected by the environment/context and their cognitive processes.

3.2.1 Social Cognitive Theory in Management Accounting and Auditing Research

Many theories from cognitive psychology have been adopted in the management accounting and auditing research to study a variety of topics, including attention, judgement, decisions and social influence (Birnberg, Luft and Shields, 2006). For instance, Juhari, Sanusi, Rahman and Omar (2013) employed the theory of reasoned action⁷ for examining the impact of independence threats on auditors' ethical judgements. Adopting the framework of cognitive moral development⁸, Brandon (2003) examined how auditing students' ethical judgement is affected by their moral development and the client risk.

Moreover, Iskandar and Sanusi (2011) employed social cognitive theory to assess the impact of self-efficacy and task complexity on audit judgement. Wongpinunwatana and Panchoo (2014) employed the constructs from social cognitive theory to propose the creation of self-efficacy in internal auditors. Furthermore, Afifah, Sari, Anugerah and Sanusi (2015) adopted a cognitive approach to examine the ethical judgements. With reference to the ethics of professional scepticism in public accounting, Cabrera-Frias (2012) asserted the positive impact

⁷ The theory of reasoned action postulates that behavioural intent is caused by attitudes and subjective norms (Fishbein, 2008).

⁸ The theory of cognitive moral development is underpinned by six stages in an individual's moral development. For details, see Ashkanasy, Windsor and Trevino (2006).

of professional's propensity to morally disengage on the adoption of unethical behaviour. Moreover, with specific reference to the conflict of interests in professional accounting firms, Charles (2011) and Agle, Hart, Thompson and Hendricks (2014) suggest the positive impact of professional's positive outcome expectancy of compliant decision-making on their ethical judgements.

In order to understand how conflict of interests leads auditors to avoid the issuance of warning signals to the stakeholders, Guiral, Rodgers, Ruiz and Gonzalo (2010) developed a cognitive approach by connecting the throughput model to the moral seduction theory. Likewise, Moore, Tetlock, Tanlu and Bazerman (2006) examined the structural arrangements that give rise to conflict of interests in a professional accounting environment. They examined the cognitive processes through which these structures exert their impact on the professionals' judgement. Furthermore, Cohen and Bennie (2006) discussed the relevance of contingent factors model⁹ for conducting the accounting ethics research.

Since conflict of interests is ethical as well as social in nature (Finn, Chonko and Hunt, 1988; Mills and Bettner, 1992; Argandona, 2004), the social cognitive theory suggests looking at conflicting interests from the perspective of dynamic interaction between; (i) the environment (i.e. situations involving conflict of interests), (ii) the cognitive factors (i.e. perceived outcome expectancy, perceived difficulty and ethical judgement) and (iii) behaviour in the events of conflict of interests (i.e. compliant versus deviant). Social cognitive theory can potentially explain how the interplay of environmental factors, the cognitive factors and the behaviour affect the way an accountant behaves in the events of different conflict of interests (Bandura, 1986; 2006; 2008). In this way, professional accounting firms can get useful insights about managing conflict of interests through the encouragement of desired behavioural change, by making adjustments to the environment or by influencing personal attitudes.

Thus, it can be concluded that the cognitive theories, in general and the social cognitive theory, in particular, can inform a wide range of topics in accounting. Specifically, the promising usefulness of social cognitive theory for examining conflict of interests at the level of an individual accounting professional is evident due to its successful application for investigation

⁹ The contingent factors model is an ethical decision-making model that Jones (1991) proposed by integrating the earlier models (those proposed by Ferrell and Gresham, 1985; Hunt and Vitell, 1986; Rest, 1986; Trevino, 1986; Dubinsky and Loken, 1989). For details, see Cohen and Bennie (2006).

of decision-maker's cognitive processes. This research will also add to the social cognitive theory by applying it, in combination with the throughput model, to the professional accounting context.

3.3 Throughput Model

The throughput model of decision-making (Rodgers, 1997) draws on the concept of *process thinking* which provides that decision-making behaviour is characterised by the interaction of four concepts, i.e. information, perception, judgement and the decision choice. This approach provides a constructive way of formulating thoughts into a successful strategy. The immediate usefulness of process thinking is that it can alert individuals of the particular pathway they use to arrive at a certain decision. Generally, success across the pathway journey is achieved when an individual and those governing individuals' behaviour are aware of the obstacles and shortcuts they encounter during decision-making (Rodgers, 2006; Rodgers and Gago, 2006). The throughput model suggests that there are six main pathways to a decision, that vary by the weight a decision-maker puts on the information and the perception.

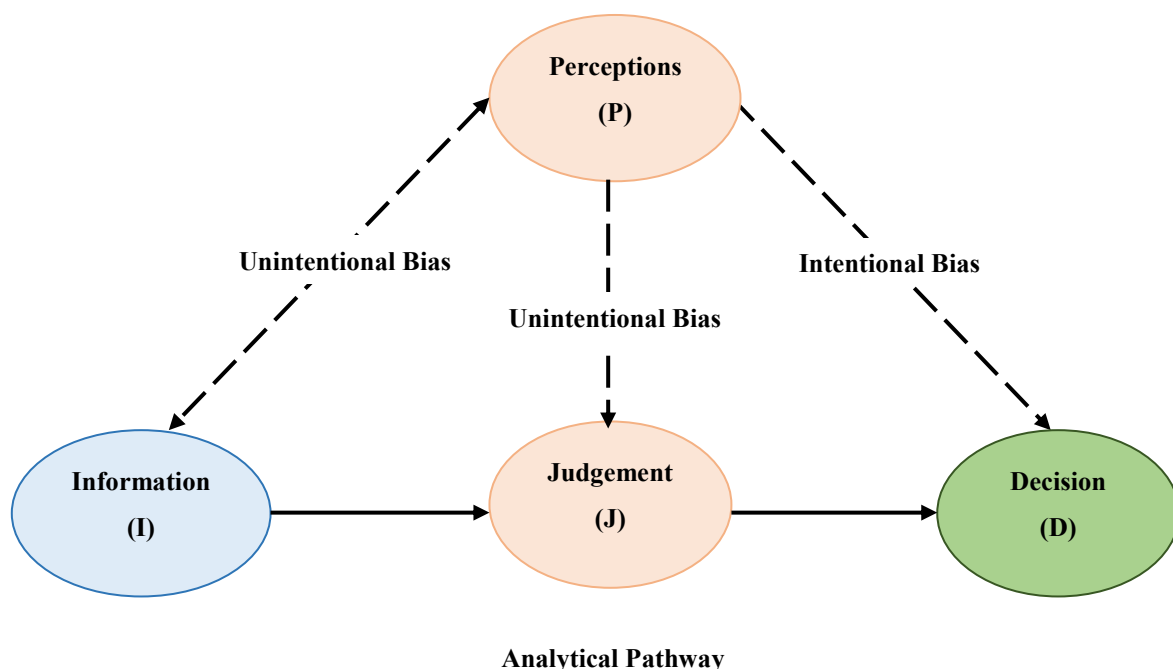


Figure 3.2: Throughput Model of Decision-Making

As indicated in the figure 3.2, the throughput model suggests an interaction of the information (available to the individual), the perceptions (problem-framing and biases), the judgement (analysis) and the decision. Importantly, perceptions are a source of bias in different decision

pathways. Perceptions as a direct driver of the decision (the $P \rightarrow D$ path) introduce intentional bias in decision-making and the other paths involving the role of perceptions (the $P \rightarrow J \rightarrow D$, $I \rightarrow P \rightarrow D$, $P \rightarrow I \rightarrow J \rightarrow D$ and $I \rightarrow P \rightarrow J \rightarrow D$) introduce unintentional bias in decision-making. The $I \rightarrow J \rightarrow D$ path is, however, a bias-free path (Guiral, Rodgers, Ruiz and Gonzalo, 2010). Given the different barriers to effective decision-making (such as time pressure, incomplete information, overload of confusing information, inability to manage available information, instability in the environment and the lack of expertise), only a particular pathway to decision choice might work better in any given situation (Rodgers and Gago, 2006; 2009).

With reference to the decision-making behaviour in professional accounting firms, the relevant decision pathways, each of which is dominated by a different moral philosophy, are briefed below (Rodgers and Gago, 2001; 2006, Rodgers, 2006; 2009);

i. $P \rightarrow D$ (*The Expedient Pathway*): The philosophy underlying this path is the ‘psychological egoism’ which suggests that in situations involving conflict of interests, the accounting professionals adopting this pathway to a decision are motivated to act in their perceived self-interest. Decisions are driven on the basis of decision-makers’ predisposition or framing of the problem. All the information surrounding conflict of interests is disregarded and a decision is made without analysis. Several pressures (e.g., time pressure) prevent thorough analysis via judgement stage.

ii. $P \rightarrow J \rightarrow D$ (*The Ruling Guide Pathway*): The philosophy underlying this path is the ‘deontology’ which implies that in situations involving conflict of interests, the accounting professionals adopting this pathway focus on the rights of individuals. They form judgements by implementing the decision rules that exist to guide individuals to a decision. The judgement and decisions are, primarily, driven by their perceived understanding of the rules of law. Factors, including incomplete information, inadequate understanding, conflicting information signals and undifferentiated alternatives cause an accounting professional to disregard the information surrounding conflict of interests.

iii. $I \rightarrow P \rightarrow D$ (*The Revisionist Pathway*): The philosophy underlying this path is the ‘ethical relativism’ which suggests that in situations involving conflict of interests, the accounting professionals adopting this pathway to a decision observe the actions of those around them. They try to determine group consensus on a given behaviour and their ethical values are defined by their feelings, firm’s culture and the environment. Accordingly, the information surrounding

conflict of interests is continuously revised. Without any consideration of the alternatives, professionals tend to make a decision on the basis of the perceptions they formulate from a given information.

iv. $I \rightarrow J \rightarrow D$ (*The Analytical Pathway*): The accounting standards require professionals to adopt analytical pathway to decision-making (Guiral, Rodgers, Ruiz and Gonzalo, 2010). The philosophy underlying this path is the ‘utilitarianism’ which suggests that in situations involving conflict of interests, the accounting professionals adopting this path are concerned about acting in the best interest of the public. They tend to follow a systematic approach in making use of the available information and subject it to a thorough analysis at the judgement stage.

v. $I \rightarrow P \rightarrow J \rightarrow D$ (*The Global Perspective Pathway*): The philosophy underlying this path is the ‘ethics of care’ which implies that in situations involving conflict of interests, the accounting professionals adopting this pathway to a decision take all the available information into consideration. They consider distinct viewpoints and use the available information to modify their perceptions about the issue at hand. Alternatives are considered while analysing the problem (i.e. judgement stage) and then the decisions are reached.

Since this study seeks to examine the process through which conflict of interests affects decision-making behaviour, it will be relevant to use throughput model for understanding the pathways through which the decisions are made and how the bias might enter into these paths. This research will also add to the throughput model by applying it, in combination with the social cognitive theory, to a professional accounting context.

3.3.1 Throughput Model in Decision-Making Research

Throughput Modelling has been successfully applied to different fields, for understanding the dominant pathways engaged in decision-making. For instance, the extant research (e.g., Alloy and Tabachnik, 1984; Anderson, 1985; Rodgers and Gago, 2001) provides that since information typically is processed subjectively, it is considered interdependent with the perceptions of a decision-maker. Furthermore, in different decision-making situations, both the situational information and the decision maker’s prior beliefs about information jointly determine the perceptions (Rodgers and Gago, 2001). An earlier study by Anderson (1985) also provided that perception results from the integration of miscellaneous pieces of

information.

With particular reference to the perceptual biases, Johnson-Laird (1980) asserted that prior to making a decision, an individual encodes information and develops a representation of the problem. Afterwards, the perceptions and judgement can influence the decision choice. Importantly, Kahneman, Slovic and Tversky (1982) suggested that both the automatic perceptive-like heuristics and the more deliberate information processing strategies (i.e. judgement) are involved in most of the decisions that individuals make. Moreover, Rodgers and Gago (2001) argued that certain factors, including unstable environment, uncertain information, time pressure and expertise of a decision-maker contribute to whether or to what extent bias may distort the judgement process.

Conceptually, what individuals hold as valuable enters into their perception of information and, resultantly, their judgements about what the information is, what is acceptable, what evidence they believe in and what philosophical view is appropriate to address the issue at hand, are all influenced by what they hold valuable. In this regard, Rodgers (1997) found that when forming a decision, auditors' perceptions preceded the information that would be used for forming a judgement and hence, the path $P \rightarrow I \rightarrow J \rightarrow D$ was found to be the most relevant. Thus, it was the perceptions that determined the rules and that P dominated I since the primary method of decision-making was via perception. The provisions of this research are useful in establishing the utmost importance of perceptual biases in the decision-making process. Rodgers and Gago (2001) called for the research studies that seek to validate the decision-maker's cognitive processes with the throughput model.

The accounting professionals often have to deal with a large quantum of complex information and, like any other individual, their ability to receive, perceive, analyse and to make a decision is limited. Within the framework of throughput model, although all the pathways contribute towards decision-making, generally more emphasis is placed on a single pathway. Within all the pathways, searches for information, biases and heuristics are made when making a decision. However, based on the pathway that dominates, *process thinking* may lead to the different decision choices. Accordingly, this approach might help professionals solve ethical dilemmas (such as in situations involving conflict of interests) by determining which pathways are more likely to lead to the compliant decision choices and those that lead to the deviant decisions (Rodgers and Gago, 2001).

Another important implication of the throughput model for managing conflict of interests is the concept of parallel cognitive processing. As opposed to the serial processing assumed in basic information processing and decision-making, the throughput model assumes parallel processing in that there are various simultaneous pathways that lead to a decision (Rodgers and Gago, 2001; Rodgers, 2006). In order to understand how conflict of interests lead the auditors to avoid the issuance of warning signals to stakeholders, Guiral, Rodgers, Ruiz and Gonzalo (2010) employed throughput model to explain the role of involuntary perceptual biases.

The usefulness of the throughput model, therefore, is not limited to decision-making in any specific field but is applicable to a wide variety of contexts. Its ability to capture decision-making process at the level of an individual accounting professional is of particular reference to this study's research problem.

3.4 Linking Social Cognitive Theory and Throughput Model

There are many convincing reasons to believe that social cognitive theory and throughput model complement one another and that their combination can help address this study's research problem in a comprehensive way. Given the complexity of conflict of interests in a professional environment, there is a growing trend amongst researchers (e.g., Moore, Loewenstein, Tanlu and Bazerman, 2003; Moore and Loewenstein, 2004; Guiral, Rodgers, Ruiz and Gonzalo, 2010; Moore, Tanlu and Bazerman, 2010) to use a combination of theories for understanding the phenomena regarding conflict of interests.

According to social cognitive theory, the brain is the most incredible network of information processing during decision-making. The theory postulates that the input information (i.e. stimulus) is represented in the brain as cognitive elements that are processed to produce a certain behavioural outcome (Bandura, 2006; 2008). Similarly, the throughput model is a cognitive model that provides a way to decision maker for dealing with the information processed through various pathways to a decision (Rodgers, 2006). Thus, it is evident that both the social cognitive theory and the throughput model have closely related conceptual underpinnings and that there is a logical connection between both.

One of the limitations of social cognitive theory is that it regards behaviour as an outcome of mainly the deliberative efforts and it largely ignores the impact of unconscious thought processes (Fishbein and Cappella, 2006; Fishbein, 2008; Conner, 2010). Furthermore, the

individual differences and the impact of emotional responses on the behaviour are largely ignored. Sutton (1998) provided that although the social cognitive models are meant to predict behaviour, they leave much of the variance in behaviour unexplained. As elaborated in the previous section, throughput model can overcome the said limitations due to its ability to explain the possibility of intentional as well as the unintentional bias in the decision-making process.

Throughput model highlights the central role of perceptions in various pathways to decision-making. These perceptions are viewed as the sources of unintentional and the intentional bias (Rodgers and Gago, 2001). The concept of perceptions, however, is very broad and could range from simple cognitive processes (such as recognition of a stimulus) to the complex functions (such as thinking, analysing and framing of complicated situations). Social cognitive theory can overcome this limitation by providing the specific constructs representing perceptions (such as outcome expectancy and perceived difficulty), that are of predominant importance in decision-making behaviour (Bandura, 2008). Arguably, the combination of throughput model and social cognitive theory tends to offer advantages in terms of better predictive and explanatory powers of the resulting models.

Moreover, while social cognitive theory simply considers the reciprocal interactions of environment, cognitive factors and the behaviour; throughput model specifies the possible cause and effect directions. For instance, the throughput model provides the dominant pathways a decision maker might adopt towards decision-making in the event of conflicting interests (i.e. $I \rightarrow J \rightarrow D$, $I \rightarrow P \rightarrow D$, $I \rightarrow P \rightarrow J \rightarrow D$, $P \rightarrow J \rightarrow D$ and $P \rightarrow D$). In this way, the integration of social cognitive theory and the throughput model allows moving beyond the description of ‘what’ to ‘why’ and ‘how’ – this makes relevance to the problem of accounting professionals’ deviant behaviour due to conflict of interests.

Based on the aforementioned arguments, the social cognitive theory and the throughput model logically converge into the *Stimulus-Organism-Response (S-O-R) Paradigm* of behaviour, that constitutes the conceptual framework for this research. This paradigm (Holt et al., 2015) locates organisms’ cognitive representation of the world (O) in between the stimulus (S) and the response (R). It can, therefore, be argued that the combination of social cognitive theory and throughput model is the practical depiction of S-O-R paradigm which provides that ‘*in the face of stimuli, organisms form cognitive representations (i.e. perceptions and judgements) of the world and respond through their conduct, actions or behaviour*’.

With particular reference to this research, the S-O-R paradigm (Figure 3.3) reflects the following;

i. S: Stimulus for an accounting professional derives from the internal and external context for managing conflict of interests. Accordingly, the stimulus is represented by the environmental factors (as per social cognitive theory) or equivalently the given situation (as per the *information* concept in the throughput model).

ii. O: In the face of information in a given context (i.e. stimulus), the professionals form cognitive representations in terms of the; (i) *perceptions* towards a situation involving conflict of interests and (ii) *judgement* about the alternative decision choices in a given situation. Since the conflict of interests is social in nature (Finn, Chonko and Hunt, 1988; Mills and Bettner, 1992; Argandona, 2004), the perceptions and judgement are essentially the sociocognitive processes.

iii. R: The response is displayed as decision-making behaviour in reaction to the context-specific conflict of interests. Broadly, it could either be the behaviour in accordance with the primary interest of accounting profession (i.e. compliant decision-making) or the behaviour in disagreement with the primary interest (i.e. deviant decision-making). With specific reference to the accounting ethics research, Cohen and Bennie (2006) provide that the context does matter in ethical decision-making.

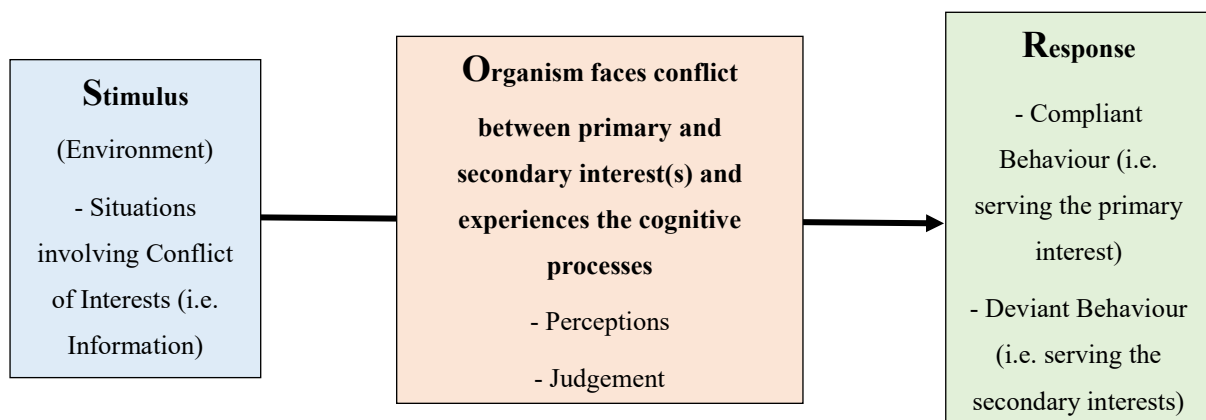


Figure 3.3: Conceptual Framework (S-O-R Paradigm): Combination of Social Cognitive Theory
& Throughput Model of Decision-Making

The units of analysis in this study are the accounting professionals. Both the social cognitive theory and the throughput model are very well-suited to examine the phenomena at an individual's level. The next section will extend the conceptual framework (i.e. S-O-R Paradigm) to develop the theoretical model of this study.

3.5 Theoretical Model

The S-O-R paradigm (Holt et al., 2015) implies that behaviour is an outcome of the cognitive processes that emanate in response to the given situation involving conflict of interests. Within the bounds of this conceptual framework, the theoretical model will specify the variables (and the relationships between these) against each of the components, i.e. stimulus (information), the organism (cognitions) and the response (behaviour).

3.5.1 Stimulus (Information)

In the light of social cognitive theory, the stimulus can be interpreted in terms of the social context, i.e. circumstances that form setting for the process of managing conflict of interests. Thus, the stimulus represents the situational or environmental factors that affect cognitive processes of an individual which, in turn, influence the resulting behaviour (Bandura, 2008). Similarly, according to the throughput model, stimulus exerts its influence on decision-making behaviour through the information that is representative of the context for managing conflict of interests (Rodgers, 2006).

Combining the provisions of both the social cognitive theory and the throughput model, it can be argued that stimulus or information is characterised by the context comprising of the situations involving conflict of interests. These conflicting interests represent the clash of accounting profession's primary interest with the professional's secondary interest(s).

3.5.1.1 Primary Interest

Broadly speaking, the primary interest in the accounting profession is about serving in the best interest of the public, including the investors, prospective investors, lending banks, credit agencies and government regulators (Oseni, 2011). Pierce (2007) and Clements, Neill and Stovall (2012) provide that the primary responsibility of professional accounting firms is to protect the public interest by reporting on the fairness of a client's financial statements. Likewise, the *Code of Ethics for Professional Accountants* provides that compliance with the fundamental principles of accounting profession (i.e. integrity, objectivity, professional competence and due care, confidentiality and the professional behaviour) constitutes primary interest of the accounting profession (IESBA, 2015).

3.5.1.2 Sources of Secondary Interests

A detailed review of the literature (e.g., Allen and Siegel, 2002; Moore, Loewenstein, Tanlu and Bazerman, 2003; Moore and Loewenstein, 2004; Beattie, Fearnley and Brandt, 2005; Moore, Cain, Loewenstein and Bazerman, 2005; Moore, Tetlock, Tanlu and Bazerman, 2006; Guiral, Rodgers, Ruiz and Gonzalo, 2010; Moore, Tanlu and Bazerman, 2010; Juhari, Mohd-Sanusi, Rahman and Omar, 2013) and some inspection reports, including the *Audit Quality Inspection Annual Reports 2011 - 2015* (Financial Reporting Council, 2016) revealed three main sources of secondary interests for the accounting professionals. These sources are; (i) the misaligned incentives with roots in temptation for gain, (ii) the misaligned incentives with roots in fear of loss and (iii) the workplace pressures with roots in fear of loss.

Furthermore, the *Code of Ethics for Professional Accountants* recognises various threats (i.e. self-interest, self-review, advocacy, familiarity and the intimidation threat) to compliance with the fundamental principles of accounting profession. These threats serve as the sources of secondary interests for the professionals (IESBA, 2015). The code itself and some studies relevant to the conflict of interests (e.g., Beattie and Fearnley, 2002; Juhari, Mohd-Sanusi, Rahman and Omar, 2013; Ahmad, 2015) indicate that the root causes underlying these threats are, primarily, the misaligned incentives with roots in temptation for gain and/or in fear of loss and the workplace pressures with roots in fear of loss.

3.5.1.3 Conflict of interests: The Conflict between Primary & Secondary Interests

This study defines conflict of interests as *a situation involving a disagreement between the accounting profession's primary interest and the professional's secondary interest(s) which, in turn, leads to the likelihood of deviant behaviour.*

Conflict of interests is said to arise if the accounting professionals have an interest (i.e. secondary interest) that might interfere with their primary responsibility to protect the public trust (Clements, Neill and Stovall, 2012). Thus, conflict of interests refers to a range of scenarios that pose a risk that an individual in question will compromise professional judgement (Davis, 1993). Similarly, various threats serve as the sources of secondary interests that interfere with the primary interest of the accounting profession and give rise to the conflict of interests. In such situations, there is a risk of deviation from compliant behaviour (IESBA, 2015).

Therefore, within the bounds of social cognitive theory and throughput model, the stimulus represents context-specific information about different conflict of interests. With particular

reference to examining the process through which conflict of interests affects accounting professionals' decision-making behaviour, the specific variable formalising the first component (i.e. stimulus) of the conceptual framework is '*conflict of interests*' – the independent variable in the theoretical model.

3.5.2 Organism (Cognitive Processes)

With reference to managing conflict of interests, the social cognitive theory and the throughput model draw attention towards two broad categories of cognitive processes, i.e. the perceptions and the judgement. According to the throughput model, perception is about framing a problem according to one's own view of the world. These perceptions introduce biases and shortcut strategies in the decision-making process (Rodgers, 2006). Likewise, social cognitive theory suggests that the *positive outcome expectancy of compliant decision-making* and the *perceived difficulty in making compliant decisions* are the two main perceptions of relevance to professionals' behaviour in the face of conflicting interests. Similarly, the theory also asserts an indispensable role of the judgement (Bandura, 1986; 2006; 2008). Since the conflict of interests is ethical in nature (Finn, Chonko and Hunt, 1988; Mills and Bettner, 1992; Argandona, 2004), social cognitive theory and the throughput model suggest considering the *ethical judgements* towards decision-making behaviour.

Thus, within the bounds of social cognitive theory and throughput model, the cognitive processes are characterised by the perceptions and the ethical judgement. With reference to examining the process through which conflict of interests affects accounting professionals' decision-making behaviour, the specific variables formalizing the second component (i.e. organism – their cognitive processes) of the conceptual framework are the '*positive outcome expectancy of compliant decision-making*', the '*perceived difficulty in making compliant decisions*' and the '*ethical judgement*' – the intervening variables in the theoretical model.

3.5.3 Response (Behaviour)

The response in the face of conflicting interests can be, broadly, categorised into either the deviant behaviour or the compliant behaviour. Specifically, the deviant decision represents the decision choice that is in nonconformity with the primary interest of accounting profession. Likewise, the compliant decision represents the decision choice that is in conformity with the primary interest of profession. Since this study's research problem is about deviant behaviour

in the event of conflicting interests, deviant decision-making behaviour is of prime concern.

Therefore, within the bounds of social cognitive theory and the throughput model, the response is characterised by the deviant decision-making behaviour. With particular reference to examining the process through which conflict of interests affects accounting professionals' decision-making behaviour, the specific variable formalising the third component (i.e. response) of the conceptual framework is the '*likelihood of deviant decision-making behaviour*' – the main dependent variable in the theoretical model.

There are two main reasons to include the '*likelihood*' of decision-making behaviour (and not simply the 'decision-making behaviour') as a variable of interest. First, this study views conflict of interests through the lens of behavioural risk management and the risk situations pose uncertainty in terms of increase or decrease in the *likelihood* of occurrence (or non-occurrence) of the intended behaviour, objectives, events, or consequences (see, ISO 31000:2009). The definition of conflict of interests, as per this study, also focuses on the *likelihood of deviant behaviour* in the situations involving conflict between the primary and the secondary interest(s). Secondly, relevant behavioural research (Maddux, Sherer and Rogers, 1982; Ajzen, 1991; Parker, Manstead and Stradling, 1995; Terry and O'Leary, 1995; Schwarzer and Renner, 2000; Palfai, 2002; Garcia and Mann, 2003; Zebracki and Drotar, 2004; Sniehotta, Scholz and Schwarzer, 2005; Baker-Eveleth and Stone, 2008; Brown, Littlewood and Vanable, 2013; Cheng and Chu, 2013; Khan, Panatik, Saat and Perveen, 2013) strongly asserts that the individual's perceived likelihood of engaging in a given behaviour (also termed the behavioural intention) is the most proximate predictor of their actual behaviour.

To be further clarified in the subsequent chapters on research methodology and data analysis, a complementary analysis of empirical data will also be performed with the '*likelihood of compliant decision-making behaviour*' as the dependent variable in the theoretical model. The figures 3.4 and 3.5 present the main and the complementary theoretical models. As evident through the figures, the theoretical model of this study is basically the mediation model that is meant to explain the process through which the 'conflict of interests (the independent variable)' exerts its impact on the 'likelihood of decision-making behaviour (the dependent variable)' in the professional accounting firms. The accounting professionals' situation-specific cognitive processes, including the positive outcome expectancy of compliant decision-making, the perceived difficulty in making compliant decisions and the ethical judgement tend to serve as the said mediators.

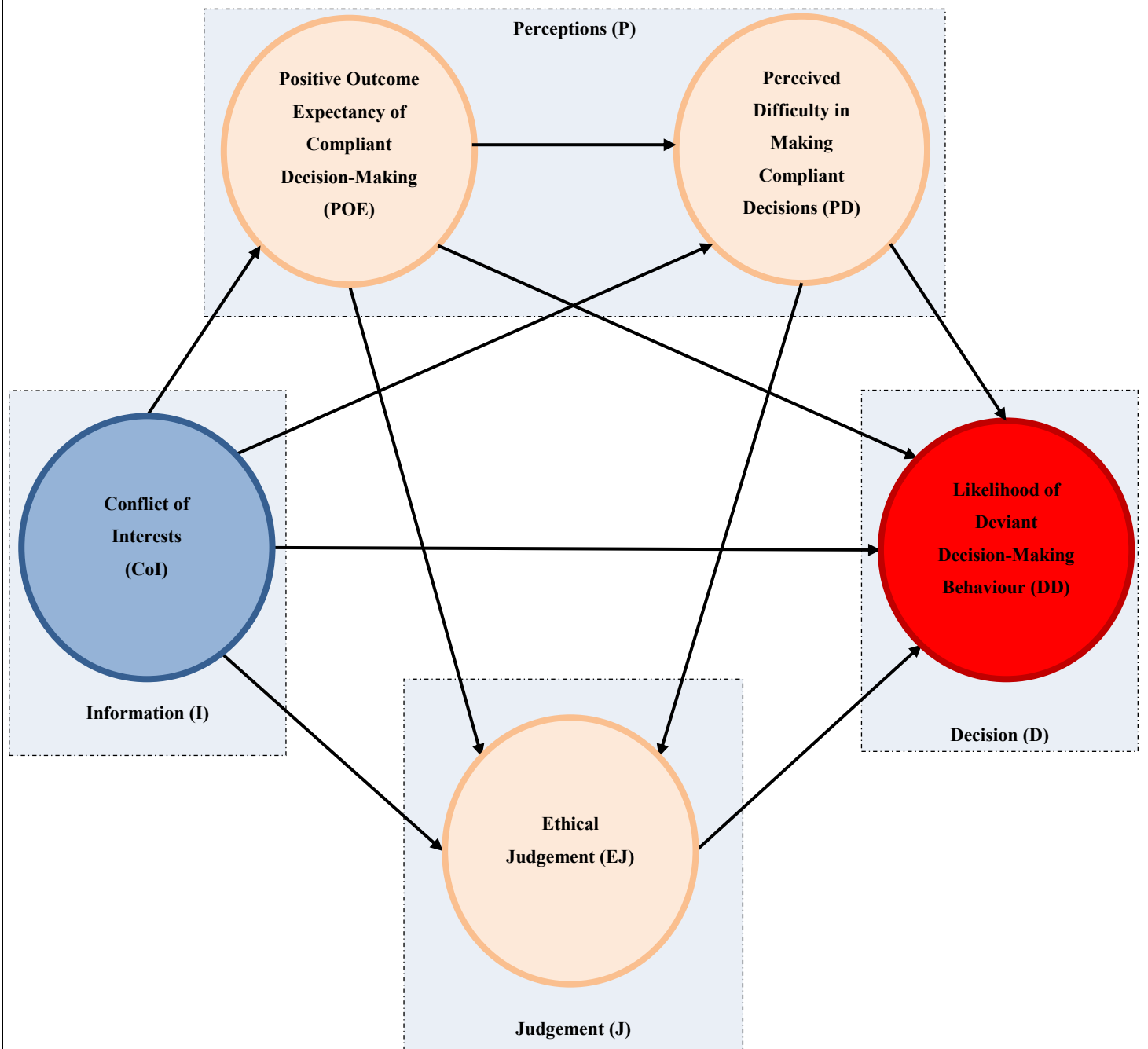


Figure 3.4: Main Theoretical Model

(Note: The different colours are for differentiation and clarity purposes only)

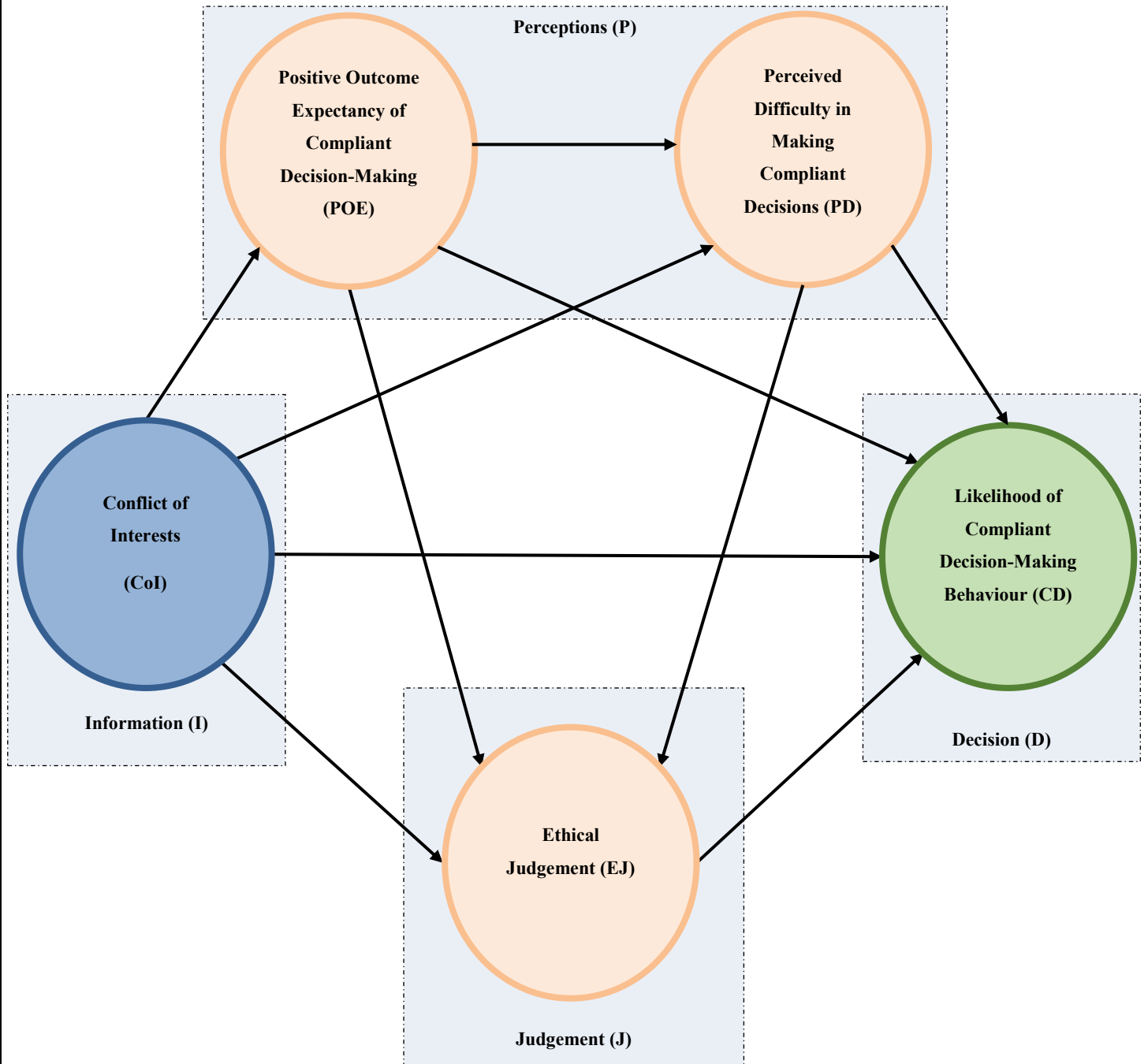


Figure 3.5: Complementary Theoretical Model

(Note: The different colours are for differentiation and clarity purposes only)

3.6 Hypotheses Development

Hypotheses have been classified into three groups. The first one relates the conflict of interests in professional accounting firms to the professionals' likelihood of deviant decision-making behaviour. The second group is about the role of accounting professionals' positive outcome expectancy, their perceived difficulty and the ethical judgements towards their decision-making behaviour in the events of conflict of interests. Finally, the third group of hypotheses is about the role of perceptual biases in the professionals' deviant decision-making behaviour. Statistical control regarding two variables, i.e. occupational self-efficacy and propensity to morally disengage will also be discussed in this section.

While proposing the hypotheses, one of the challenges was to keep into consideration that conflict of interests is a broad term and that there could be many sources of such conflicting interests. Irrespective of the specific source(s), the literature has used the term 'conflict of interests' to include all the conflicting interests originating from different sources. Accordingly, the hypothesised relationships between conflict of interests due to different threats (i.e. due to self-interest threat, that due to intimidation threat, that due to a combination of self-interest and self-review threats and the conflict of interests due to a combination of self-interest, intimidation, self-review and familiarity threats) and the other variables of this study follow the same pattern. Furthermore, the topic of this study is quite novel and the extant literature lacks in empirical support to propose the source-specific relationships between conflict of interests and other variables in the study. However, as the research on this very topic progresses, researchers will be able to hypothesise relationships in accordance with the specific sources of conflict of interests.

3.6.1 First Group of Hypotheses: Conflict of interests & Deviant Decision-Making Behaviour

In the events of conflict of interests, deviant behaviour assumes the form of various dysfunctional consequences, including the reduction in audit quality, premature signing off from audit assignment, considering insufficient sample size, biased sample selection and under-reporting of the audit hours to avoid budget over-run (Boyd, 2004; Pierce and Sweeney, 2004; Davis, DeZoort and Kopp, 2006; Pierce, 2007). Importantly, Lehr, Lehr and Sumarah (2007) argued that the individuals always make ethical decisions in relation to their social context.

Commercial pressures due to the increased competition in the external audit market are one of the most cited sources of conflict of interests in a professional accounting environment. The literature provides that these conflicts of interests lead to reduced audit quality (Beattie, Brandt and Fearnley, 1999; Beattie and Fearnley, 2002; Boyd, 2004; McMillan, 2004; Reinstein and McMillan, 2004; Favere-Marchesi and Emby, 2005; Young, 2005; Pierce, 2007; Daugherty, Dickins, Hatfield and Higgs, 2012). Similarly, conflict of interests due to the higher fees for non-audit services (Craswell, Stokes and Laughton, 2002; Frankel, Johnson and Nelson, 2002; Kinney, Palmrose and Scholz, 2004; Ruddock, Taylor and Taylor, 2004) is found to result in the audit-quality threatening behaviours. Furthermore, the conflict of interests due to time pressure (Dirsmith and Covalleski, 1985; McNair, 1991; Malone and Roberts, 1996; Willett and Page, 1996; Anderson-Gough, Grey and Robson, 2001; Sikka, 2004) and obedience pressure (Davis, DeZoort and Kopp, 2006) are also argued to lead to the dysfunctional practices in professional accounting firms.

Therefore, the extant literature regarding conflict of interests in accounting profession strongly suggests that conflicting interests tend to increase the likelihood of deviant decision-making behaviour. Accordingly, the following hypotheses have been proposed for the relationship between conflict of interests and the likelihood of deviant decision-making behaviour;

H_{1.1/1}: *Conflict of interests due to self-interest threat in professional accounting firms is positively related to the professionals' likelihood of deviant decision-making behaviour.*

H_{1.2/1}: *Conflict of interests due to intimidation threat in professional accounting firms is positively related to the professionals' likelihood of deviant decision-making behaviour.*

H_{1.3/1}: *Conflict of interests due to a combination of self-interest and self-review threats in professional accounting firms is positively related to the professionals' likelihood of deviant decision-making behaviour.*

H_{1.4/1}: *Conflict of interests due to a combination of self-interest, intimidation, self-review and familiarity threats in professional accounting firms is positively related to the professionals' likelihood of deviant decision-making behaviour.*

Thus, the first group of hypotheses against this study's first research question implies that in situations involving conflict of interests, the accounting professionals will have a high likelihood of engaging in deviant decision-making behaviour.

3.6.2 Second Group of Hypotheses: Role of Accounting Professionals' Cognitive Processes

This group of hypotheses is further divided into three subgroups corresponding to the three subgroups of the second group of research questions about the role of accounting professionals' cognitive processes (i.e. the positive outcome expectancy of compliant decision-making, their perceived difficulty in making compliant decisions and their ethical judgement) towards decision-making behaviour in the events of conflict of interests.

3.6.2.1 Relationship of Conflict of interests with Cognitive Processes

This subsection includes hypotheses against the first subgroup of the second group of research questions.

1. Conflict of Interests & Positive Outcome Expectancy

As per the social cognitive theory, outcome expectancy is about the value an individual ascribes to a given outcome and incentives (Eldredge et al., 2011). Specifically, positive outcome expectancy represents the expectation that the positive outcomes of performing a given behaviour will outweigh its negative outcomes (Sniehotta, Scholz and Schwarzer, 2005).

The reason to include positive outcome expectancy as a cognitive process of concern draws on literature establishing the significance of outcome expectancies in case of the context-specific behaviour (e.g., Maddux, Sherer and Rogers, 1982; Parker, Manstead and Stradling, 1995; Terry and O'Leary, 1995; Schwarzer and Renner, 2000; Palfai, 2002; Garcia and Mann, 2003; Zebracki and Drotar, 2004; Sniehotta, Schwarzer, Scholz and Schütz, 2005; Baker-Eveleth and Stone, 2008; Brown, Littlewood and Venable, 2013; Cheng and Chu, 2013). Furthermore, as detailed in the previous sections, the relationship directed from *Information (I)* to the *Perceptions (P)* in the throughput model (Rodgers, 1997; 2006; 2009; Rodgers and Gago, 2001; 2006; Guiral, Rodgers, Ruiz and Gonzalo, 2010) also provide strong reason to link conflict of interests (representing *I*) to the positive outcome expectancy (representing *P*).

Since the perceptions, including the positive outcome expectancies, are subjective (Cvejic, Lloyd and Vollmer-Conna, 2016), different individuals could perceive the same situation differently. Accordingly, the set of hypotheses relating conflict of interests to the positive outcome expectancy of compliant decision-making does not specify any sign.

H_{1a/2.1}: *Conflict of interests due to self-interest threat in professional accounting firms is related to the professionals' positive outcome expectancy of compliant decision-making.*

H_{1b/2.1}: *Conflict of interests due to intimidation threat in professional accounting firms is related to the professionals' positive outcome expectancy of compliant decision-making.*

H_{1c/2.1}: *Conflict of interests due to a combination of self-interest and self-review threats in professional accounting firms is related to the professionals' positive outcome expectancy of compliant decision-making.*

H_{1d/2.1}: *Conflict of interests due to a combination of self-interest, intimidation, self-review and familiarity threats in professional accounting firms is related to the professionals' positive outcome expectancy of compliant decision-making.*

The hypothesised relationship between conflict of interests and the positive outcome expectancy implies that in the events of conflicting interests, the accounting professionals tend to form perceptions about the positive versus the negative outcomes of adopting a compliant decision-making behaviour.

2. Conflict of interests & Perceived Difficulty

Perceived self-efficacy is about the belief in one's ability to accomplish a certain task, using the available resources. The self-efficacy beliefs are particularly important in the difficult or new situations (Sniehotta, Scholz and Schwarzer, 2005). When measured across the magnitude (i.e. the level of difficulty of the task), self-efficacy beliefs are conceptualised as the perceived difficulty. Particularly, self-efficacy in this sense reflects the individuals' belief about the difficulty they can overcome, when asked to perform a certain behaviour (Bandura, 2006) or similarly, the level of difficulty an individual perceives is required to perform a given task (van der Bijl and Shortridge-Baggett, 2001).

Literature asserting the significance of self-efficacy, in general and of the perceived difficulty, in particular, in case of the context-specific behaviours (e.g., Maddux, Sherer and Rogers, 1982; Parker, Manstead and Stradling, 1995; Terry and O'Leary, 1995; Schwarzer and Renner, 2000; Palfai, 2002; Garcia and Mann, 2003; Zebracki and Drotar, 2004; Sniehotta, Schwarzer, Scholz and Schütz, 2005; Baker-Eveleth and Stone, 2008; Brown, Littlewood and Venable, 2013; Cheng and Chu, 2013) highlights the importance of perceived difficulty as a cognitive

process of concern. Furthermore, as discussed in the previous sections, the relationship directed from *Information (I)* to the *Perceptions (P)* in the throughput model of decision-making (Rodgers, 1997; 2006; 2009; Rodgers and Gago, 2001; 2006; Guiral, Rodgers, Ruiz and Gonzalo, 2010) also suggests linking conflict of interests (representing *I*) to the perceived difficulty (representing *P*).

Since the perceptions, including the perceived difficulty, are subjective (Cvejic, Lloyd and Vollmer-Conna, 2016), two or more individuals could perceive the same situation differently. Therefore, the set of hypotheses relating conflict of interests to the perceived difficulty in making a compliant decision does not specify any sign.

H_{2a/2.1}: *Conflict of interests due to self-interest threat in professional accounting firms is related to the professionals' perceived difficulty in making a compliant decision.*

H_{2b/2.1}: *Conflict of interests due to intimidation threat in professional accounting firms is related to the professionals' perceived difficulty in making a compliant decision.*

H_{2c/2.1}: *Conflict of interests due to a combination of self-interest and self-review threats in professional accounting firms is related to the professionals' perceived difficulty in making a compliant decision.*

H_{2d/2.1}: *Conflict of interests due to a combination of self-interest, intimidation, self-review and familiarity threats in professional accounting firms is related to the professionals' perceived difficulty in making a compliant decision.*

The hypothesised relationship between conflict of interests and the perceived difficulty implies that in the event of conflicting interests, the accounting professionals tend to form perceptions about the level of difficulty in making a desired compliant decision.

3. Conflict of interests & Ethical Judgement

As per the throughput model, the judgement implies subjective and deliberate information processing strategies (Rodgers and Gago, 2001). Within the bounds of social cognitive theory, the moral or ethical judgement is a self-regulatory mechanism (Bandura, 2001) which represents the judgement on what course of action is morally justifiable. Thus, judgement is about what ought to be done in a given situation (Cohen and Bennie, 2006). One of the principal assumptions that underlies auditing function and, thus, the professional judgement is that the

auditors will act ethically, especially in relation to their independence (Ponemon, 1993). According to Cohen and Bennie (2006), the ethical judgement in a professional accounting environment is about making a judgement on what constitutes the ethically correct course of action. When formulating a judgement, accounting professionals respond to the social factors and to the self-interest (Cohen and Bennie, 2006).

The reason to include ethical judgement as a cognitive process of concern draws on literature establishing the significance of ethical judgements in the case of context-specific behaviours (e.g., Ponemon, 1993; Armstrong, Ketz and Owsen, 2003; Keim and Grant, 2003; Cohen and Bennie, 2006). Furthermore, as detailed in the previous sections, the relationship directed from *Information (I)* to the *Judgement (J)* in the throughput model (Rodgers, 1997; 2006; 2009; Rodgers and Gago, 2001; 2006; Guiral, Rodgers, Ruiz and Gonzalo, 2010) also provides a strong reason for linking conflict of interests (representing *I*) to the ethical judgement (representing *J*). Importantly, Lehr, Lehr and Sumarah (2007) argued that individuals always form ethical judgements in relation to their social context.

During the formation of ethical judgement, information is processed in accordance with the decision rules as practised in one's profession. These decision rules are encoded in the judgement stage where these rules provide guidance on processing (such as sorting, arranging, ranking and rating) the information (Rodgers and Gago, 2001). Usually, prior to making a decision, an individual encodes information and develops a representation for the problem (Johnson-Laird, 1980). The relationship between conflict of interests and ethical judgement is also evident in the research by Juhari, Mohd-Sanusi, Rahman and Omar (2013) who examined the impact of independence threats (including the self-interest, familiarity and self-review) on ethical judgements of the auditors – they found a significant relationship between these variables.

The aforementioned arguments support the relationship between the conflict of interests and ethical judgement. Since the judgement implies subjective and deliberate information processing strategies (Rodgers and Gago, 2001), different individuals could form different judgements in the same ethical situation. Accordingly, the set of hypotheses relating conflict of interests to ethical judgement does not specify any sign.

H_{3a/2.1}: *Conflict of interests due to self-interest threat in professional accounting firms is related to the professionals' ethical judgement.*

H_{3b/2.1}: *Conflict of interests due to intimidation threat in professional accounting firms is related to the professionals' ethical judgement.*

H_{3c/2.1}: *Conflict of interests due to a combination of self-interest and self-review threats in professional accounting firms is related to the professionals' ethical judgement.*

H_{3d/2.1}: *Conflict of interests due to a combination of self-interest, intimidation, self-review and familiarity threats in professional accounting firms is related to the professionals' ethical judgement.*

The hypothesised relationship between the conflict of interests and ethical judgement implies that in the events of conflicting interests, the accounting professionals tend to form judgements about the ethicality of compliant decision choices.

3.6.2.2 Relationship of Cognitive Processes with Deviant Decision-Making Behaviour

This subsection includes hypotheses against the second subgroup of the second group of research questions.

1. Positive Outcome Expectancy & Deviant Decision-Making Behaviour

Both the social cognitive theory (Bandura, 2006; 2008) and the throughput model (Rodgers and Gago, 2001; 2006; Rodgers, 2006; 2009; Guiral, Rodgers, Ruiz and Gonzalo, 2010) provide a logical connection between the professionals' positive outcome expectancy of compliant decision-making and their likelihood of deviant decision-making behaviour. Sniehotta, Scholz and Schwarzer (2005) argued that if the positive outcome expectancies outweigh the negative outcome expectancies, the likelihood of one's intention to adopt the desired behaviour increases. Similarly, Smith, Simpson and Huang (2007) provide that if the perceived negative outcome expectancies exceed the positive outcome expectancies of engaging in a specific behaviour, the likelihood of engaging in that behaviour decreases. Many other studies (e.g., Maddux, Sherer and Rogers, 1982; Parker, Manstead and Stradling, 1995; Terry and O'Leary, 1995; Schwarzer and Renner, 2000; Palfai, 2002; Garcia and Mann, 2003; Zebracki and Drotar, 2004; Sniehotta, Schwarzer, Scholz and Schütz, 2005; Baker-Eveleth and Stone, 2008; Brown, Littlewood and Vanable, 2013; Cheng and Chu, 2013) also establish positive relationship between the positive outcome expectancy of a task and its execution, in a wide variety of contexts.

Likewise, the relationship directed from the *Perceptions (P)* to the *Decision (D)* in the throughput model (Rodgers, 1997; 2006; 2009; Rodgers and Gago, 2001; 2006; Guiral, Rodgers, Ruiz and Gonzalo, 2010) suggests that the professionals' positive outcome expectancy (representing *P*) is linked to their likelihood of deviant decision-making behaviour (representing *D*). Overall, the literature suggests that if the perceived positive outcomes of performing compliant behaviour exceed the negative outcomes of performing it, the likelihood of adopting compliant behaviour increases. Alternatively, if the perceived positive outcomes of performing a compliant behaviour exceed the negative outcomes of performing it, the likelihood of adopting deviant behaviour will decrease. Accordingly, the set of hypotheses relating the positive outcome expectancy of compliant decision-making to the likelihood of deviant decision-making behaviour is as follows;

H_{1a/2.2}: *In the events of conflict of interests due to self-interest threat in professional accounting firms, the professionals' positive outcome expectancy of compliant decision-making is negatively related to their likelihood of deviant decision-making behaviour.*

H_{1b/2.2}: *In the events of conflict of interests due to intimidation threat in professional accounting firms, the professionals' positive outcome expectancy of compliant decision-making is negatively related to their likelihood of deviant decision-making behaviour.*

H_{1c/2.2}: *In the events of conflict of interests due to a combination of self-interest and self-review threats in professional accounting firms, the professionals' positive outcome expectancy of compliant decision-making is negatively related to their likelihood of deviant decision-making behaviour.*

H_{1d/2.2}: *In the events of conflict of interests due to a combination of self-interest, intimidation, self-review and familiarity threats in professional accounting firms, the professionals' positive outcome expectancy of compliant decision-making is negatively related to their likelihood of deviant decision-making behaviour.*

The hypothesised relationship suggests that in the events of conflicting interests, the likelihood of deviant decision-making behaviour is high in the case of accounting professionals who tend to perceive the negative outcomes of performing compliant decision to outweigh its positive outcomes. Similarly, the likelihood of deviant decision-making behaviour is low in case of the professionals who tend to perceive the positive outcomes of performing compliant decision to outweigh its negative outcomes.

2. Perceived Difficulty & Deviant Decision-Making Behaviour

The throughput model of decision-making (Rodgers and Gago, 2001; 2006; Rodgers, 2006; 2009; Guiral, Rodgers, Ruiz and Gonzalo, 2010) provides a logical connection between the accounting professionals' perceived difficulty in making compliant decisions and their likelihood of deviant decision-making behaviour. For instance, the path leading from the *Perceptions (P)* to the *Decision (D)* provides that the perceived difficulty (representing *P*) has an impact on the deviant decision-making behaviour (representing *D*).

Similarly, the social cognitive theory (Bandura, 2006; 2008) also suggests a relationship between the accounting professionals' perceived difficulty in making a compliant decision and their likelihood of deviant decision-making behaviour. According to Bandura (2006), the lower the perceived difficulty in performing given task, the easier it is to perform it. Extant literature (e.g., Parker, Manstead and Stradling, 1995; Terry and O'Leary, 1995; Schwarzer and Renner, 2000; Palfai, 2002; Garcia and Mann, 2003; Zebracki and Drotar, 2004; Sniehotta, Schwarzer, Scholz and Schütz, 2005; Baker-eveleth and Stone, 2008; Brown, Littlewood and Venable, 2013; Cheng and Chu, 2013) also suggests negative relationship between the perceived difficulty in performing a behaviour and its adoption, in a wide variety of contexts.

Thus, the literature suggests that if the perceived difficulty in making a compliant decision is low, the likelihood of adopting the compliant behaviour will increase. Alternatively, if the perceived difficulty in making a compliant decision is high, the likelihood of adopting the deviant behaviour will increase. Accordingly, the set of hypotheses relating the perceived difficulty in making compliant decisions to the likelihood of deviant decision-making behaviour is as follows;

H_{2a/2.2}: *In the events of conflict of interests due to self-interest threat in professional accounting firms, the professionals' perceived difficulty in making a compliant decision is positively related to their likelihood of deviant decision-making behaviour.*

H_{2b/2.2}: *In the events of conflict of interests due to intimidation threat in professional accounting firms, the professionals' perceived difficulty in making a compliant decision is positively related to their likelihood of deviant decision-making behaviour.*

H_{2c/2.2}: *In the events of conflict of interests due to a combination of self-interest and self-review threats in professional accounting firms, the professionals' perceived difficulty in making a*

compliant decision is positively related to their likelihood of deviant decision-making behaviour.

H_{2a/2.2}: *In the events of conflict of interests due to a combination of self-interest, intimidation, self-review and familiarity threats in professional accounting firms, the professionals' perceived difficulty in making a compliant decision is positively related to their likelihood of deviant decision-making behaviour.*

The hypothesised relationship implies that in the events of conflicting interests, the likelihood of deviant decision-making behaviour is high in the case of accounting professionals who tend to perceive high difficulty in performing the given compliant decision. Similarly, the likelihood of deviant decision-making behaviour is low in case of the professionals who tend to perceive less difficulty in performing the relevant compliant decision.

3. Ethical Judgement & Deviant Decision-Making Behaviour

The relationship between ethical judgement and decision-making behaviour in the accounting ethics research is mostly found in connection with the 'contingent factors model' proposed by Jones (1991). This model integrates the earlier models (including Ferrell and Gresham, 1985; Hunt and Vitell, 1986; Rest, 1986; Trevino, 1986; Dubinsky and Loken, 1989) of ethical decision-making (Cohen and Bennie, 2006). The contingent factors model indicates a positive relationship between the ethical judgement and the ethical (or compliant) decision-making. Similarly, extant literature (e.g., Trevino and Youngblood, 1990; Ponemon, 1992; Adams, Tashchian and Shore, 2001; Sullivan, 2004; Sauers, Ballantine and Kennedy, 2006) also suggests a positive relationship between ethical judgement and the compliant decision-making behaviour. The throughput model (Rodgers, 1997; 2006; 2009; Rodgers and Gago, 2001; 2006; Guiral, Rodgers, Ruiz and Gonzalo, 2010) also highlights the relationship directed from ethical judgement (representing *J*) to the likelihood of deviant decision-making behaviour (representing *D*).

Therefore, the literature suggests that if the accounting professionals form a judgement that compliant decision-making is the most ethical course of action, the likelihood of adopting compliant behaviour will increase. Alternatively, the professionals' judgement that compliant decision-making represents the most ethical course of action decreases the likelihood of adopting deviant behaviour. Accordingly, a set of hypotheses relating ethical judgement to the likelihood of deviant decision-making behaviour is as follows;

H_{3a/2.2}: *In the events of conflict of interests due to self-interest threat in professional accounting firms, the professionals' ethical judgement is negatively related to their likelihood of deviant decision-making behaviour.*

H_{3b/2.2}: *In the events of conflict of interests due to intimidation threat in professional accounting firms, the professionals' ethical judgement is negatively related to their likelihood of deviant decision-making behaviour.*

H_{3c/2.2}: *In the events of conflict of interests due to a combination of self-interest and self-review threats in professional accounting firms, the professionals' ethical judgement is negatively related to their likelihood of deviant decision-making behaviour.*

H_{3d/2.2}: *In the events of conflict of interests due to a combination of self-interest, intimidation, self-review and familiarity threats in professional accounting firms, the professionals' ethical judgement is negatively related to their likelihood of deviant decision-making behaviour.*

The hypothesised relationship implies that in the event of conflicting interests, the likelihood of deviant decision-making behaviour is low in the case of accounting professionals who tend to form a judgement that compliant decision choice is the most ethical course of action (i.e. the most ethical judgement). Similarly, the likelihood of deviant decision-making behaviour is high in case of the professionals who tend to form a judgement that compliant decision choice is not the most ethical course of action or that deviant decision choice is the most ethical (i.e. the least ethical judgement).

3.6.2.3 Interrelationships of Cognitive Processes

This subsection includes hypotheses against the third subgroup of the second group of research questions.

1. Positive Outcome Expectancy & Perceived Difficulty

The proposed hypotheses for the relationship between the positive outcome expectancy of compliant decision-making and the perceived difficulty in making compliant decisions draws on literature establishing the impact of outcome expectancies on the self-efficacy. This is because, perceived difficulty is one of the dimensions or conceptualisations of self-efficacy, i.e. the one measured across the magnitude (van der Bijl and Shortridge-Baggett, 2001; Bandura, 2006).

Maddux, Sherer and Rogers (1982) examined the relationship between outcome expectancy and the self-efficacy. They found that the manipulations in outcome expectancy affected the self-efficacy beliefs. Specifically, the participants who perceived more favourable outcomes of performing the given behaviour (i.e. positive outcome expectancy) expressed more confidence and less perceived difficulty in performing that behaviour. Similarly, other studies (e.g., Borkovec, 1978; Teasdale, 1978; Kazdin, 1978; 1982; 1985; Corcoran, 1991; 1995; Eastman and Marzillier, 1984; Sniehotta, Scholz and Schwarzer, 2005; Lin, Ko and Wu, 2008; Williams, 2010) also suggest that the positive outcome expectancy leads to the less perceived difficulty in performing the desired behaviour. Similarly, Wongpinunwatana and Panchoo (2014) conducted a study in the professional accounting context and found that the participants' positive outcome expectancy of performing a given behaviour resulted in the increased confidence (i.e. the less perceived difficulty) to perform that behaviour.

Thus, the literature from different disciplines suggests that the professionals' perception that the overall positive outcomes of compliant decision-making will outweigh its overall negative outcomes (i.e. positive outcome expectancy) is expected to lead to the low perceived difficulty in making compliant decisions. Alternatively, the professionals' perception that the overall negative outcomes of compliant decision-making will outweigh its overall positive outcomes (i.e. negative outcome expectancy) is expected to lead to the high perceived difficulty in making compliant decisions. Accordingly, following hypotheses have been proposed for the relationship between the positive outcome expectancy of compliant decision-making and the perceived difficulty in making a compliant decision;

H_{1a/2.3}: *In the events of conflict of interests due to self-interest threat in professional accounting firms, the professionals' positive outcome expectancy of compliant decision-making is negatively related to their perceived difficulty in making a compliant decision.*

H_{1b/2.3}: *In the events of conflict of interests due to intimidation threat in professional accounting firms, the professionals' positive outcome expectancy of compliant decision-making is negatively related to their perceived difficulty in making a compliant decision.*

H_{1c/2.3}: *In the events of conflict of interests due to a combination of self-interest and self-review threats in professional accounting firms, the professionals' positive outcome expectancy of compliant decision-making is negatively related to their perceived difficulty in making a compliant decision.*

H_{1d/2.3}: *In the events of conflict of interests due to a combination of self-interest, intimidation, self-review and familiarity threats in professional accounting firms, the professionals' positive outcome expectancy of compliant decision-making is negatively related to their perceived difficulty in making a compliant decision.*

The hypothesised relationship implies that the lower perceived difficulty in making compliant decisions is expected in the case of the accounting professionals who expect that compliant decision-making has more positive than the negative outcomes. Similarly, higher perceived difficulty in making compliant decisions is expected in the case of the professionals who expect that compliant decision-making has less positive than the negative outcomes.

2. Positive Outcome Expectancy & Ethical Judgement

The relationship between the positive outcome expectancy of compliant decision-making and ethical judgement is found in connection with the literature suggesting positive relationship between the positive outcome expectancy and the likelihood of compliant or ethical decision-making (Maddux, Sherer and Rogers, 1982; Parker, Manstead and Stradling, 1995; Terry and O'Leary, 1995; Schwarzer and Renner, 2000; Palfai, 2002; Garcia and Mann, 2003; Zebracki and Drotar, 2004; Sniehotta, Schwarzer, Scholz and Schütz, 2005; Smith, Simpson and Huang, 2007; Baker-eveleth and Stone, 2008; Brown, Littlewood and Venable, 2013; Cheng and Chu, 2013). With specific reference to the conflict of interests, Charles (2011) and Agle, Hart, Thompson and Hendricks (2014) suggest the positive impact of professional's positive outcome expectancy of compliant decision-making on the formation of ethical judgements.

Furthermore, the relationship path from the *Perceptions (P)* to the *Judgement (J)* in the throughput model (Rodgers, 1997; 2006; 2009; Rodgers and Gago, 2001; 2006; Guiral, Rodgers, Ruiz and Gonzalo, 2010) also provides a reason to believe that the positive outcome expectancy (representing *P*) has an effect on the ethical judgement (representing *J*). Overall, the literature suggests that if the perceived positive outcomes of performing compliant behaviour exceed the negative outcomes of performing it, highly ethical judgements are expected to be formed. Alternatively, if the perceived negative outcomes of performing compliant behaviour exceed the positive outcomes of performing it, less ethical judgements are expected to be formed. Accordingly, the set of hypotheses relating positive outcome expectancy of compliant decision-making to the ethical judgement is as follows;

H_{2a/2.3}: *In the events of conflict of interests due to self-interest threat in professional accounting*

firms, the professionals' positive outcome expectancy of compliant decision-making is positively related to their ethical judgement.

H_{2b/2.3}: *In the events of conflict of interests due to intimidation threat in professional accounting firms, the professionals' positive outcome expectancy of compliant decision-making is positively related to their ethical judgement.*

H_{2c/2.3}: *In the events of conflict of interests due to a combination of self-interest and self-review threats in professional accounting firms, the professionals' positive outcome expectancy of compliant decision-making is positively related to their ethical judgement.*

H_{2d/2.3}: *In the events of conflict of interests due to a combination of self-interest, intimidation, self-review and familiarity threats in professional accounting firms, the professionals' positive outcome expectancy of compliant decision-making is positively related to their ethical judgement.*

The hypothesised relationship implies that in the event of conflicting interests, the accounting professionals will form highly ethical judgements if they expect the positive outcomes of compliant decision-making to outweigh its negative outcomes. Similarly, the accounting professionals will form less ethical judgements if they expect the negative outcomes of compliant decision-making to outweigh its positive outcomes.

3. Perceived Difficulty & Ethical Judgement

The relationship between the perceived difficulty in making compliant decisions and the ethical judgement is found in conjunction with the literature suggesting negative relationship between the perceived difficulty and the likelihood of compliant or ethical decision-making (e.g., Maddux, Sherer and Rogers, 1982; Parker, Manstead and Stradling, 1995; Terry and O'Leary, 1995; Schwarzer and Renner, 2000; Palfai, 2002; Garcia and Mann, 2003; Zebracki and Drotar, 2004; Sniehotta, Schwarzer, Scholz and Schütz, 2005; Bandura, 2006; Baker-eveleth and Stone, 2008; Brown, Littlewood and Venable, 2013; Cheng and Chu, 2013). With specific reference to the conflict of interests, research by Iskandar and Sanusi (2011) and Afifah, Sari, Anugerah and Sanusi (2015) indicate the negative impact of professional's perceived difficulty in making a compliant decision on the formation of ethical judgements.

Furthermore, the relationship path from the *Perceptions (P)* to the *Judgement (J)* in the

throughput model (Rodgers, 1997; 2006; 2009; Rodgers and Gago, 2001; 2006; Guiral, Rodgers, Ruiz and Gonzalo, 2010) also provides a reason to believe that the perceived difficulty in making compliant decisions (representing *P*) has an effect on the ethical judgement (representing *J*). Literature suggests that if the perceived difficulty in making a compliant decision is high, less ethical judgements are expected to be formed. Alternatively, if the perceived difficulty in making a compliant decision is low, highly ethical judgements are expected to be formed. Accordingly, the set of hypotheses relating the perceived difficulty in making compliant decisions to the ethical judgement is as follows;

H_{3a/2.3}: *In the events of conflict of interests due to self-interest threat in professional accounting firms, the professionals' perceived difficulty in making a compliant decision is negatively related to their ethical judgement.*

H_{3b/2.3}: *In the events of conflict of interests due to intimidation threat in professional accounting firms, the professionals' perceived difficulty in making a compliant decision is negatively related to their ethical judgement.*

H_{3c/2.3}: *In the events of conflict of interests due to a combination of self-interest and self-review threats in professional accounting firms, the professionals' perceived difficulty in making a compliant decision is negatively related to their ethical judgement.*

H_{3d/2.3}: *In the events of conflict of interests due to a combination of self-interest, intimidation, self-review and familiarity threats in professional accounting firms, the professionals' perceived difficulty in making a compliant decision is negatively related to their ethical judgement.*

The hypothesised relationship implies that in the event of conflicting interests, the accounting professionals will form highly ethical judgements if they perceive that the compliant decisions are easy to undertake. Similarly, the accounting professionals will form less ethical judgements if they perceive that the compliant decisions are difficult to undertake.

3.6.3 Third Group of Hypotheses: Biasing Role of the Conflict of interests

This group of hypotheses draws heavily on the research asserting an indispensable role of the perceptual biases towards decision-making in a professional accounting environment. With particular reference to the role of bias in decision-making involving conflict of interests, the

literature (Moore, Loewenstein, Tanlu and Bazerman, 2003; Moore and Loewenstein, 2004; Moore, Cain, Loewenstein and Bazerman, 2005; Tyler, 2005; Moore, Tetlock, Tanlu and Bazerman, 2006) asserts that the presence of some structural arrangements in professional accounting firms serves as the potential threats to the independence of auditors. These arrangements include hiring and firing of auditors by clients, auditors taking jobs with clients and simultaneous provision of audit and non-audit services. In the presence of such structural arrangements, auditors might become morally seduced to serving their self-interest – they experience cognitive barriers such as the unconscious bias. According to Moore, Tanlu and Bazerman (2010), conflict of interests results in unconscious bias and may also lead an accounting professional to commit intentional corruption, due to the direct impact of the perceptions on decision-making.

Similarly, Chugh, Banaji and Bazerman (2005) argued that the ethical decisions are biased by the psychological barriers on individuals' mind that lead them to assume that they are not susceptible to conflict of interests. Such barriers increase the risk that otherwise visible conflict of interests will not be recognised by an individual. Furthermore, the throughput model suggests that the positive outcome expectancy and the perceived difficulty (denoting the perceptions, P) serve as the sources of bias in different decision pathways. The perceptions as a direct driver of decision (i.e. the $P \rightarrow D$ path) introduce intentional bias in the decision-making. The other paths involving the role of perceptions (i.e. the $P \rightarrow J \rightarrow D$, $I \rightarrow P \rightarrow D$, $P \rightarrow I \rightarrow J \rightarrow D$ and $I \rightarrow P \rightarrow J \rightarrow D$) introduce unintentional bias in the decision-making process. The significance of such perceptions implies that the professionals tend to disregard the adoption of the analytical pathway to decision (i.e. $I \rightarrow J \rightarrow D$) – the one that professional accounting standards require (Rodgers, 2009; Rodgers and Gago, 2006; Guiral, Rodgers, Ruiz and Gonzalo, 2010).

Based on the aforementioned studies, following hypotheses have been proposed to signify the biasing role of conflict of interests;

H_{1.1/3}: *In the events of conflict of interests due to self-interest threat in professional accounting firms, the professionals' deviant decision-making behaviour will be prone to bias due to the interference of their perceptions with the analytical pathway to deviant decision.*

H_{1.2/3}: *In the events of conflict of interests due to intimidation threat in professional accounting firms, the professionals' deviant decision-making behaviour will be prone to bias due to the*

interference of their perceptions with the analytical pathway to deviant decision.

H_{1.3/3}: *In the events of conflict of interests due to a combination of self-interest and self-review threats in professional accounting firms, the professionals' deviant decision-making behaviour will be prone to bias due to the interference of their perceptions with the analytical pathway to deviant decision.*

H_{1.4/3}: *In the events of conflict of interests due to a combination of self-interest, intimidation, self-review and familiarity threats in professional accounting firms, the professionals' deviant decision-making behaviour will be prone to bias due to the interference of their perceptions with the analytical pathway to deviant decision.*

The hypothesised role of the bias due to accounting professionals' perceptions (i.e. positive outcome expectancy and/or perceived difficulty) implies that decision-making is expected to be prone to bias due to the likely interference of the said perceptions with the analytical pathway to deviant decision. The said interference is about the significant role of positive outcome expectancy and/or the perceived difficulty in driving the ethical judgements and/or the decisions. Based on the suggestions of Guiral, Rodgers, Ruiz and Gonzalo (2010), it can be argued that the accounting professionals' perceptual biases make them disregard the analytical pathway to decision-making and, resultantly, their likelihood of deviant behaviour increases.

3.6.4 Control Variables

Occupational self-efficacy (OSE) and propensity to morally disengage (PMD) are the dispositional cognitive processes that have been included as control variables in the tested model.

3.6.4.1 Occupational Self-Efficacy & Deviant Decision-Making Behaviour

This research considers the professionals' compliant decision-making behaviour as the desired one and according to Stajkovic and Luthans (1998), individuals with high self-efficacy exert more effort to perform the desired behaviour. The extant literature suggests that an individual's general occupational self-efficacy is positively related to the ethical behaviour and negatively to the unethical or deviant decision-making behaviour (Palmer, 2013). Specifically, a number of studies provide that the individuals high in their dispositional trait of occupational self-efficacy tend to perform the ethical behaviour, in a wide variety of contexts (Chen, Gully and

Eden, 2001; MacNab and Worthley, 2008; Palmer, 2013; Agle, Hart, Thompson and Hendricks, 2014). With particular reference to the professional accounting firms, Iskandar and Sanusi (2011) and Afifah, Sari, Anugerah and Sanusi (2015) suggest the negative effect of professional's occupational self-efficacy on the adoption of unethical behaviour.

Therefore, a negative relationship is expected between the professionals' occupational self-efficacy and their likelihood of deviant decision-making behaviour. This implies that the high occupational self-efficacy is expected to lead to the lower likelihood of deviant decision-making behaviour. Accordingly, the professionals' occupational self-efficacy has been statistically controlled by including it in the theoretical model.

3.6.4.2 Propensity to Morally Disengage & Deviant Decision-Making Behaviour

The extant literature provides that an individual's propensity to morally disengage is negatively related to the ethical behaviour and positively to the unethical or deviant decision-making behaviour (Moore et al., 2012). Many studies provide that the individuals high in their dispositional trait of propensity to morally disengage adopt unethical behaviour, in a wide variety of contexts (Bandura, Barbaranelli, Caprara and Pastorelli, 1996; Bandura, 1999; 2002; Bandura, Caprara and Zsolnai, 2000; Moore, 2007; Moore et al., 2012). With particular reference to the ethics of professional scepticism in public accounting, Cabrera-Frias (2012) asserted the positive impact of professional's propensity to morally disengage on the adoption of unethical behaviour.

Therefore, a positive relationship is expected between the professionals' propensity to morally disengage and their likelihood of deviant decision-making behaviour. This implies that the high propensity to morally disengage is expected to lead to a higher likelihood of deviant decision-making behaviour. Accordingly, for all the categories of conflicting interests, the accounting professionals' propensity to morally disengage has been statistically controlled by including it in the theoretical model.

3.7 Summary

This chapter developed the theoretical model in an attempt to fill the gap identified through detailed analysis of literature in the previous chapter. The said model drew on the integration of *social cognitive theory* (Bandura, 1986) with the *throughput model of decision-making* (Rodgers, 1997). The second section of chapter detailed the social cognitive theory, followed

by an explanation of the throughput model in the third section. The fourth section included a conceptual framework that justified the link between the social cognitive theory and the throughput model. The study's theoretical model was presented in the fifth section, followed by hypotheses development in the sixth section.

The next chapter will discuss the research paradigm, the methodology and the methods that have been adopted for seeking answers to this study's research questions.

CHAPTER 4: RESEARCH PARADIGM, METHODOLOGY AND METHODS

*“I keep six honest serving-men (they taught me all I know); their names are what and why
and when and how and where and who”*

Rudyard Kipling

4.1 Introduction

The research paradigm, methodology and methods are meant to address a wide range of *what, why, when, how, where* and *who* questions, including what philosophical assumptions underlie the research? why should the study be conducted in a certain way? when did the research take place? how did it happen? where did it take place? and who was involved? (Ellis and Levy, 2008). This chapter is meant to discuss and justify the paradigm underpinning this study, the methodology adopted for seeking answers to the study’s research questions and the specific methods used for data collection and analysis. The second section on research paradigms includes discussions about the approaches to research, the postpositivism paradigm and the assumptions and rationale for post-positivist perspective towards this study. The third section on research methodology discusses the experiment methodology and provides a rationale for its adoption. The research methods for data collection and analysis have been detailed in the fourth section. Finally, the fifth section will summarise this chapter.

4.2 Research Paradigms

Research paradigm is about the philosophical issues underpinning a research. It represents a set of common beliefs and agreements, shared between the scientists, about how the problems should be understood and addressed. Thus, every research is based on underlying philosophical assumptions about what constitutes valid research and which methods are appropriate for the development of knowledge in that research study (Collis and Hussey, 2009; 2014; Kuhn and Hacking, 2012). The paradigm is, therefore, a perspective that researchers adopt to look at the research problem. Due to their crucial role towards the adoption of a particular research approach, the philosophical assumptions need to be specifically identified (Creswell, 2014).

Burrell and Morgan (1979) suggested using paradigm at the following three levels;

- Philosophical level, where the term paradigm is used to reflect basic beliefs about the world in terms of the nature of reality and knowledge.
- Social level, where the term paradigm is used to provide guidance about how a research should be conducted.
- Technical level, where the term paradigm is used to specify the techniques and methods that ideally should be adopted when conducting a research.

Different approaches exist within the research paradigms (Collis and Hussey, 2014). According to Creswell (2014), the overall research approach refers to the plans and procedures that originate in broad assumptions and converge to the detailed methods of collecting, analysing and interpreting the research data. In this regard, Collis and Hussey (2014) suggested thinking of positivism¹⁰ and interpretivism¹¹ as two extremes on a continuum of research paradigms, with different research approaches associated with these paradigms. One of the distinctions is proposed to be the ‘quantitative approaches corresponding to positivism’ versus ‘qualitative approaches corresponding to interpretivism’¹². According to Newman and Benz (1998) and Creswell (2014), the quantitative and qualitative approaches represent two ends of a continuum, with a mixed methods approach at the middle as it incorporates elements of both the quantitative and qualitative approaches.

In the case of quantitative research, the researcher has an impersonal role in research and the main purpose of the enquiry is to understand phenomena and to construct knowledge. The theories are tested by examining relationships between variables. However, the researcher has a personal role in the case of qualitative research where the main purpose of enquiry is to explain phenomena and to discover knowledge (Stake, 1995; Collis and Hussey, 2009). Furthermore, where quantitative research is deductive and begins with a well-defined research design, there qualitative is inductive and the research questions, mainly, evolve during the study (Lincoln and Guba, 1985; Ghauri and Gronhaug, 2010; Lindlof and Taylor, 2010). A

¹⁰ Positivism paradigm is based on the assumption that social reality is singular and objective and is not affected by the act of investigating it (Collis and Hussey, 2014).

¹¹ Interpretivism paradigm is based on the assumption that social reality is in our minds and is subjective and multiple. The reality, therefore, is affected by the act of investigating it (Collis and Hussey, 2014).

¹² Collis and Hussey (2014) pointed out that the referring to research approach as quantitative or qualitative might be misleading such as, when a researcher collects qualitative data that can be quantified for statistical analysis. In this case, although the overall approach is quantitative but might be misunderstood as being qualitative.

quantitative approach to research involves the collection of quantitative data (or qualitative data that can be quantified) and statistical analysis and the qualitative approach collects qualitative data that is analysed using interpretative methods (Collis and Hussey, 2014; Creswell, 2014). Some researchers (Easterby-Smith, Thorpe and Jackson, 2008; Collis and Hussey, 2009; Saunders, Thornhill and Lewis, 2009; Creswell, 2014) argue that complete understanding of the research problem requires a combination of quantitative and the qualitative approaches. They suggest using mixed methods to avail the advantages of both the approaches.

As suggested by Creswell (2014), the decision to adopt a quantitative approach for this study has been informed by the philosophical assumptions underpinning this study, the strategies of inquiry implemented for addressing the research questions and the research methods for collecting, analysing and interpreting data. Thus, the reciprocal intersection of research paradigm, research methodology and the research methods have guided the quantitative approach to this research.

4.2.1 Postpositivism Paradigm

Although this study takes postpositivism paradigm, a brief account of closely related positivism will help understand how postpositivism originated and how it is connected to this study. Traditional positivism originated in natural sciences and had its roots in ‘realism’ philosophy which holds that reality exists independent of the observer – for instance, whether God exists or not is not affected by an individual’s decision to believe or to not (Barnes, Wright and Brandon, 2013).

Under positivism paradigm, researchers’ belief about the world and the nature of knowledge rests on the assumption that social reality is singular and objective and that it is not affected by the act of investigating it (Collis and Hussey, 2014; Creswell, 2014). Positivism informs most of the research in natural sciences and assumes single objective truth which is discoverable through careful observation and measurement and can be proven through repeated measures (Littlejohn and Pegler, 2007). Research drawing on positivism employs pre-existing theories that provide the basis of explanation and prediction of phenomena.

Positivism invited criticisms when the trends in research changed and the traditional scientific methods established by natural scientists (and used by positivists) seemed inadequate to meet

the needs of social scientists. Critics argued that it is impossible to separate people from the social contexts they exist in and that complete understanding of the people requires examining the perceptions they hold of their behaviour. They further asserted that the highly structured research designs under positivism constrain the results of research. Moreover, researchers bring in their interests and values to the research as they are a part of it and further that complex phenomena cannot be, sufficiently, captured using a single measure (Collis and Hussey, 2014). In response to such criticisms on positivism, postpositivism paradigm emerged in the 1950s - 60s (Creswell, 2014).

Postpositivism has its roots in natural as well as the social sciences. It represents thinking that developed after positivism (hence the term postpositivism). This paradigm challenges the traditional idea of 'knowledge as an absolute truth'. Post-positivists believe that knowledge is conjectural because absolute truth can never be found (Phillips and Burbules, 2000). With particular reference to this research, postpositivism recognises that when studying the behaviour of humans, one cannot be positive about the claims of knowledge (Creswell, 2014).

4.2.2 Assumptions of Postpositivism

So that the researchers can identify their research orientation, it is necessary to understand the philosophical assumptions that underpin research paradigms. The main assumptions relate to the ontological, epistemological and methodological positions (Creswell, 2014).

4.2.2.1 Ontological Assumption

Ontology is the branch of philosophy that is concerned with the nature and structure of the world. It specifies the nature and form of reality and what can be known about it (Wand and Weber, 1993). This assumption corresponds to the philosophical level suggested by Burrell and Morgan (1979), where the paradigm is used to reflect basic beliefs about the world.

Postpositivism assumes critical realist ontology which provides that reality does exist independent of observers' thinking, but cannot be understood perfectly (Guba, 1990; Littlejohn and Pegler, 2007). Since postpositivism holds that knowledge is conjectural and not an absolute truth, the evidence established by researchers is imperfect (Creswell, 2014). Positivists' realism also advocates the existence of an objective social reality that exists external to the researcher, but the reality is rigidly believed to be singular that can be perfectly understood. Critical realists believe that observation is imperfect and has errors and further that the theories can be revised.

The post-positivists, therefore, do not believe in the existence of absolute truth and are critical of a researcher's ability to know the reality with complete certainty (Trochim, 2006).

4.2.2.2 Epistemological Assumption

The epistemological assumption is about what constitutes valid knowledge and what relationship exists between the researcher and that researched (Collis and Hussey, 2009; 2014). This assumption corresponds to the social level suggested by Burrell and Morgan (1979), where the paradigm is used to provide guidance about how a research should be conducted.

Postpositivism assumes empiricist epistemology which holds that valid knowledge is derived using a scientific method of enquiry. Post-positivists begin with a testable hypothesis and make the claims. The collected data may either support the theory or negate it, in which case the required revisions are made to the theory and additional tests conducted. Importantly, post-positivists must examine the methods and conclusions for bias, because being objective is an essential feature of competent enquiry (Creswell, 2014). Positivists also believe that valid knowledge is the one that is derived from objective evidence about observable and measurable phenomena and that the researcher is distant from the phenomena under study. However, contrary to the post-positivists' belief, positivists are quite rigid in their beliefs about single reality (Littlejohn and Pegler, 2007).

4.2.2.3 Methodological Assumption

The methodological assumption is associated with the process of research. This assumption corresponds to the technical level suggested by Burrell and Morgan (1979), where the paradigm is used to specify the techniques and methods that ideally should be adopted when conducting a research.

Post-positivists tend to be deterministic and believe the causes to be determinants of the effects. They study problems that reflect the need to identify and measure the causes that affect outcomes. Furthermore, post-positivists are also reductionists and test the ideas by reducing these into small discrete sets such as the variables corresponding to the research questions and hypotheses (Creswell, 2014). Practically, post-positivists follow deductive approach and collect data by recording observations or by using the participants' self-reported data. Thus, knowledge is shaped with the help of data, evidence and rational considerations (Philips and Burbules, 2000). Post-positivists state that they 'do not prove a hypothesis' but 'fail to reject a

hypothesis’ – thus, where post-positivists are concerned about falsifying hypotheses, there positivists verify hypotheses (Philips and Burbules, 2000; Littlejohn and Pegler, 2007; Creswell, 2014).

4.2.3 Rationale for adopting Postpositivism Paradigm

The choice of philosophical paradigm is largely based on the research questions (Simons and Merchant, 1986; Abernethy, Chua, Luckett and Selto, 1999). Littlejohn and Pegler (2007) provide that research questions define the ontology, epistemology and methodology of a study but not vice versa. Overall, this study’s research questions are aimed at understanding the process through which conflict of interests affects accounting professionals’ decision-making behaviour. The following discussions elaborate how the postpositivism is well-suited to serve the aim of this study;

First, this study examines the intermediary role of cognitive processes (i.e. positive outcome expectancy, perceived difficulty and ethical judgement) in the relationship between conflict of interests and deviant decision-making behaviour. The said cognitive processes have been measured as the self-reported perceptions that represent reality, but at the same time cannot be substituted for absolute truth – there is a difference between ‘reality’ and ‘perception of reality’ (Churchland, 1979, Littlejohn and Pegler, 2007). Resultantly, imperfect evidence can be established which implies that the knowledge so gained will be conjectural and the evidence established by the researcher will be imperfect (Creswell, 2014). This process corresponds to the ontological assumptions underlying postpositivism.

Second, postpositivism assumes empiricist epistemology which provides that valid knowledge is derived using a scientific method of enquiry (Littlejohn and Pegler, 2007; Collis and Hussey, 2009; 2014). This study also begins with the hypothesised relationships drawn from the social cognitive theory and the throughput model of decision-making. The collected data may either support or negate the theory in which case required revisions can be proposed for the theory and additional tests can be conducted by the future researchers. Similarly, in accordance with the post-positivists’ epistemological assumptions, this study also considers ‘objectivity of researcher’ an essential feature of competent enquiry (Creswell, 2014) and thus, the methods and conclusions will be examined for bias.

Third, the methodological assumptions underlying postpositivism endorse a deductive

approach to research and a collection of data by recording observations or by using scales for participants' self-reports. This study also follows deductive logic and the data have been collected using the Likert-type scales and items for self-reported perceptions and behaviour. Furthermore, this study claims to strive towards the post-positivists' stance, i.e. falsifying a hypothesis and not the positivists' stance, i.e. verifying a hypothesis (Philips and Burbules, 2000; Littlejohn and Pegler, 2007; Creswell, 2014).

Fourth, the accounting professionals' cognitive processes serve as the endogenous variables in this study. In the era dominated by positivism, researchers had to predict behaviours by focusing on the positive and negative reinforcements of behaviour and any intervening processes (such as perceptions and thinking) were ignored, since those could not be measured with absolute certainty. However, there is no such restriction for post-positivists who study behaviour and are concerned with developing numeric measures of observations on the cognitive processes (Creswell, 2014). This study seeks to examine the perceptions, judgements and perceptual biases in situations involving a conflict of interests – according to Bisman (2010), post-positivists' critical realism has the potential to investigate the cognitive processes.

Finally, the criticisms on positivism also provide a rationale for adopting postpositivism paradigm for this study. In agreement with postpositivism, this study goes beyond traditional positivism and acknowledges that it is not possible to separate people from the social contexts which they operate in – just as the researchers bring in their interests and values to research, the accounting professionals work in a dynamic social setting (that is imbued with norms, codes, procedures and regulations etc.) which affects their conduct. The philosophical assumptions of postpositivism allow examination of individuals' decision-making behaviour that this study intends to understand. Consistent with the post-positivists' philosophical assumptions (Healy and Perry, 2000), this study adopts a quantitative approach for examining the cognitive mechanisms underlying the accounting professionals' behaviour.

4.3 Research Methodology

According to Leedy and Ormrod (2005), research methodology is about the steps that are undertaken to derive reliable and valid answers to research questions and is the general approach a researcher takes to conduct the study. Similarly, Collis and Hussey (2014) provided that methodology denotes an overall approach to the process of research, encompassing a body of methods. Importantly, research paradigms provide a framework for determining the research

design, which denotes the choices made in terms of ‘methodology’, and the ‘methods’ used for addressing the research questions (Collis and Hussey, 2009; 2014). Likewise, Littlejohn and Pegler (2007) regard paradigm a tool that researchers use to design their study. In this regard, the main categories of research designs include the quantitative, qualitative and the mixed methods designs. Quantitative designs are aimed at maximising objectivity, replicability and generalizability of the findings and these designs are usually interested in predictions. Qualitative designs attempt to explore and understand the thoughts, experiences and perspectives of the participants. The mixed methods designs tend to draw on the strengths of both the quantitative and qualitative designs and are well-suited to address the research questions demanding rigorous examination (Harwell, 2011).

During the late 19th and the 20th century, the research designs associated with quantitative approaches were those that originated in psychology and invoked postpositivism paradigm. Remarkably, postpositivism facilitates studying human behaviour and is concerned with developing numeric measures of observations on the cognitive processes (Creswell, 2014). Therefore, as suggested by Bryman (2006), the decision to adopt quantitative research design has been informed by philosophical assumptions and the nature and purpose of this study.

4.3.1 Experiments

From within the quantitative research designs, the experiment has been adopted as a methodology to serve the aim and objectives of this study. According to Creswell (2014), experiments are the strategies of inquiry within quantitative research design and are used to identify causal relationships between the variables. The independent variable is manipulated to observe its effect on the dependent variable (Green, Ha and Bullock, 2010; Cozby and Bates, 2011; Imai, Tingley and Yamamoto, 2013; Collis and Hussey, 2014). Over time, experiments have emerged as a powerful design to test scientific theories (Splawa-Neyman, Dabrowska and Speed, 1990).

Experiments could either be true experiments or the quasi-experiments (Morgan, Gliner and Harmon, 2000; Shadish, Cook and Campbell, 2001; DiNardo, 2008; Cozby and Bates, 2011). True experiments are characterised by random assignment of the participants to experimental groups. In the case of quasi-experiments, assignment to groups is not purely random and is based on other criteria such as experience or income of the participants (Morgan, Gliner and Harmon, 2000). Moreover, experiments can either be conducted in the natural setting of the

participants – i.e. field experiments or in the artificial environment created to simulate natural setting – i.e. laboratory experiments (Cozby and Bates, 2011). In recent years, there has been an increasing trend of web-based experiments (also termed online laboratory) in psychology and social sciences (Bainbridge, 2007). The web-based experiments enable researchers to reach more diverse samples and to recruit a large number of participants (Kramer, Guillory and Hancock, 2014). For instance, Salganik, Dodds and Watts (2006) used web-based design to collect data from over 14,000 participants.

In the case of nonexperimental quantitative research methodologies (such as surveys), both the independent and dependent variables are measured and are not suitable when a researcher is interested in the cause and effect relationships. Moreover, the nonexperimental methodologies are frequently prone to the problem of confounding variables which, in turn, harms the internal validity of research findings. However, experimental designs (especially those conducted in artificial settings) attempt to eliminate the influence of confounding variables, by eliminating certain variables or keeping some others constant and, thus, reduce ambiguity in the interpretation of results (Cozby and Bates, 2011). Alongside the manipulated independent variable(s), the quasi-experiments allow examining naturally occurring variables such as the personal attributes of participants (Morgan, Gliner and Harmon, 2000). To be elaborated in the later section on research methods, the nature of this study needs the controls for potential confounding variables and also considers the personal attributes of the participants.

However, the experimental methodology also invites several criticisms. The common criticism is that they only reveal, but do not explain the causal relationships. This criticism, however, fades away with the inclusion of mediating variables that tend to reflect on the process underlying observed causation (Green, Ha and Bullock, 2010). Furthermore, the experiments are believed to have a limited external validity, which poses restrictions on the replication of research in different settings and with different participants (Cozby and Bates, 2011). This study relates to a particular setting (i.e. professional accounting firms) and also the particular participants (i.e. accounting professionals) – therefore, external validity is not expected to be much of an issue for the future research related to the professionals from accounting firms. Moreover, this study attempts to mitigate the problem of limited external validity, by controlling for the main potential confounding variables.

The quantitative strategies have evolved over time and include complex experiments with many variables (as in Brandon, 2003; Guiral, Rodgers, Ruiz and Gonzalo, 2010; Juhari, Mohd-

Sanusi, Rahman and Omar, 2013). Researchers have begun using structural equation models that include many causal paths and determine the strength of multiple variables (Creswell, 2014). Taking into consideration the philosophical assumptions underlying this study and the context and purpose of the study, the aforementioned discussions justify experimental methodology as the most appropriate strategy of inquiry for this research.

4.3.2 Rationale for Adopting Quasi-Experiment

In order to address the research questions, this study adopts repeated measures web-based quasi-experiment as a specific methodology.

In the repeated measures or within-subject experimental designs, all the participants are assigned to all the manipulations of the independent variable. Comparisons are made within the same group of participants (Collis and Hussey, 2014). This approach is beneficial over the independent groups or between-subjects design because the individual differences among the participants are same across all the manipulations and thus, any differences in the dependent variable(s) can be attributed to the changes in the independent variable (Cozby and Bates, 2011). Moreover, the use of repeated measures is suitable when the purpose is to expose the participants to a wide variety of conditions, in order to examine the differences in their responses (Shadish, Cook and Campbell, 2001). One of the objectives of this study is to understand how different categories of conflicting interests affect decision-making and, therefore, comparisons across the same person are required to better understand the phenomenon.

Web-based experiments invited criticism that they have weaker experimental controls than the traditional laboratory ones – for instance, the participants might not take the experiment seriously and that they might make wrong claims about their demographics. However, some others (e.g., Reips, 1996; Hartshome, 2007) disregard such criticisms and asserted that the laboratory experiments can also be affected by the same problems. Schoeffler et al. (2013) compared the laboratory and web-based results of a particular experiment and did not find any significant differences between the results. To be elaborated in the later section on research methods, the robustness of this study's experiment is expected to overcome the limitations associated with the web-based experiments.

Just as the nonexperimental methods, quasi-experiments are sometimes criticised for the

possibility of confounding bias which is believed to challenge the internal validity of research findings (DiNardo, 2008). Such bias, however, can be controlled by using various statistical techniques such as multiple regression. This study uses path analysis which is an advancement of multiple regression (Streiner, 2005) and, thus, confounding bias has been taken care of.

Moreover, there are other advantages of quasi-experiments that are of direct relevance to this study. For instance, Derue, Nahrgang, Hollenbeck and Workman (2012) provide that quasi-experiments allow researchers to use any manipulations they want to. Furthermore, these incorporate features from both the experimental and the non-experimental designs in that both the manipulated and the measured variables can be brought in. In this way, quasi-experiments tend to maximise the internal and the external validity. This study's theoretical framework stresses the need for both the manipulated and the measured variables. Therefore, quasi-experiment is the most appropriate to address this concern.

4.4 Research Methods

Research methods are the specific tools and techniques used for data collection, analysis and interpretation. In order to ensure that the research design corresponds to the philosophical assumptions of research paradigm, a researcher needs to adopt a cohesive approach when choosing the research methods (Littlejohn and Pegler, 2007; Collis and Hussey, 2009; 2014; Creswell, 2014). In accordance with the postpositivism paradigm and the experimental methodology, this study adopts quantitative research methods – the type of data to be collected has been specified in advance, the data to be analysed is in numeric form and the statistical results will be interpreted for the findings and conclusions.

The 'method plan' for this experimental study is based on the suggestions by Wimmer and Dominick (2013) and Creswell (2014). Accordingly, the research methods will include discussions on research context, research population, sampling frame, sampling, experimental vignettes, operationalization of variables, instrumentation, threats to validity, administration of experiment and finally the statistical technique(s) for data analysis.

The table 4.1 highlights the main differences between the quantitative, qualitative and the mixed methods.

Table 4.1 Differences between Quantitative, Qualitative and Mixed Methods (Adapted from Creswell, 2014)

| DIFFERENTIATING CRITERIA | Quantitative Methods | Qualitative Methods | Mixed Methods |
|---------------------------------|---|---|----------------------------------|
| Collection | Predetermined | Emerging methods | Predetermined and emerging |
| Type of Questions | Instruments based questions, closed-ended | Open-ended questions | Closed- and Open-ended questions |
| Examples | Attitude data, census data, performance data and observational data | Audio-visual data, document data, interview data and observation data | Multiple forms of data |
| Analysis | Statistical analysis | Text and image analysis | Statistical and text analysis |
| Interpretation | Statistical interpretation | Interpretation of themes and patterns | Interpretation across databases |

4.4.1 Research Context

Careful site selection holds utmost importance for successful theory testing. Researchers should be considerate of various important issues such as the availability of data, suitability of the organisation and the appropriateness of the units of analysis (Anderson and Widener, 2007). Availability of the participants and available resources are important considerations when designing the study (Wimmer and Dominick, 2013). In order to address this study's research problem, the Big Four professional accounting firms (Deloitte, EY, KPMG and PwC) in the UK have been chosen for the empirical part of study. There are many compelling reasons that make the Big Four in the UK an appropriate research context.

First, Big Four represents the largest international professional networks and offer a wide range of audit and non-audit services, including consultation, advisory, actuarial, assurance, corporate finance and legal services. A vast majority of audits for publicly traded and many private companies are done by the Big Four. Reportedly, the Big Four firms audit 99% of the companies from FTSE 100 and 96% from the FTSE 250 index (Christodoulou, 2011). Given the wide range of services being offered to a number of big companies, it becomes apparent

that the Big Four play an important role in capital markets. The efficiency of the capital markets relies on audited statements of the companies whose stocks are being traded publicly. Hence, the Big Four have a unique role of serving in the best interest of the shareholders, despite their relationship with the clients' management. The Big Four have returned to the consultancy business and the worry is that conflict of interests might be an issue of more concern, due to continuous growth in the provision of non-audit services (Agnew, 2015; Loxton, 2015).

Secondly, the mismanagement of conflict of interests in the Big Four is still an active issue of concern. In June 2015, EY was fined £250,000 over the failure to disclose a conflict of interests. For the similar reasons, PwC was fined \$25m in August 2014 and Deloitte was fined \$10m in June 2013 (Agnew, 2015). Similarly, on account of flawed audits, Deloitte was recently fined 1.81m Euros, EY for 2.23m, KPMG was fined 1.25m and PwC for 85,000 Euros (Loxton, 2015). Such cases pertaining to the Big Four raise curiosity about the possible flaws in their conduct. In its annual review of the Big Fours audits, the Financial Reporting Council found many areas that needed to be addressed for improvement (Irvine and Doherty, 2015).

Thirdly, the Big Four are considered the trendsetters in the professional accounting world and their policies also have an impact on other accounting firms.

Fourth, lack of empirical evidence for the impact of conflict of interests on the accounting professionals' decision-making, in general and in the UK, in particular, is another reason for choosing the Big Four from within the UK. There have been increasing calls for understanding the interaction of conflicting interests with decision-making in the professional accounting firms (Moore, Loewenstein, Tanlu and Bazerman, 2003; Moore and Loewenstein, 2004; Moore, Cain, Loewenstein and Bazerman, 2005; Moore, Tetlock, Tanlu and Bazerman, 2006; Moore, Tanlu and Bazerman, 2010).

Finally, as the researcher is based in the UK, it is feasible to conduct and administer the empirical study in this country.

4.4.2 Research Population, Sampling Frame and Sampling

Identification of research populations allows creating a sampling frame which then leads to the derivation of the sample for empirical data collection (Saunders, Thornhill and Lewis, 2009). Population represents the full set of cases from which a sample is to be drawn (Bryman and Bell, 2007). According to Collis and Hussey (2009), population denotes a precisely defined

body of individuals or objects under consideration. Professionals from the Big Four accounting firms in the UK represent the population for this study.

Sampling frame has to be defined after identification of the research population. According to Saunders, Thornhill and Lewis (2009), a sampling frame is a complete list of all the cases in the target population. Often the sampling frames are derived from reliable databases, as it is essential to have an accurate sampling frame. In order to identify the sampling frame, *Register of Statutory Auditors* was used. This register contains information on the audit firms and the statutory auditors in the UK. It provides contact details of the 'Recognized Supervisory Body (RSB)' with which an audit firm is registered and the contact details of registered audit firms and the professionals. The sampling frame derived from the register comprised of a list of the professionals from the Big Four accounting firms in the UK (Register of Statutory Auditors, 2015).

Sampling is done when it is not possible to include the entire population in the study and there are time or budget constraints involved (Saunders, Thornhill and Lewis, 2009). The sample represents a segment of the population that is chosen for empirical investigation (Bryman and Bell, 2007). The two main sampling techniques are the 'representative or probability sampling' and the 'judgemental or non-probability sampling'. With an intent to keep sampling error to a minimum, probability sampling involves selecting a random sample such that each unit in the population has an equal chance of being selected. There are various techniques of probability sampling, including simple random, systematic random, stratified random, cluster and multistage sampling. Non-probability sampling involves non-random selection of sample such that each unit in the population does not have an equal chance of being selected. Various techniques of non-probability sampling include quota sampling, snowball sampling, purposive sampling, theoretical and the convenience sampling (Bryman and Bell, 2007; Saunders, Thornhill and Lewis, 2009).

Given the difficulty in recruiting accounting professionals, this study adopted convenience sampling technique. The sample, therefore, includes all those professionals who were willing to participate. Specifically, a list of total 3295 professionals (i.e. the sampling frame) was created using the 'Register of Statutory Auditors'. The register does not provide email addresses of the professionals and, thus, the addresses had to be googled for. Out of these, a total of 2283 addresses could be arranged and the list of contactable professionals reduced to this number. Technically, the resultant list of contactable professionals did not constitute an

accurate sampling frame, but according to Saunders, Thornhill and Lewis (2009), the precise sampling frame is a matter of concern in the case of probability sampling. As this study is based on convenience sample – a non-probability technique, the exact sampling frame was not required.

The decision to include all the available professionals in the sample was also based on interviews conducted with four professionals (Appendix 1), one each from the Big Four accounting firms. The interviewees were asked to describe their firms' audit engagement process with specific reference to the factors considered when accepting a client, the composition of audit engagement teams and the decision-making process during engagements. Overall, the responses revealed that the entire process engages participants from all the levels in the firm (including junior auditors, senior auditors, partners, management board and the support staff). This implies that ideally the sample of participants for my research should include personnel from all the levels/designations because everyone in an audit firm is, directly or indirectly, involved in making the decisions that demand them to act in the best interest of the public.

4.4.3 Experimental Vignettes

The quasi-experiment of this study comprises of four separate vignettes (Appendix 2). Vignettes are the stories that represent hypothetical scenarios in order to elicit perceptions, preferences, judgement and the expected behaviour (Caro et al., 2012). Vignettes are useful within both the quantitative and qualitative research on relatively the sensitive topics (Gourlay et al., 2014). According to Taylor (2006), vignettes are suitable for research on professional ethics and judgement. However, the extent to which hypothetical behaviour represents the actual behaviour is sometimes subjected to criticism (Caro et al., 2012). Some researchers have examined the extent to which hypothetical behaviour, as reported in vignette studies, is representative of the actual behaviour. In this regard, some (e.g., Peabody et al., 2000; Peabody et al., 2004; Telser and Zweifel, 2007) found that hypothetical behaviour matched favourably with the actual behaviour. Although Eifler (2007) found mixed evidence, but did not rule out the usefulness of vignettes. Moreover, Juhari, Mohd-Sanusi, Rahman and Omar (2013) successfully used experimental vignettes for examining the impact of independence threats on the auditors' ethical judgement.

Importantly, the appropriate design of experiments is based on the nature of research questions

and hypotheses and the types of variables to be manipulated and measured (Wimmer and Dominick, 2013). The four vignettes used in this study's experiment have been informed by; (i) the *Code of Ethics for Professional Accountants*, (ii) the literature and (iii) the interviews conducted with four professionals (Appendix 1), one each from the Big Four accounting firms. To be elaborated later on, a pilot study was conducted in order to improve the vignettes. Hence, the experiment employed for empirical data collection is quite robust.

4.4.3.1 Relevance of the *Code of Ethics* to Vignettes' Scenarios

The *Code of Ethics for Professional Accountants* was developed by IESBA and approved by IFAC. This code provides a conceptual framework for designing the experimental vignettes. This code adopts 'threats and safeguards approach' for strengthening compliance with the fundamental principles of professional ethical conduct. Various accountancy bodies (including the National Association of State Boards of Accountancy – NASBA, American Institute of Certified Public Accountants – AICPA, Association of Accounting Technicians – AAT, Certified Institute of Management Accountants – CIMA, Institute of Chartered Accountants in England and Wales – ICAEW and the Association of Chartered Certified Accountants – ACCA) are the proponents of the said approach (Johnson and Hansen, 2011).

The code provides that the compliant behaviour is essentially about the compliance with five fundamental principles of professional ethics, i.e. integrity, objectivity, professional competence and due care, confidentiality and the professional behaviour. Particularly, compliance with the fundamental principles constitutes the primary interest of accounting profession. The code recognises various threats, i.e. self-interest, self-review, advocacy, familiarity and intimidation threat to compliance with the fundamental principles. The so recognised threats serve as the sources of secondary interest, which interfere with the primary interest and give rise to the conflict of interests. These conflicting interests lead to the risk of deviation from compliant behaviour. In order to counter the likely devastating impact of conflicting interests, various safeguards have been created by the profession, legislation and the work environment (IESBA, 2015).

With reference to the scenarios used in vignettes, figure 4.1 presents the Code of Ethics for Professional Accountants, in action.

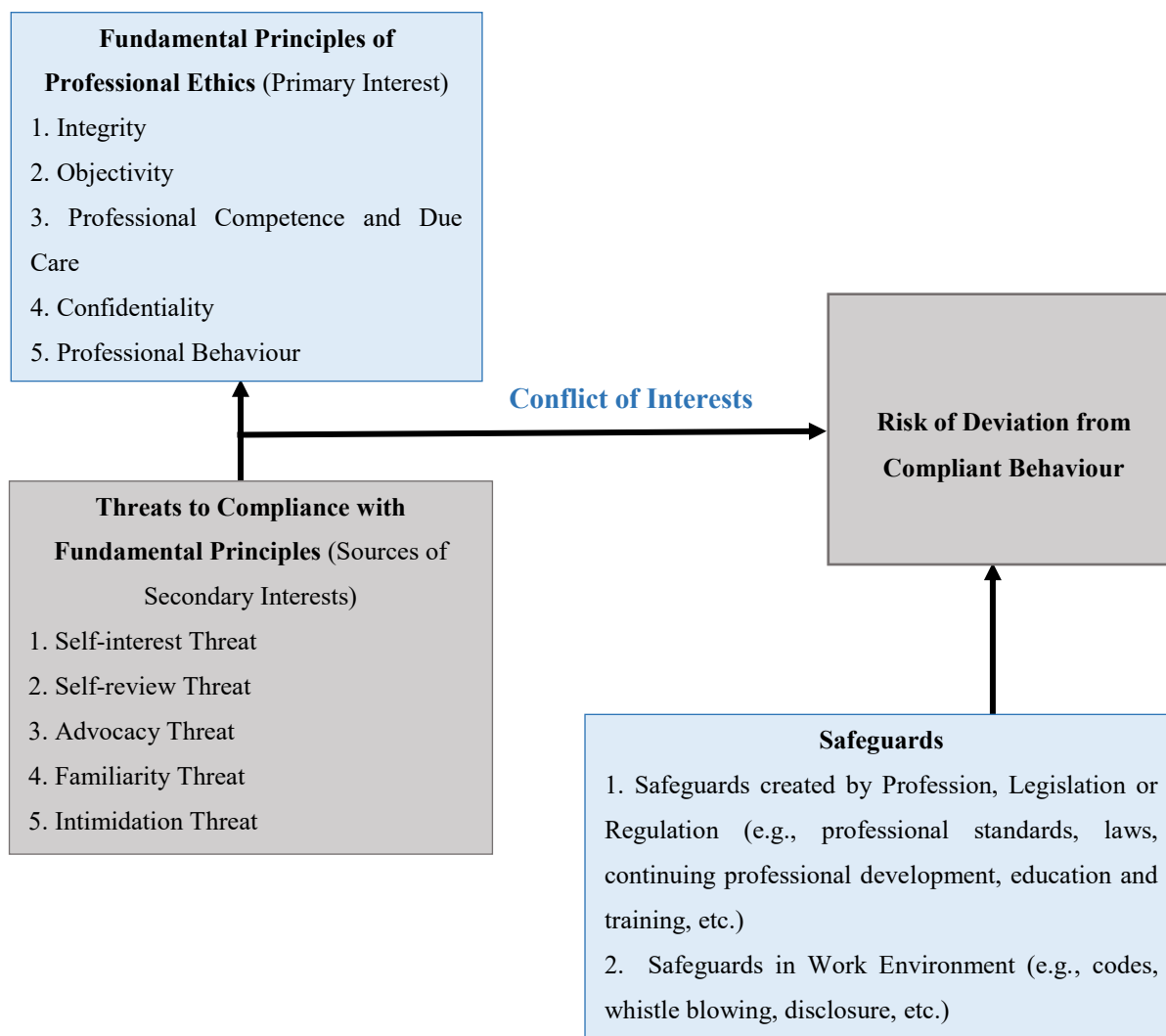


Figure 4.1: Code of Ethics for professional Accountants, in action

The threats and safeguards approach requires the practitioners to identify the threats and then to determine if appropriate safeguards are available for eliminating or reducing the identified threats to an acceptable level. The aim of this approach is to ensure that the ethical behaviour is not compromised (Johnson and Hansen, 2011; IESBA, 2015). With reference to this study's vignettes, the code provides that conflict of interests originates when the threats clash with the fundamental principles of professional ethics.

4.4.3.2 Relevance of Literature to Vignettes' Scenarios

As highlighted in the chapters on literature review and theoretical framework, an insight into the literature and some inspection reports revealed three main sources of secondary interests for the accounting professionals. These sources are; (i) the misaligned incentives with roots in temptation for gain, (ii) misaligned incentives with roots in fear of loss and (iii) the workplace

pressures with roots in fear of loss. Very interestingly, the said three sources coincide with the threats to compliance with the fundamental principles of professional ethics.

The *Code of Ethics for Professional Accountants* itself and the literature relevant to conflict of interests in professional accounting firms (e.g., Allen and Siegel, 2002; Moore, Loewenstein, Tanlu and Bazerman, 2003; Moore and Loewenstein, 2004; Beattie, Fearnley and Brandt, 2005; Moore, Cain, Loewenstein and Bazerman, 2005; Moore, Tetlock, Tanlu and Bazerman, 2006; Guiral, Rodgers, Ruiz and Gonzalo, 2010; Moore, Tanlu and Bazerman, 2010; Juhari, Mohd-Sanusi, Rahman and Omar, 2013) indicate that the root causes underlying self-interest, self-review, advocacy, familiarity and intimidation threats are, primarily, the misaligned incentives with roots in temptation for gain, the misaligned incentives with roots in fear of loss and the workplace pressures with roots in fear of loss.

With reference to this study's vignette scenarios, literature provides that the conflict of interests arises due to the interference of secondary interests (i.e. the threats due to 'misaligned incentives with roots in temptation for gain', those due to 'misaligned incentives with roots in fear of loss' and the threats due to 'workplace pressures with roots in fear of loss') with the primary interests of the professions (i.e. the fundamental principles of professional ethics). Specifically, the conflict of interests (i.e. independent variable in this study) can be manipulated by using different threats.

4.4.3.3 Relevance of Interviews to Vignettes' Scenarios

One of the reasons to conduct interviews with four professionals from the Big Four (Appendix 1) was to inform vignettes' scenarios in terms of the most frequent sources of secondary interests in a professional accounting environment. The interviews suggested that although the final outcome of an audit is the 'issuance of audit opinion', there are many stages involved in forming that opinion – decisions are taken at all the stages and any deviant behaviour is likely to be reflected in the final audit report. Therefore, the compliant behaviour is required at all the stages that lead to the formation of an audit opinion. Similarly, any non-audit services must not let professionals undermine the public interest. Therefore, the vignettes should include different instances of the compliant and deviant decisions, instead of focusing only on the audit opinion.

When asked about the reasons that might lead a professional to not do complete justice to their primary responsibility of serving in the best interest of the public, the interviewees talked about various misaligned incentives and pressures. Interestingly, the responses coincide with the

provisions of *the Code of Ethics for Professional Accountants* and that of literature. According to them, the incentives and disincentives that are not aligned with serving the primary interest, increase the risk that professionals might not be able to do complete justice to their primary responsibility, despite their very good intentions. The incentives and disincentives talked about by the interviewees can be, conveniently, categorised into the three main classes, i.e. the misaligned rewards with roots in temptation for gain, the misaligned rewards with roots in fear of loss and the workplace pressures with roots in fear of loss. Thus, the vignettes were designed to account for these three different sources of conflict of interests.

In order to better understand the impact of conflict of interests on professionals' decision-making, the interviewees were asked to share their personal experiences. Following are some of the responses of the interviewees, verbatim;

“Although I have never experienced personally, but I am aware that some auditors receive under-the-table payment for cooperating with clients’ attempt to manipulate financial transactions”

“.....but if I am an engagement partner and I hold some percentage in the shares of our client then I will naturally have in mind that if qualified audit opinion¹³ is issued, the share price is likely to fall and I might suffer a loss on my investment”

(Interviewee 1)

“I am not sure but have heard that some clients try to bribe senior management of the firm, for cooperation”

“While I can’t be sure what exactly the criteria are, but ‘how well the clients are treated’ and ‘positive feedback about the engagement team’ are considered when we are rewarded. In such situations, conflict might arise between serving the client or the public”

(Interviewee 2)

“I would say that compared to the rewards, pressures are a stronger factor that gives rise to

¹³ Qualified opinion is an auditor's (or auditing firm's) judgement that the company's financial information is limited in scope and that some of the accounting procedures do not conform to the generally accepted accounting principles (Pierce, 2007).

conflict of interests for auditors and partners on the engagement team”

“.....however, I will not get tempted by misaligned bonus because my good reputation is very dear to me”

(Interviewee 3)

“Any conflict of interests at the personal level is often difficult to manage due to human nature, especially in the cases such as future job prospects with a client or personal affiliation with an employee in the client company”

"I believe that conflicts of interests are natural, but also negative in a sense that they put desired behaviour to risk"

(Interviewee 4)

With reference to the vignette scenarios, the responses reveal that conflict of interests abounds in the audit profession and are usually a natural phenomenon, especially when they are caused by environmental factors, including the misaligned rewards and workplace pressures. Accordingly, the vignette scenarios should also include a combination of various threats to examine their likely impact on the professionals’ decision-making behaviour. Consistent with the literature and the theoretical framework, the interviews added strength to the argument that ‘the presence of a conflict of interests does not guarantee deviant behaviour but put compliant behaviour at risk’. Therefore, the vignettes can better address this study’s research questions, with a focus on ‘the impact of conflict of interests on the *likelihood* of deviant or compliant behaviour’.

4.4.3.4 Composition of Vignette Scenarios

This study’s experiment comprises of four vignettes (Appendix 2) that have been informed by the *Code of Ethics for Professional Accountants*, the relevant literature and the interviews conducted with four professionals from the Big Four accounting firms.

The hypothetical scenarios for all the four vignettes have been derived from *Ethical Dilemmas Case Studies* developed by the *UK and Ireland’s Consultative Committee of Accountancy Bodies, 2011*. These case studies make perfect relevance to this study because the conceptual framework driving these is the *Code of Ethics for Professional Accountants*. Hence, all the

ethical dilemmas are based on the ‘threats and safeguards approach’ that is one of the informants of the vignettes. Importantly, all the case studies are followed by a clear guidance on the compliant versus deviant decision in given dilemma situations and the same have been included in the vignettes. Thus, the decision on what constitutes compliant or deviant behaviour in any given situation is not susceptible to researcher’s bias. Notably, all the vignettes are intentionally designed to be simple because ‘task complexity’ has been treated as one of the controls – thus, any changes in response to different vignettes cannot be attributed to the difficulty level of the task.

Vignette 1 represents the situation involving a ‘conflict of interests due to self-interest threat’, with temptation for gain as an underlying stimulus of secondary interest. Vignette 2 represents the situation involving a ‘conflict of interests due to intimidation threat’, with workplace pressure as an underlying stimulus of secondary interest. Vignette 3 includes the situation involving a ‘conflict of interests due to a combination of self-interest and self-review threats’, with fear of loss as an underlying stimulus of secondary interest. Finally, vignette 4 represents the situation involving a ‘conflict of interests due to a combination of self-interest, intimidation, self-review and familiarity threats’ – the temptation for gain, workplace pressure and the fear of loss simultaneously act as the underlying stimuli of secondary interest(s). Some researchers (Moore and Loewenstein, 2004; Beattie, Fearnley and Brandt, 2005; Moore, Cain, Loewenstein and Bazerman, 2005; Moore, Tetlock, Tanlu and Bazerman, 2006; Guiral, Rodgers, Ruiz and Gonzalo, 2010; Moore, Tanlu and Bazerman, 2010; Juhari, Mohd-Sanusi, Rahman and Omar, 2013) have, directly or indirectly, followed the same sort of approach to examine the ethical concerns in a professional accounting environment.

4.4.4 Operationalisation of Variables

Operationalisation is about defining the research variables as measurable factors. It is meant to specify the exact definition of each variable and, thereby, to improve the quality of the results and the robustness of the design (Shuttleworth, 2008). In an experimental design, the independent variable is operationalised in terms of the manipulation used to create it. The dependent variables are operationalised by constructing scales or rules for categorisation of the observed behaviour (Wimmer and Dominick, 2013). All the variables of this study have been operationalised in accordance with the relevant accounting and psychology literature.

Each of the four vignettes comprises of one independent variable (i.e. conflict of interests),

three intervening variables (i.e. positive outcome expectancy of compliant decision-making, perceived difficulty in making a compliant decision and ethical judgement), one dependent variable (i.e. likelihood of deviant decision-making behaviour) for main analysis and other dependent variable (i.e. likelihood of compliant decision-making behaviour) for complementary analysis.

Two control variables (i.e. the occupational self-efficacy and the propensity to morally disengage) have also been measured as part of the experiment.

4.4.4.1 Conflict of interests (CoI)

Conflict of interests is the independent variable which has been manipulated through different threats to compliance with the fundamental principles of professional ethics, in four different ways. The vignette 1 involves conflict of interests due to self-interest threat – CoI-1, vignette 2 includes conflict of interests due to intimidation threat – CoI-2, vignette 3 involves conflict of interests due to a combination of self-interest and self-review threats – CoI-3 and vignette 4 is about conflict of interests due to a combination of self-interest, intimidation, self-review and familiarity threats – CoI-4 (IESBA, 2015). The threats are not specifically named in the vignettes, but underlie the hypothetical scenarios used in each of the vignettes.

4.4.4.2 Likelihood of Deviant Decision-Making Behaviour (DD)

DD has been operationalised as the likelihood of making a deviant decision. The deviant decision represents the decision choice that is in nonconformity with the primary interest of the accounting profession. For instance, (i) the acceptance of offered 70% discount, (ii) agreeing to perform the task assigned (irrespective of the lack of competence), (iii) not disclosing the minor weaknesses in internal control system of the client and (iv) not reporting the matter to tax authorities, represent deviant decision choices in case of vignette 1, vignette 2, vignette 3 and vignette 4, respectively.

4.4.4.3 Likelihood of Compliant Decision-Making Behaviour (CD)

CD has been operationalised as the likelihood of making a compliant decision. The compliant decision represents the decision choice that is in conformity with the primary interest of the accounting profession. For instance, (i) refusing to accept the offered 70% discount, (ii) refusing to perform the task assigned (on account of the lack of competence), (iii) admitting

the negligence in the initial evaluation of internal control system of the client and (iv) reporting the matter to tax authorities, represent compliant decision choices in case of vignette 1, vignette 2, vignette 3 and vignette 4, respectively.

4.4.4.4 Positive Outcome Expectancy of Compliant Decision-Making (POE)

POE has been operationalised as the professionals' expectation that the overall positive outcomes of compliant decision-making will outweigh its overall negative outcomes. For instance, the professionals' expectation that; (i) the overall positive outcomes of declining the offered 70% discount will outweigh its negative outcomes, (ii) the overall positive outcomes of refusing to perform the task will outweigh its negative outcomes, (iii) the overall positive outcomes of disclosing their negligence in initial evaluation will outweigh its negative outcomes and that (iv) the overall positive outcomes of disclosing the past undisclosed income to tax authorities will outweigh its negative outcomes, represent POE in case of vignette 1, vignette 2, vignette 3 and vignette 4, respectively.

4.4.4.5 Perceived Difficulty in Making Compliant Decisions (PD)

PD has been operationalised as the professionals' perceived difficulty in making a compliant decision. For instance, the professionals perceived levels of difficulty in; (i) refusing to accept the offered 70% discount, (ii) refusing to perform the task, (iii) accepting their negligence in initial evaluation of the internal control system of the client and (iv) disclosing the past undisclosed income to tax authorities, represent PD in case of vignette 1, vignette 2, vignette 3 and vignette 4, respectively.

4.4.4.6 Ethical Judgement (EJ)

EJ has been operationalised as the participants' judgement about the ethicality of decision choices. The professionals' judgement that 'the given compliant decision choice is the most ethical course of action' represents the 'most ethical judgement'. Likewise, their judgement that 'the given deviant decision choice is the most ethical one' represents the 'least ethical judgement'. Furthermore, 'less ethical judgement' is said to be formed if professionals regard both the decision choices (compliant and deviant) as ethically appropriate.

4.4.4.7 Occupational Self-Efficacy (OSE)

OSE has been introduced in the study's model as the control variable and represents the

dispositional trait of an individual. OSE has been operationalised as the professional's perceived ability to successfully cope with the occupation-related challenges and tasks. Since OSE has been included as a dispositional factor, it remains context free. Thus, OSE for a particular participant will be same across all the experimental vignettes.

4.4.4.8 Propensity to Morally Disengage (PMD)

PMD has been introduced in the study's model as the control variable and represents the dispositional trait of an individual. PMD has been operationalised as the professional's tendency to consider the unethical/immoral behaviour as ethically/morally acceptable. Since PMD has been included as a dispositional factor, it remains context free. Thus, PMD for a particular participant will be same across all the experimental vignettes.

4.4.5 Research Instrumentation

Research instrument refers to the measurement device (e.g. questionnaires, scales, personal inventories, self-checklists and aptitude test etc.) used in research. Instrumentation refers to the overall course of action adopted in developing, testing and using the research instrument (Biddix, 2009). The use of online products for designing research instruments is getting increasingly common (Sue and Ritter, 2012). The research instrument (Appendix 2) used for this study's data collection has been developed using Qualtrics, which is one of the leading online data collection software.

4.4.5.1 Ethical Considerations

Researchers must take into consideration the ethical concerns surrounding their studies. It is essential to adopt ethical practices and to anticipate the likely ethical issues (Creswell, 2014). All the stakeholders of the research, including the participants, researcher and the researcher's organisation must not suffer any discomfort, embarrassment, damage or loss of property (Cooper and Schindler, 2006).

Data collection was conducted in accordance with the *Anglia Ruskin University's Research Ethics Policy*. Prior to approaching the participants, the policy requires researchers to seek ethical approval for their pilot studies and research projects. All the researchers are required to comply with the laws and codes of practice applicable to their area of research. The researchers must also undertake compulsory research ethics training. Accordingly, in order to acquire

ethical approval for commencing data collection process, research ethics application form was filled in and submitted to the research ethics panel of the university's business school. Because this study involves human participants and offered an incentive (to be won through lucky draw), it was required to submit the participant information sheet and the participant consent form.

In the first section of participant information sheet, researchers are required to provide the participant(s) up with an overview of the research project. Specifically, the sheet includes the title of the project, brief summary of research, the reason of invitation, the likely benefits of participating, participant's right to refuse participation, informing participants of the ethical approval and the contact details of researcher. The second section of information sheet provides details regarding what the participants will be asked to do, confidentiality and anonymity, any possible risks, the intended use of data to be collected and the complaints procedure. Data for this study was collected using web-based experiment and, therefore, the contents of the participant information sheet were incorporated in the cover email of the research instrument.

The participants' consent form is meant to ask the participants for confirming their willingness to participate. Specifically, the form requires undertaking for their agreement to participate, awareness about their role and that they have been provided up with the information sheet. Data for this study was collected using web-based experiment and the participants were instructed in the cover email to enter the experiment (via the link provided in the email) only if they consented to participate. The consent form was, therefore, incorporated in the cover email of the research instrument.

As per the university's research ethics policy, three compulsory trainings were undertaken prior to the data collection process, i.e. *Introduction to Research Ethics & Integrity*, *Epigeum – Intellectual Property (IP) in the Research Context* and *Epigeum – Ethics 2: Working with Human Subjects*. The research ethics panel reviewed the application form, the participant information sheet and the participant consent form. Afterwards, the ethical approval was granted to commence data collection for the study.

4.4.5.2 Instrument Layout

The layout of a research instrument is important in order to increase the response rate. Construction of a good instrument is about the general appearance, clarity of instructions, the questions asked and the ordering of questions. The purpose is to make the instrument appealing

to the respondents. Furthermore, the flow of questions is one of the important considerations regarding the instrument layout. The acquisition of clear responses largely depends on the simplicity of visual appearance and the wording of instrument's contents. Starting research instrument with the most important questions in relation to the cover letter is often recommended (Dillman, Smyth and Christian, 2008). Similarly, the respondents should be able to fill in the responses easily and the layout of research instrument should be attractive enough to convince them for participation (Saunders, Thornhill and Lewis, 2009). In this regard, the *Tailored Design Method* (Dillman, Smyth and Christian, 2014) has been used as a guidance tool towards the layout of this research's instrument.

Keeping in mind the utmost significance of the overall layout of research instruments, due consideration was given to make it attractive and clear to the participants. The cover email introduced the nature and purpose of the study, the likely benefits of participation and the participant's right to free consent etc. As this cover email was a part of this study's instrument, the contents of the email were also pilot tested and improved for their clarity.

The research instrument (which was accessible through a link provided at the end of cover email) started with the title of the study, followed by to-the-point instructions regarding the approximate time to completion (i.e. 15 – 20 minutes) and the ability to complete the study in parts. The option to save the study and to continue it from where the respondents last left it, contributed towards the increased response rate. The first phase of instrument asked for the data on four demographic variables, followed by the measurement of control variables. The second phase comprised of four experimental vignettes along with the measurements on study's intervening and dependent variables against each of the vignettes. Prior to concluding the research instrument with a note of thanks, comments box was also included for the participants.

The entire research instrument utilised only the ten mini pages/screens and the appearance was kept professional and simple. In order to utilise as little space as possible, some customised formats were used – for instance, horizontal positioning for multiple choice questions and the drop-down list for the answers to matrix form questions was implemented. In accordance with the provisions of Dillman, Smyth and Christian (2008; 2014) and Saunders, Thornhill and Lewis (2009), the research instrument was revised over several times – this will be detailed in the pilot testing section.

4.4.5.3 Manipulation of Independent Variable

As briefed in the earlier section on the operationalisation of variables, conflict of interests is the independent variable which has been manipulated through different threats to compliance with the fundamental principles of professional ethics. The vignette 1 involves conflict of interests due to self-interest threat – CoI-1, vignette 2 includes conflict of interests due to intimidation threat – CoI-2, vignette 3 involves conflict of interests due to a combination of self-interest and self-review threats – CoI-3 and vignette 4 is about conflict of interests due to a combination of self-interest, intimidation, self-review and familiarity threats – CoI-4.

Conflict of interests has been treated as a categorical variable as it comprises of the levels divided into distinct categories (Field, 2009; Cozby and Bates, 2011). For one particular vignette, conflict of interests represents a binary variable comprising of two categories, i.e. ‘presence of that particular conflict of interests’ and ‘its absence’.

4.4.5.4 Measurement of Demographic Variables

The study required the collection of data on four demographic variables, i.e. participant’s rank in the firm, gender, years of work experience and their age. All the demographic variables were measured as simple responses to the questions asking about data on these variables. Such questions represent the category of questions, termed closed questions, that allow the respondent to choose from predetermined answers (Collis and Hussey, 2009). The closed questions are easier to answer and are quicker because they involve minimal writing and are a matter of choosing from the given options (Saunders, Thornhill and Lewis (2009).

Specifically, the predetermined answers against participant’s rank comprised of the management board, partner, director, statutory auditor and the other rank to choose from. Gender asked for the respondent’s indication of male or female. The answers against the years of work experience were divided into six ranges to choose from, i.e. 1 – 5, 5 – 10, 10 – 15, 15 – 20, 20 – 30, 30 – 40, 40 – 50 and above 50. Finally, age was measured by allowing participants to choose from the five slots, i.e. 20 – 30, 30 – 40, 40 – 50, 50 – 60 and above 60. The demographic variables have been measured in accordance with the extant research comparable to this study. All the demographic variables have been treated as categorical since these variables comprise of the entities divided into distinct categories. Specifically, the participant’s rank, years of work experience and their age are all the nominal variables as these comprise of more than two categories. Gender is, however, a binary variable as it comprises of two

categories (Field, 2009; Cozby and Bates, 2011).

4.4.5.5 Measurement of Control, Intervening and Dependent Variables

The study required collection of data on two control variables representing two distinct dispositional traits (i.e. occupational self-efficacy – OSE and propensity to morally disengage – PMD), three intervening variables (i.e. positive outcome expectancy of compliant decision-making – POE, perceived difficulty in making compliant decisions – PD and ethical judgement – EJ), one dependent variable for the main analysis (i.e. likelihood of deviant decision-making behaviour – DD) and one dependent variable for complementary analysis (i.e. likelihood of compliant decision-making behaviour – CD).

Data on all the control, intervening and the dependent variables were collected using the rating questions. Typically, the rating questions are meant for opinion data collection. In this regard, the Likert or Likert-type rating scales and items are most frequently used – respondents are required to indicate their level of agreement or disagreement with a statement or a set of statements, usually on a four- to seven-point rating scale. Other opinion data such as the level of belief in truthfulness or untruthfulness, the level of confidence and the level of difficulty etc. are also measured using rating scales. Furthermore, positive as well as negative statements can be used in rating questions (Saunders, Thornhill and Lewis, 2009). There are many advantages of using rating scales – for instance, it allows the ease of answering the asked questions and occupies less space on a research instrument, by listing all the statements in one set (Collis and Hussey, 2009).

- Control Variables

OSE was measured using a short version of the *Occupational Self-Efficacy Scale*, proposed by Rigotti, Schyns and Mohr (2008). It includes a total of six statements that were presented to research participants on a 5-point response scale ranging from 1 (*not at all true*) to 5 (*completely true*). The scale has adequate psychometric properties and demonstrates excellent goodness-of-fit indexes, acceptable scale reliability, convergent validity and the discriminant validity (Rigotti, Schyns and Mohr, 2008; Damasio 2014).

PMD was measured using a short version of the *Propensity to Morally Disengage Scale*, proposed by Moore et al. (2012). The scale includes a total of eight statements that were presented to research participants on a 5-point response scale ranging from 1 (*strongly*

disagree) to 5 (*strongly agree*). The scale has adequate psychometric properties and demonstrates excellent goodness-of-fit indexes, acceptable scale reliability, convergent validity and the discriminant validity (Moore et al., 2012; Kouchaki and Smith, 2013).

The lower scores on both the occupational self-efficacy and the propensity to morally disengage scales indicate less of the respective trait.

- Intervening Variables

All the intervening variables have been measured against each of the four vignettes involving different categories of conflict of interests (i.e. CoI-1, CoI-2, CoI-3 and CoI-4).

PD has been measured as the self-reported level of perceived difficulty/ease in making compliant decisions. 5-points Likert item has been used with '1' representing the perception of difficulty level in making compliant decisions as 'very easy' and '5' as 'very difficult'. Similarly, POE has been measured as the self-reported level of agreement/disagreement with the expectation that the overall positive outcomes of compliant decision-making will outweigh its negative outcomes. 5-points Likert item has been used with '1' representing 'strong disagreement' and '5' the 'strong agreement'. Moreover, EJ has been measured as the participants' judgement about the ethicality of compliant decision choices in all the vignettes. Three broad decision choices are included with varying levels of ethicality on a continuum, with one of these representing the 'least ethical, i.e. deviant decision' (coded '1'), another representing the 'less ethical decision, i.e. neither deviant not compliant' (coded '2') and the third the 'most ethical, i.e. compliant decision' (coded '3').

- Dependent Variables

Both the dependent variables (i.e. DD and CD) have been measured against each of the four vignettes. DD has been measured using 5-points Likert item with '1' representing deviant decision-making as 'extremely unlikely' and '5' as 'extremely likely'. Similarly, CD has been measured using 5-points Likert item with '1' representing compliant decision-making as 'extremely unlikely' and '5' as 'extremely likely'.

It is worth discussing that the use of single-item measures for cognitive and behavioural constructs has been empirically justified by Hoeppner, Kelly, Urbanoski and Slaymaker (2011). They found that the single-item measures of self-efficacy outperformed the multiple-

item measure in predicting future behaviour. Similarly, Petrescu (2013) suggests that the concrete and easy-to-understand constructs can successfully be measured using only one item and that the behavioural constructs based on single-item measures can reliably be included in structural equation models. Other researchers (Schimmack, 2009; Zimmerman et al., 2006; Gebauer, Broemer, Haddock and von Hecker, 2008; Rossiter and Bergkvist, 2009) also agree that the use of single-item measures in case of the context-specific variables is almost as effective as is the multiple items measure of the same variable. Therefore, the use of single-item measures for this study's context-specific and straightforward cognitive and behavioural constructs (i.e. PD, POE, EJ, DD and CD) is justifiable.

4.4.5.6 Treatment of Control, Intervening and Dependent Variables

Likert scales and items used for measuring all the control, intervening and the dependent variables have been treated as continuous variables that yield interval data.

Cozby and Bates (2011) provide that the Likert scales used for measuring personality traits yield interval data. Accordingly, this study's control variable, i.e. OSE and PMD have been treated as continuous variables. Similarly, justification to use intervening (POE, PD and EJ) and the dependent variables (DD and CD) as continuous variables comes from a very robust study conducted by Rhemtulla, Brosseau-Liard and Savalei (2012). Accordingly, any variable comprising of five to seven categories (as are POE, PD, DD and CD) can be conveniently treated as a continuous variable. Similarly, for variables comprising of two to four categories (as is EJ), it is acceptable to treat them as continuous variables for a sample size between 100 to 150 – this study's sample size is 105 against each of the manipulations of the independent variable and is 420 in total, i.e. 105×4 .

4.4.5.7 Pilot Study

The research instrument used for empirical data collection was finalised on the basis of a pilot study comprising of two stages. Biddix (2009) provides that pilot testing is an important component in instrumentation and is primarily aimed at testing for the manipulation checks, the usability of the research instrument and its validity and reliability.

In the case of experiments, pilot testing is of immense importance so as to improve the format, to obtain feedback before starting an extended data collection, for rectifying any misunderstood questions and to improve the scales of measurement or the questions (Dillman, Smyth and

Christian, 2008; Creswell, 2014). According to Cozby and Bates (2011), pilot studies should be conducted after the researcher has finally decided on all the specific aspects of the procedure. Usually, the participants in a pilot study are questioned about their experience following the experiment. Bell (2005) suggested that when doing pilot testing, researchers should consider various concerns such as the time taken to complete the study, clarity of instructions, possible ambiguity in the questions, appropriateness of the layout and any possible objectionable questions. Furthermore, participants might also be asked to comment on the study.

Importantly, pilot testing allows carrying out manipulation checks (Creswell, 2014). A manipulation check is an attempt to directly measure whether the manipulation of independent variable has the intended effect on participants. If a researcher gets the insignificant relationship between the independent and the dependent variable, then manipulation checks are a good way to ensure if insignificance is due to the ineffective manipulations (Cozby and Bates, 2011).

Following the suggestion by Dillman, Smyth and Christian (2008) that pilot testing should start with a review of the research instrument by knowledgeable analysts and colleagues, the instrument was first presented to both the supervisors of this research for their feedback. Based on their comments, some changes were introduced in the contents of research instrument which was then considered ready for being subjected to pilot testing. The main issues of concern were to ensure the feasibility of data collection through web-based experiment, the content of experimental vignettes, manipulation check, to assess the clarity of instructions and questions included in the research instrument and the total time taken to complete the study.

The first stage of pilot testing was conducted with a total of thirty participants, including five professional auditors and three assurance managers from the professional accounting firms, fifteen ACCA students and seven accounting students. A separate section was included at the end of the instrument to check for the manipulations of independent variable. Specifically, the manipulation checks involved asking the participants for their confirmation that they understood the different situations involved in the given vignettes. Comments were also invited about the concerns highlighted in the previous paragraph. The instrument was revised on the basis of feedback received at this stage. Some comments, verbatim, of the participant are as follows;

“The body of the cover email is too long and provides unnecessary details.”

(Participant 1)

“.....but I think in the end it’s little bit repetitive. Usually, people have no time these days, so it can cause them a little bit of an issue.”

(Participant 5)

“I would give 65 out of 100 points to your experiment. Best of luck!”

(Participant 15)

“In the beginning, the study is a little bit confusing but then it is very good and clear.”

(Participant 20)

Overall, the participants suggested some changes in the wording of some questions and advised reducing some repetitiveness. The positive comments (which have not been presented above) suggested that the manipulations were working in an intended way and that the format and layout of research instrument were very interesting for the participants.

After introducing the required changes in research instrument, it was subjected to the second stage of pilot testing with a total of 17 professionals from the Big Four accounting firms in the UK. This stage was meant to ensure that the changes introduced in research instrument have made a positive difference. A manipulation check was not required at this stage and only the comments were invited. Some of the comments, verbatim, of the participants follow;

“You have chosen very good examples.”

(Participant 3)

“Interesting dilemmas that aren’t that easy to answer”

(Participant 10)

“I think the questionnaire has been drafted really well. I thoroughly enjoyed participating in this study”

(Participant 13)

“Scenarios are understood, but in one or two of them there may be some issues of materiality

which are not allowed for in your answer options”

(Participant 16)

The comments of the participants in the second stage of pilot testing prompted few changes in the composition of vignette scenarios. The required changes were introduced and the improved version of research instrument was re-reviewed by both the supervisors of this research. The final version of this study's research instrument has been presented in the Appendix 2.

4.4.6 Administration of Experiment

After the research instrument has been designed, pilot-tested and improved accordingly, it is ready to be subjected to data collection (Dillman, Smyth and Christian, 2008; Saunders, Thornhill and Lewis, 2009). A well-designed research instrument is just one part of an attempt to achieve higher response rates and the implementation procedures are equally important. These procedures include, but are not limited to, multiple contacts with the respondents, the content of reminder emails and/or letters, personalisation, incentives and the good communication skills etc. Based on *Tailored Design Method* (Dillman, Smyth and Christian, 2014), the strategy of multiple contacts was used to achieve higher response rates.

As indicated earlier on, Qualtrics software was used to create the research instrument and to distribute it to the respondents. The software tracks records of the emails sent, those bounced, the studies started and those finished. In the first step, research instrument was emailed to a total of 2283 professionals serving at the Big Four accounting firms. Out of these, 110 emails bounced (on account of invalid email addresses) and 2173 got sent, out of which only 591 emails got opened. Out of the 591 opened emails, 165 participants opted out (through a link provided at the end of cover email), 36 refused to participate (through direct reply to the cover email), 97 started the study and 52 of them finished it. The Qualtrics support team was contacted to investigate the possible technical reasons for only the 591 emails being opened up. According to the team, there could be two possible reasons for this – first, the remaining emails (i.e. $2173 - 591 = 1582$) might have ended up in the spam folder of participants or, secondly, the participants deliberately did not open the email. All the email addresses were official and the strict data protection policies in the professional accounting firms lead to strict filter controls in their email servers.

Three weeks after the first emails, the second step involved sending a reminder email. This

time a total of 2040 emails were sent, excluding those who finished the survey and those who opted out or refused [i.e. 2283 (total) – 165 (opted out) – 36 (refused) – 52 (finished) = 2040]. As before, the same 110 emails were bounced and 1927 got sent, out of which only 341 got opened. Given the fact that only 341 emails were opened, it can be said that due to the strict data protection and e-mail filtering rules, the majority of the emails was getting directed to the spam folder of intended people. It might, therefore, be assumed that a total of 591 emails reached the inboxes and the rest ended up in spam. This time, 37 started the study and 20 finished it, while a total of 26 refused to participate in the study.

Two weeks after the second step, it was decided for the third step that reminders should be sent to those who started the study but did not finish it (a total of 62 participants). Resultantly, 33 of them finished the survey, 12 refused to proceed further and 18 did not respond. Thus a total of 105 responses were received [i.e. 52 (step 1) + 20 (step 2) + 33 (step 3) = 105]. Based on the previous relevant experimental research, the aim was to collect data from at least 100 professionals. The options to contact the professionals by phone or mail were ruled out because the *Register of Statutory Auditors*, which was used to make a list of professionals, provides the contact details of the head offices only. The head offices were contacted, but they refused to provide any further details about the participants. Furthermore, due to the time and budget constraints, more time could not be allocated to data collection.

Table 4.2: Participants' Response Rate

| Response Rate | | | | |
|--|---------------|----------------|---------------|-------|
| Respondents | First request | Second Request | Third Request | Total |
| Complete Responses | 52 | 20 | 33 | 105 |
| Opt out & Refusal Responses | 201 | 26 | 12 | 239 |
| Total | 253 | 46 | 45 | 344 |
| Response Rate (Based on 591 Opened Emails) | 43% | 8% | 8% | 58% |
| Response Rate (Based on 2173 Sent Emails) | 12% | 2% | 2% | 16% |

Assuming that only 591 professionals opened the cover email of research instrument and that

the rest of the emails ended up in spam, the total response rate is high, i.e. 58%. When calculated for the 2173 sent emails (i.e. 2283 – 110 bounced), the total response rate is still acceptable, i.e. 16%. Based on the provisions by Dillman, Smyth and Christian (2008) and Saunders, Thornhill and Lewis (2009), the total response rate for this study is acceptable. Furthermore, according to Bryman and Bell (2007), the low response rate is acceptable and expected in the case of research based on convenience sampling.

Table 4.3: Demographics of Research Participants

| Rank | Frequency | Percentage |
|--------------------------------|------------------|-------------------|
| Management Board | 5 | 5% |
| Partners | 83 | 79% |
| Director | 8 | 8% |
| Statutory Auditors | 9 | 9% |
| Total | 105 | 100% |
| Work Experience (Years) | Frequency | Percentage |
| 1 – 20 | 20 | 19% |
| 20 – 30 | 42 | 40% |
| 30 -40 | 41 | 39% |
| 40 -50 | 2 | 2% |
| Total | 105 | 100% |
| Age (years) | Frequency | Percentage |
| 20-30 | 7 | 7% |
| 30-40 | 7 | 7% |
| 40-50 | 38 | 36% |
| 50-60 | 48 | 46% |
| > 60 | 5 | 5% |
| Total | 105 | 100% |
| Gender | Frequency | Percentage |
| Male | 85 | 81% |
| Female | 20 | 19% |
| Total | 105 | 100% |

The demographics of respondents are presented in table 4.3. The majority of the participants have a higher rank in their respective firm, i.e. 79% are partners, have higher work experience, i.e. 79% have more than 20 years of work experience, 82% are more than 40 years old and 81% are male. So that there are no or minimal threats to the validity of the research findings, interpretation of the results will take into consideration the demographics of participants. Accordingly, generalisations of the findings will be made with caution.

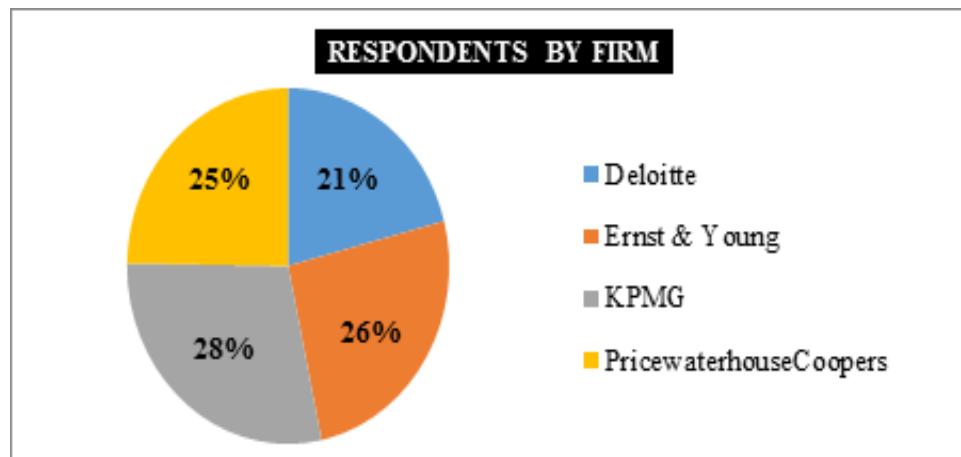


Figure 4.2: Respondents by Firm

As shown in the figure 4.2, the respondents from each of the Big Four have fairly equal distribution in the study's sample. Out of the total 105 respondents, 22 belonged to Deloitte, 27 to EY, 30 to KPMG and 26 are from PricewaterhouseCoopers.

4.4.7 Threats to Validity

It is extremely important to take into consideration the internal and external threats to the validity of an experiment, that raise questions about the researcher's ability to conclude that the independent variable (its manipulation or intervention) affects an outcome and not some other factors. Internal threats to validity are the experimental treatments, procedures or the experiences of the participants that threaten the ability of a researcher to draw correct inferences from the data. External threats are said to arise when a researcher incorrectly generalises the findings of research. It is essential for a researcher to take appropriate actions in an attempt to mitigate or to eliminate the internal and external threats to validity (Creswell, 2012; Creswell, 2014).

The possible internal threat to the validity of this study's experiment could have been the

selection threat which arises if the participants are selected on the basis of a particular characteristic that could lead them to display particular outcome – for instance, choosing the brighter students who would perform better at comprehension task (Creswell, 2012). In an attempt to minimise this possible threat, selection of the participants was not based on any particular criteria (Creswell, 2014).

Similarly, Creswell (2012) suggested the following possible external threats to validity: (i) interaction of selection and treatment (i.e. the limited characteristics of the participants does not allow the researcher to generalize findings to those who lack in such characteristics), (ii) interaction of setting and treatment (i.e. the characteristics of the settings does not allow the researcher to generalize findings to those in other settings) and (iii) the interaction of history and treatment (i.e. the time-bound nature of the experiment does not allow the researcher to generalize findings to the past or future situations). For this study's experiment, the possible external threat could have been the interaction of selection and treatment. In an attempt to address this possible threat, the researcher restricted claims about the individuals or groups to which the study's findings cannot be generalised (Creswell, 2014).

4.4.8 Statistical Technique

This section will introduce Partial Least Squares (PLS) path analysis and will provide rationale for its adoption as a statistical technique for data analysis.

4.4.8.1 PLS Path Analysis

Recently, there has been burgeoning trend in accounting research to use the multidisciplinary perspectives and methods, for examining a wide range of research topics (Henri, 2007). In order to match these developments, there is a need for better model specifications to represent the relationships derived from theories. Moreover, methodological rigour is also required for testing the models (Ittner and Larcker, 2001; Chenhall, 2005). Path analysis, which is an extension of multiple regression, is one such technique that is suitable for analysing complicated models involving the chains of relationships (Streiner, 2005). It is a multivariate analysis technique that allows simultaneous analysis of more than two variables. Multiple measurements on the research participants can, therefore, be analysed instantaneously (Hair, Black, Babin and Anderson, 2010).

The main purpose of statistical techniques, including path analysis, is to determine if the

patterns of collected data could have occurred by chance rather than by the causes proposed by the theory. It is important that the chosen techniques must be in alignment with the theory being tested and the particular needs of a research (Lowry and Gaskin, 2014). Path analysis is a special case of structural equation modelling (SEM) and can be regarded a technique to analyse the structural relationships between observed variables. While SEM works with latent variables in order to account for the measurement error, path analysis assumes that all the variables are measured without error (Shin, 2008; Kazár, 2014). Since this study includes variables that have been measured using single indicators, the variables are treated as the observed – hence, path analysis has been adopted as data analysis technique.

It is important to justify the choice of a particular statistical technique, by providing the rationale for its adoption. This choice is based on the nature of research questions and/or hypotheses, the number of independent and dependent variables, the number of variables controlled, consideration of whether the variables will be measured on an instrument as a continuous score or as a categorical score and whether the scores are normally distributed. The said factors help in determining which statistical test is the most suited for addressing the research questions (Rudestam and Newton, 2007; Creswell, 2014). Importantly, the assumptions of chosen statistical test must be taken into consideration (Field, 2009; Creswell, 2014).

Within path analysis, it is common to use both the ‘covariance-based method (CB)’, that represents constructs through factors and the ‘variance or partial least squares-based method (PLS)’, that represents the constructs through components. CB method often ends with the ‘factor indeterminacy’ which implies that it produces more than one solution that are all mathematically sound, but provides no means to determine which of the several solutions pertains to the hypothesis being tested. However, the PLS method avoids the factor indeterminacy problem by composing constructs from the factor scores and then using these in subsequent calculations. PLS adopts an iterative approach for obtaining the parameter estimates and does not assume that the dependent variables conform to any particular distribution. Importantly, CB method relies on the assumption of normal distribution, while the PLS method does not assume normality and is also preferable in the instances of non-homogeneity of variance and for the small sample sizes. Thus, PLS allows more flexibility in analysing the theoretical models (Lowry and Gaskin, 2014).

This study’s theoretical model draws on the social cognitive theory and the throughput model,

that are less developed for this study's area of research. The goal of this research is the explanation (and some predictions) and it includes not-too-large sample size. Most of the variables follow a non-normal distribution, as observed through the descriptive statistics. Importantly, heteroscedasticity is presumed in the case of this study's path model since the theory underlying this study expects the variability in the dependent variables to be unequal across the different values of a predictor (Field, 2009). Moreover, the empirical study is based on a rather complex structural model which also includes interaction effects and intends to compare alternate models.

Table 4.4: Guidelines for Choosing between PLS- and CB-Path Analysis [Based on Hair, Ringle and Sarstedt (2011) and Lowry and Gaskin (2014)]

| Criteria | PLS | CB |
|------------------------------|---|----------------------------------|
| Theory | Less Developed, Strong | Strong |
| Research Goal | Theory Development and Prediction | Theory Testing and Confirmation |
| Sample Size | Can Handle Small Sample Sizes (Minimum: 10 Times the Largest Number of Paths Leading towards Endogenous Constructs) | Larger Sample Sizes Are Required |
| Distributional Assumption | Non-Parametric (Distribution Free) | Parametric (Normal Distribution) |
| Heteroscedasticity | Suitable | Assumes Homogeneity |
| Structural Model | Complex | Less Complex |
| Includes Interaction Effects | Preferable | Very Difficult |
| Alternate Models | Yes | Yes, Preferable |

Importantly, most of the established theoretical models, such as those drawing on *Social Cognitive Theory*, are too complex to be tested fully with traditional statistical techniques. The advanced statistical techniques, such as PLS based path analysis, are very useful for the

behavioural researchers. Such techniques allow testing the big picture of theory and offer advantages for causal modelling (Lowry and Gaskin, 2014). It must, however, be considered that path analysis cannot establish causality but can only prove or disprove a model that postulates causal relationships among the variables. In this way, path analysis is not a model-building approach, but a model-testing one (Streiner, 2005).

Thus, following the guidelines by various experts (e.g., Rudestam and Newton, 2007; Field, 2009; Hair, Ringle and Sarstedt, 2011; Creswell, 2014; Lowry and Gaskin, 2014), the statistical technique this study adopts to analyse the empirical data is the *PLS-based path analysis*. After having identified and justified the adoption of particular statistical technique, the next step is to identify the statistical package that is well equipped to perform the chosen technique (Field, 2009; Creswell, 2014). In order to perform the PLS-based path analysis, this study utilises *SmartPLS 3* that is one of the leading PLS-SEM software programs. The SmartPLS 3 works with Partial Least Squares (PLS) path modelling algorithm and offers many data analysis functions (Hair, Ringle and Sarstedt, 2011; 2013). This study used SmartPLS 3 to assess the structural model through examination of the coefficients of determination, the path coefficients, the effect size, the predictive relevance, the goodness of model fit and multicollinearity. The bootstrapping procedure was performed to test the research hypotheses. Furthermore, complementary analysis (i.e. testing alternate model) and multi-group analysis were also performed using this statistical software. The application and usefulness of SmartPLS 3 will become evident in the next chapter on data analysis.

4.4.8.2 Current Debate on PLS Path Modelling

In the light of current debate on usefulness and application of PLS path modelling, this subsection is meant to provide further justification for adopting PLS path analysis as a statistical technique.

It is necessary to emphasise that path analysis should not be confused with the more advanced path modelling and it is necessary to be aware of the basic difference and similarity between the two. The extant literature tends to use the terms PLS path modelling (PLS-PM) and PLS structural equation modelling (PLS-SEM) interchangeably (McIntosh, Edwards and Antonakis, 2014; Rönkkö et al., 2016; Sarstedt et al., 2016; Hair et al., 2017; Nitzl and Chin, 2017). PLS-PM is a statistical analysis technique applied to the two main components of a model, i.e. the *measurement model* that shows relationships between latent variables and their

indicators and the *structural model* that relates latent variables to one another. Path analysis, on the other hand, is an extension of multiple regression and includes only the structural model but not the measurement model. In this sense, path analysis can be viewed as a special case of path modelling – the one in which all the variables/ constructs are treated as observed and unit-weighted since these are measured using only the single indicators (Shin, 2008; Kazár, 2014). Nonetheless, PLS-based path analysis and path modelling share the same algorithm, i.e. variance-based partial least squares method (Lowry and Gaskin, 2014).

The current debate on PLS path modelling starts with Rönkkö et al. (2016) pointing out the lack of rigorous methodological support for *indicator weighting system*¹⁴ utilised for the measurement model in path modelling. They assert that approximating the latent variables using multiple indicators leads to the inconsistent and biased estimations. They further highlighted the lack of methodological support for the claims such as the suitability of PLS for small samples and non-normal data. Sarstedt et al. (2016) responded to their criticism by conducting a rigorous simulation study. They found that PLS does not lead to bias for estimating data from a *composite model* and that the bias in estimation can only occur when using the composite-based PLS to estimate the *common factors models*¹⁵ and vice versa. Hair et al. (2017) have also responded and provided further evidence that, when the underlying population is based on composite model, PLS leads to unbiased and consistent estimators. Furthermore, PLS was evidenced to yield high statistical power – some earlier studies (e.g., Hui and Wold, 1982; Lohmöller, 1989; Schneeweiss, 1991; Hwang, 2009; Hwang et al., 2010; Marcoulides, Chin and Saunders, 2012) also suggest support for this stance. Sarstedt et al. (2016) and Hair et al. (2017) reaffirmed the successful application of PLS to sample sizes over 100. Even more recently, Nitzl and Chin (2017) supported the adoption of PLS path models in managerial accounting research drawing on small sample sizes and when the purpose of study is, primarily, the prediction or exploration.

Thus, the criticisms on PLS primarily pertain to the estimation of measurement model and, according to Sarstedt et al. (2016), Hair et al. (2017) and Nitzl and Chin (2017), hold under the assumption of common factor models only. Following the provisions of current debate, this study's path analysis is essentially based on the composite model logic, since the variables/constructs in the study's model have been measured using single composite

¹⁴ for details of the indicator weighting system, see Henseler et al., 2014.

¹⁵ for details of the composite and common factor models, see Sarstedt et al., 2016.

indicators that fully explain the construct it purports to measure. Moreover, only the structural model is a matter of concern in case of path analysis which implies that the criticisms that are more specifically related to measurement model are not applicable to this research. Although the extent to which the criticisms on path modelling are readily applicable to path analysis is not completely clear, it is necessary to be considerate of the current debate because both the techniques share same PLS algorithm. One of the main concerns of Rönkkö et al. (2016) is the lack of evidence for superiority of PLS to the other statistical techniques – this, however, does not imply inferiority of PLS, per se. Until recently, only a small number of researchers (Goodhue, Thompson and Lewis, 2013; McIntosh, Edwards and Antonakis, 2014; Rönkkö et al., 2016) has been critical of PLS. In fact, PLS is regarded as one of the most fully developed system for path analysis with composites (McDonald, 1996; Hair et al., 2017). Therefore, it can be concluded that the adoption of PLS path analysis for this research is completely justifiable.

4.5 Summary

This chapter discussed and justified the adoption of postpositivism paradigm that underpins this study, the experiment methodology adopted and the methods used for data collection and analysis. Specifically, the postpositivism paradigm was explained and contrasted with positivism in the section regarding philosophical assumptions. Next, the details about the experimental study were included in the section on research methodology. Finally, the section on research methods included the details of this study's context, population, sampling frame, sampling, experimental vignettes, operationalisation of this study's variables, research instrumentation, administration of experiment, threats to validity and the statistical technique for data analysis. The decision to adopt an overall quantitative approach for this study was informed by the reciprocal intersection of research paradigm with the research methodology and methods and the nature of the research problem.

The data analysis procedures will be detailed in the next chapter.

CHAPTER 5: DATA ANALYSIS

“The goal is to turn data into information and information into insights”.

Carly Fiorina

5.1 Introduction

The application of data analysis procedures to empirical data produces the results that yield insights for permitting the conclusions as possible answers to the research questions (Ellis and Levy, 2008). This chapter provides a detailed account of data analysis procedures that have been applied to the empirical data. The second section includes an examination of data for the outliers, missing values and the normality assumption. The third section details the descriptive statistics to summarise the research data. Model assessment procedures have been included in the fourth section, followed by hypotheses testing in the fifth section. The multi-group analysis will be discussed in the sixth section and the complementary analysis in the seventh section. Finally, this chapter will be summarised in the eighth section.

The main model comprises of 1 independent variable (i.e. conflict of interests), 3 intervening variables (i.e. the positive outcome expectancy of compliant decision-making, perceived difficulty in making compliant decisions and ethical judgement) and 1 dependent variable (i.e. likelihood of deviant decision-making behaviour). An additional complementary model has also been tested, which comprises of the same independent and intervening variables, but the dependent variable has been replaced with the ‘likelihood of compliant decision-making behaviour’. Both the main and complementary models have been run in four subsets, considering one category of conflict of interests at a time (i.e. CoI-1: conflict of interests due to self-interest threat, CoI-2: that due to intimidation threat, CoI-3: that due to a combination of self-interest and self-review threats and CoI-4: conflict of interests due to a combination of self-interest, intimidation, self-review and familiarity threats).

5.2 Data Examination

In order to gain a better understanding of data, it is essential to first examine it (Hair, Black, Babin and Anderson, 2010). The process of data examination includes procedures such as identification of the missing values, detection of outliers and testing for the normality assumption (Tabachnick and Fidell, 2007).

5.2.1 Missing Values

The research instrument did not allow the participants to skip answering any of the questions included (i.e. by implementing the option of ‘compulsory response’ in Qualtrics software used for data collection). Furthermore, partially completed instruments were discarded and have not been included in the analysis. Therefore, there are no missing values in the empirical data being analysed.

5.2.2 Outliers

Empirical data for this study does not contain any extreme outliers as it has been collected using the Liker-items and scales that define the lower and upper bounds any data value can take. Therefore, the participants’ choice to answer at the extremes is not representative of an outlier behaviour (Treiblmaier and Filzmoser, 2011).

5.2.3 Normality

Normal distribution of data is signified by most of the data values or scores distributed equally around the central value, i.e. mean. Deviations from normal distribution might occur either due to the lack of symmetry (termed skewness) or due to the extreme scores (termed kurtosis) in the distribution of data around its mean. Positive skewness is characterised by most of the data values clustered below the mean and a very few far above it. Likewise, negative skewness is characterised by most of the data values clustered above the mean and a very few far below it. Positive kurtosis is termed ‘leptokurtic distribution’ which is characterised by a low number of extreme scores, with most of these clustered closely around the mean and, graphically, the distribution appears to have thick tails. Moreover, negative kurtosis is termed ‘platykurtic distribution’ which is characterised by a high number of extreme scores, with most of these far dispersed around the mean and, graphically, the distribution appears to have thin tails (Field, 2009; Westfall, 2014; Gould and Moav, 2016).

Since this study’s data arise from more than one variable, it is subject to multivariate analysis that requires data values to be normally distributed and the violation of which renders the results of parametric statistical tests invalid. Ideally, the data should be normally distributed which means that the skewness and kurtosis should be zero in their values. If a distribution has skewness and/or kurtosis less than or more than zero then it is said to be deviating from a normal distribution (Field, 2009; Hair, Black, Babin and Anderson, 2010). In order to deal with

non-normality, some transformations can be applied to data in order to make its distribution, approximately, normal. However, not everyone agrees that the transformation of data is a good idea. Alternatively, robust tests can be used that have considerable benefits over transforming the data – ‘Trimmed Mean’ and ‘Bootstrap’ are examples of robust testing¹⁶. Similarly, using the programs that work with non-parametric data are good to consider (Field, 2009; Hair, Ringle, Sarstedt and Ringle, 2014).

The empirical data will be assessed for normality assumption using the criteria specified by Hair, Ringle, Sarstedt and Ringle (2014) and Adams and Bogranskaya (2015). Accordingly, any distribution with skewness and kurtosis greater than +1 or lower than -1 (i.e. $-1 > \text{skewness} > +1$ and $-1 > \text{kurtosis} > +1$) is regarded non-normal. Specifically, kurtosis greater than +1 indicates that distribution is too peaked and a value less than -1 indicates that it is too flat. Moreover, skewness greater than +1 or less than -1 indicates highly skewed distribution, that between -1 and -0.5 or between 0.5 and 1 indicates moderately skewed distribution and the skewness between -0.5 and 0.5 indicates, approximately, symmetric or normal distribution. Normality assumption will be detailed in the following section on descriptive statistics.

5.3 Descriptive Statistics

As opposed to the inferential statistics that are used to draw conclusions about data, the descriptive statistics are meant to describe and summarise the research data. The main descriptive statistics include the mean and median as the measures of central tendency, standard deviation and the minimum & maximum values as the measures of dispersion or spread and the skewness and kurtosis as the measures of shape or distribution.

The mean represents average score and the median is the middle score when data scores are arranged in order of ascending magnitude. The disadvantage of the mean is that it is affected by the outliers and skewness, while the median is not. However, the reason mean is preferred as a measure of central tendency is that it takes into account all the values in the data set, while the median may ignore many. Therefore, both the mean and median will be included in the descriptive statistics. The measures of dispersion including standard deviation and range are required to assess how well the measure of central tendency (mean or median) represents the data. The smaller standard deviation implies that data points are closer to the mean and that the

¹⁶ For details of ‘Trimmed Mean’, see Hair, Ringle and Sarstedt, 2011. Bootstrap will be introduced in the later section.

mean is a good representative of data. The range is also the measure of dispersion and represents the difference between the largest (maximum) and the smallest (minimum) scores. The range reveals if there is low or high variation in the responses or data on the dependent variable (Field, 2009).

The following subsections include descriptive statistics for each of the variables in this study.

5.3.1 Likelihood of Deviant Decision-Making Behaviour (DD)

The likelihood of deviant decision-making behaviour (DD) has been measured as the self-reported likelihood of making a deviant decision in the events of four categories of conflict of interests (i.e. CoI-1, CoI-2, CoI-3 and CoI-4). The DD has been measured using 5-points Likert item with '1' representing deviant decision-making as 'extremely unlikely' and '5' as 'extremely likely'.

Descriptive statistics revealed that in the case of CoI-1 and CoI-3, the minimum value is 1 which represents DD as extremely unlikely and the maximum value is 4 which represents the DD as likely. In the case of CoI-2 and CoI-4, the minimum value is 1 which represents DD as extremely unlikely and the maximum value is 5 which represents the DD as extremely likely. Range as the difference between maximum and minimum values is 3 (i.e. $4 - 1 = 3$) in the case of CoI-1 and CoI-3 and the range is 4 (i.e. $5 - 1 = 4$) in the case of CoI-2 and CoI-4. Therefore, the variation in responses is comparatively lower in case of CoI-1 and CoI-3.

Table 5.1: Descriptive Statistics of the Likelihood of Deviant Decision-Making Behaviour (DD)

| Deviant Decision (DD) | Mean | Median | Min | Max | Standard Deviation | Skewness | Kurtosis |
|-----------------------|-------|--------|-----|-----|--------------------|----------|----------|
| DD (CoI-1) | 1.238 | 1 | 1 | 4 | 0.594 | 3.187 | 11.379 |
| DD (CoI-2) | 2.800 | 2 | 1 | 5 | 1.290 | 0.111 | -1.399 |
| DD (CoI-3) | 1.590 | 1 | 1 | 4 | 0.752 | 1.253 | 1.305 |
| DD (CoI-4) | 1.838 | 2 | 1 | 5 | 1.025 | 1.194 | 0.734 |

In the events of CoI-1, CoI-2, CoI-3 and CoI-4, the mean values are 1.238, 2.800, 1.590 and 1.838 and the median values are 1, 2, 1 and 2, respectively. Overall, DD is low and more

towards extreme unlikelihood (i.e. point 1). However, in the case of CoI-2, the mean value 2.800 indicates DD as higher in comparison to other categories. The standard deviation in case of CoI-2 is comparatively the highest (i.e. 1.290) which indicates high dispersion of responses from their mean value. The next highest standard deviation (i.e. 1.025) is observed in case of CoI-4. The values of standard deviation in case of CoI-1 (i.e. 0.594) and CoI-3 (i.e. 0.752) indicate comparatively less dispersion of responses from their mean values.

The DD appears to be highly positively skewed and kurtotic in case of CoI-1 (skewness = 3.187 and kurtosis = 11.379) which indicates that most of the data values are clustered below the mean and a very few far above it and that the extreme scores are less in number. In case of CoI-2, distribution of DD is very slightly skewed and is negatively kurtotic (skewness = 0.111 and kurtosis = -1.399) which indicates a high number of extreme scores. The distribution of DD in case of CoI-3 is positively skewed as well as kurtotic (skewness = 1.253 and kurtosis = 1.305) which indicates that most of the data values are clustered below the mean and that the extreme scores are less in number. However, the distribution of DD in case of CoI-4 is positively skewed, but not kurtotic (skewness = 1.194 and kurtosis = 0.734) which implies that most of the data values are clustered below the mean and a very few far above it. Overall, distribution of DD is non-normal in all the situations of conflicting interests.

5.3.2 Likelihood of Compliant Decision-Making Behaviour (CD)

The likelihood of compliant decision-making behaviour (CD) has been measured as the self-reported likelihood of making a compliant decision in the events of four categories of conflict of interests (i.e. CoI-1, CoI-2, CoI-3 and CoI-4). The CD has been measured using 5-points Likert item with '1' representing compliant decision-making as 'extremely unlikely' and '5' as 'extremely likely'.

Descriptive statistics revealed that for all the four categories of conflicting interests, the minimum value is 1 which also represents CD as extremely unlikely. Similarly, the maximum value is 5 which also represents the CD as extremely likely. Furthermore, range as the difference between maximum and minimum values (i.e. $5 - 1 = 4$) is same in all the four situations of conflicting interests, which indicates that variation in responses is same across all the categories. In the events of CoI-1, CoI-3 and CoI-4, the mean values are 4.438, 4.190 and 3.933 and the median values are 5, 4 and 4, respectively. This indicates CD as high in likelihood and more towards the extreme likelihood (i.e. point 5). However, in case of CoI-2, the mean

value is 2.629 and the median is 2 that indicate CD as lower in likelihood. Moreover, the standard deviation in case of CoI-2 is comparatively the highest (i.e. 1.197) which indicates high dispersion of responses from their mean value. The next highest standard deviation (i.e. 1.098) is observed in the case of CoI-4. The values of standard deviation in case of CoI-1 (i.e. 0.915) and CoI-3 (i.e. 0.967) indicate comparatively less dispersion in the responses from their mean value.

Table 5.2: Descriptive Statistics of the Likelihood of Compliant Decision-Making Behaviour (CD)

| Compliant Decision (CD) | Mean | Median | Min | Max | Standard Deviation | Skewness | Kurtosis |
|--------------------------------|-------------|---------------|------------|------------|---------------------------|-----------------|-----------------|
| CD (CoI-1) | 4.438 | 5 | 1 | 5 | 0.915 | -2.049 | 4.440 |
| CD (CoI-2) | 2.629 | 2 | 1 | 5 | 1.197 | 0.721 | -0.634 |
| CD (CoI-3) | 4.190 | 4 | 1 | 5 | 0.967 | -1.419 | 2.005 |
| CD (CoI-4) | 3.933 | 4 | 1 | 5 | 1.098 | -1.049 | 0.389 |

The CD appears approximately normally distributed in case of CoI-2 (skewness = 0.721 and kurtosis = -0.634) which provides that most of the data values are distributed equally around the mean. In the case of CoI-4, the distribution of CD is slightly negatively skewed, but is not kurtotic (skewness = -1.049 and kurtosis = 0.389) which implies that most of the data values are clustered above the mean and a very few far below it. Distribution is negatively skewed and positively kurtotic in case of CoI-1 (skewness = -2.049 and kurtosis = 4.440) and also CoI-3 (skewness = -1.419 and kurtosis = 2.005) which indicates that most of the data values are clustered above the mean and a very few far below it and that the extreme scores are less in number.

5.3.3 Positive Outcome Expectancy of Compliant Decision-Making (POE)

For the four categories of conflict of interests (i.e. CoI-1, CoI-2, CoI-3 and CoI-4), the positive outcome expectancy of compliant decision-making (POE) has been measured as the self-reported level of agreement/disagreement with ‘the expectation that the overall positive outcomes of compliant decision-making will outweigh its overall negative outcomes’. 5-points Likert item has been used with ‘1’ representing ‘strong disagreement’ and ‘5’ the ‘strong agreement’.

In all the four situations of conflicting interests, the minimum value is 1 which represents a strong disagreement with the positive outcome expectancy of compliant decision-making. Similarly, the maximum value is 5 which represents a strong agreement. Furthermore, range as the difference between maximum and minimum values (i.e. $5 - 1 = 4$) is same for all the categories of conflicting interests, which indicates that variation in responses is same across all the situations. In the events of CoI-1, CoI-3 and CoI-4, the mean values are 4.200, 4.248 and 4.067 and the median values are 5, 4 and 4, respectively. This indicates the POE as high and more towards the strong agreement (i.e. point 5). However, in case of CoI-2, the mean value is 3.438 that indicates almost the neutral stance (i.e. point 3) about POE. The standard deviation in case of CoI-1 is comparatively the highest (i.e. 1.174), which indicates high dispersion of responses from their mean value. The next highest standard deviation (i.e. 1.007) is observed in the case of CoI-4. The values of standard deviation in case of CoI-2 (i.e. 0.985) and CoI-3 (i.e. 0.826) indicate comparatively less dispersion in responses from their mean value.

Table 5.3: Descriptive Statistics of Positive Outcome Expectancy (POE)

| Positive Outcome Expectancy (POE) | Mean | Median | Min | Max | Standard Deviation | Skewness | Kurtosis |
|-----------------------------------|-------|--------|-----|-----|--------------------|----------|----------|
| POE (CoI-1) | 4.200 | 5 | 1 | 5 | 1.174 | -1.615 | 1.802 |
| POE (CoI-2) | 3.438 | 4 | 1 | 5 | 0.985 | -0.128 | -0.804 |
| POE (CoI-3) | 4.248 | 4 | 1 | 5 | 0.826 | -1.421 | 2.618 |
| POE (CoI-4) | 4.067 | 4 | 1 | 5 | 1.007 | -1.157 | 1.035 |

POE appears approximately normally distributed in case of CoI-2 (skewness = -0.128 and kurtosis = -0.804) which provides that most of the data values are distributed equally around the mean. Distribution of POE is negatively skewed and positively kurtotic in the events of CoI-1 (skewness = -1.615 and kurtosis = 1.802), CoI-3 (skewness = -1.421 and kurtosis = 2.618) and also CoI-4 (skewness = -1.157 and kurtosis = 1.035), which indicates that most of the data values are clustered above the mean and a very few far below it and that the extreme scores are less in number.

5.3.4 Perceived Difficulty in Making Compliant Decision (PD)

For all the four categories of conflict of interests (i.e. CoI-1, CoI-2, CoI-3 and CoI-4), perceived

difficulty in making compliant decisions (PD) has been measured as the self-reported level of perceived difficulty/ease in making a compliant decision. 5-points Likert item has been used with '1' representing the perception of difficulty level in making compliant decisions as 'very easy' and '5' as 'very difficult'.

In all the situations of conflicting interests, the minimum value is 1 which represents the perception of difficulty in making a compliant decision as 'very easy'. Similarly, the maximum value is 5 which represents the perception as 'very difficult'. Furthermore, range as the difference between maximum and minimum values (i.e. $5 - 1 = 4$) is same in all the four situations of conflicting interests which indicates that variation in responses is same across all the categories. In the events of CoI-1, CoI-3 and CoI-4, the mean values are 2.171, 2.695 and 2.562 and the median values are 2, 3 and 2, respectively. This indicates PD as lower and more towards the perception of difficulty level as 'very easy' (i.e. point 1) to 'neutral' (i.e. point 3). However, in the case of CoI-2, the mean value is 3.857 and the median is 4 that indicate PD as high and more towards the perception of difficulty level as 'very difficult' (i.e. point 5). Moreover, the standard deviation in case of CoI-1 is comparatively the highest (i.e. 1.457) which indicates high dispersion of responses from their mean value. The next highest standard deviation (i.e. 1.400) is observed in the case of CoI-4. The values of standard deviation in case of CoI-2 (i.e. 1.045) and CoI-3 (i.e. 1.339) indicate comparatively less dispersion in responses from their mean value.

Table 5.4: Descriptive Statistics of Perceived Difficulty (PD)

| Perceived Difficulty (PD) | Mean | Median | Min | Max | Standard Deviation | Skewness | Kurtosis |
|---------------------------|-------|--------|-----|-----|--------------------|----------|----------|
| PD (CoI-1) | 2.171 | 2 | 1 | 5 | 1.457 | 0.990 | -0.522 |
| PD (CoI-2) | 3.857 | 4 | 1 | 5 | 1.046 | -1.431 | 1.773 |
| PD (CoI-3) | 2.695 | 3 | 1 | 5 | 1.339 | 0.141 | -1.326 |
| PD (CoI-4) | 2.562 | 2 | 1 | 5 | 1.400 | 0.336 | -1.351 |

PD appears approximately normally distributed in case of CoI-1 (skewness = 0.990 and kurtosis = -0.522) which provides that most of the data values are distributed equally around the mean. Distribution of PD is negatively skewed and positively kurtotic in the case of CoI-2

(skewness = -1.431 and kurtosis = 1.773) which indicates that most of the data values are clustered above the mean and a very few far below it and that the extreme scores are less in number. The distribution of PD is very slightly skewed and is negatively kurtotic in the case of CoI-3 (skewness = 0.141 and kurtosis = -1.326) and CoI-4 (skewness = 0.336 and kurtosis = -1.351) which indicates high number of the extreme scores.

5.3.5 Ethical Judgement (EJ)

In case of all the four categories of conflict of interests (i.e. CoI-1, CoI-2, CoI-3 and CoI-4) ethical judgement (EJ) has been measured by the participants' judgement about the ethicality of compliant decision choices. Three broad decision choices are included with varying levels of ethicality on a continuum, with one of these representing the least ethical decision (coded '1'), another representing the less ethical decision (coded '2') and the third the most ethical decision (coded '3').

Table 5.5: Descriptive Statistics of Ethical Judgement (EJ)

| Ethical Judgement (EJ) | Mean | Median | Min | Max | Standard Deviation | Skewness | Kurtosis |
|-------------------------------|-------------|---------------|------------|------------|---------------------------|-----------------|-----------------|
| EJ (CoI-1) | 2.819 | 3 | 1 | 3 | 0.409 | -2.097 | 3.589 |
| EJ (CoI-2) | 2.229 | 2 | 1 | 3 | 0.651 | -0.272 | -0.705 |
| EJ (CoI-3) | 2.762 | 3 | 1 | 3 | 0.488 | -1.965 | 3.160 |
| EJ (CoI-4) | 2.810 | 3 | 1 | 3 | 0.439 | -2.262 | 4.595 |

The descriptive statistics revealed that in all the four situations, the minimum value is 1 which also represents the least ethical judgement. Similarly, the maximum value is 3 which represents the most ethical judgement. Furthermore, range as the difference between maximum and minimum values (i.e. $3 - 1 = 2$) is same in all the four situations of conflicting interests, which indicates that variation in responses is same across all the categories. In the events of CoI-1, CoI-3 and CoI-4, the mean values are 2.819, 2.762 and 2.810, respectively and the median value is 3 in all the cases. This indicates EJ as high and more towards the most ethical decision-choice. However, in case of CoI-2, the mean value is 2.229 and the median is 2 that indicates EJ as neither high nor low (i.e. neutral) and more towards the less ethical decision-choice (i.e. point 2). Moreover, the standard deviation in case of CoI-2 is comparatively the highest (i.e.

0.651) which indicates higher dispersion of responses from their mean value. The values of standard deviation in case of CoI-1 (i.e. 0.409), CoI-3 (i.e. 0.488) and CoI-4 (i.e. 0.439) indicate comparatively less dispersion in responses from their mean value.

EJ appears approximately normally distributed in the case of CoI-2 (skewness = -0.272 and kurtosis = -0.705) which provides that most of the data values are distributed equally around the mean. However, the distribution of EJ is negatively skewed and positively kurtotic in case of CoI-1 (skewness = -2.097 and kurtosis = 3.589), CoI-3 (skewness = -1.965 and kurtosis = 3.160) and CoI-4 (skewness = -2.262 and kurtosis = 4.595) which indicates that most of the data values are clustered above the mean and a very few far below it and that the extreme scores are less in number.

5.3.6 Occupational Self-Efficacy (OSE)

In case of all the four categories of conflicting interests (i.e. CoI-1, CoI-2, CoI-3 and CoI-4), occupational self-efficacy (OSE) has been measured as the self-reported level of perceived self-efficacy to successfully fulfil the job-related tasks. 5-points Likert-type scale, comprising of six items, has been used with '1' corresponding to 'not at all true' and '5' to 'completely true'. The scores from against all the statements are averaged to compute a single number representing the 'dispositional occupational self-efficacy'. The higher the score, the higher is the professional's occupational self-efficacy. Since occupational self-efficacy represents the dispositional trait, it remains context-free and does not differ across any of the categories of conflicting interests.

Table 5.6: Descriptive Statistics of Occupational Self-Efficacy (OSE)

| Occupational Self-Efficacy (OSE) | Mean | Median | Min | Max | Standard Deviation | Skewness | Kurtosis |
|----------------------------------|-------|--------|-----|-----|--------------------|----------|----------|
| OSE (Average) | 4.214 | 4.167 | 3 | 5 | 0.417 | -0.194 | 0.042 |

The minimum value is 3 which can be thought of as a neutral stance on one's perceived occupational self-efficacy. Similarly, the maximum value is 5 which represents the perception of occupational self-efficacy as very high. Furthermore, range as the difference between maximum and minimum values (i.e. $5 - 3 = 2$) indicates, on average, a difference of two points variation in responses against all the categories of conflict of interests. The mean value of OSE

is 4.214 and the median is 4.167 which is an indication of high occupational self-efficacy. Moreover, the standard deviation signifying dispersion of responses from their mean value is 0.417. The distribution of OSE is approximately normal with a skewness of -0.194 and kurtosis 0.042, which indicates that most of the data values are distributed equally around the mean.

5.3.7 Propensity to Morally Disengage (PMD)

In case of all the categories of conflict of interests (i.e. CoI-1, CoI-2, CoI-3 and CoI-4), propensity to morally disengage (PMD) has been measured as the self-reported level of tendency to morally disengage in the situations with an ethical content. A 5-points Likert scale, comprising of eight items, has been used with '1' corresponding to 'strong disagreement' and '5' to 'strong agreement' with the given statement(s). The scores from against all the statements are averaged to compute a single number representing the 'dispositional propensity to morally disengage'. The lower the score, the lower is the professional's propensity to morally disengage. Since the propensity to morally disengage represents a dispositional trait, it remains context-free and does not differ across any of the categories of conflicting interests.

Table 5.7: Descriptive Statistics of Propensity to Morally Disengage (PMD)

| Propensity to Morally Disengage (PMD) | Mean | Median | Min | Max | Standard Deviation | Skewness | Kurtosis |
|--|-------------|---------------|------------|------------|-------------------------------|-----------------|-----------------|
| PMD (Average) | 1.399 | 1.250 | 1 | 3.125 | 0.373 | 1.606 | 3.977 |

The minimum value is 1 which is the lowest score on one's PMD and the maximum value is 3.125 which represents the neutral stance on one's self-reported PMD. Furthermore, range as the difference between maximum and minimum values (i.e. $3.125 - 1 = 2.125$) indicates, on average, a difference of around two points variation in responses to all the situations involving conflict of interests. The mean value of PMD is 1.399 and the median is 1.250 that indicate a low propensity to morally disengage. Moreover, the standard deviation signifying the dispersion of responses from their mean value is 0.373. Distribution of PMD is positively skewed and kurtotic (skewness = 1.606 and kurtosis = 3.977) which indicates that most of the data values are clustered below the mean and very few above and that the extreme scores are less in number.

5.4 Model Assessment

Model assessment is about the examination of several criteria, including the coefficients of determination, path coefficients, effect size, predictive relevance, the goodness of model fit and multicollinearity (Jacobs, 2014). This section provides an account of the data analysis procedure, followed by a detailed assessment of the study's model.

5.4.1 Data Analysis Procedure

Empirical data were collected using the repeated measures experiment with 105 professionals from the Big 4 accounting firms. Each of the professionals was exposed to 4 scenarios representing four different categories of conflict of interests (i.e. CoI-1, CoI-2, CoI-3 and CoI-4). Thus, the total observations are $105 * 4 = 420$.

With CoI coded as '0' and '1', the path leading from CoI towards all the other variables will capture the impact of 105 data observations for which it is coded '1'. The problem arises for the paths leading from the POE, PD and EJ towards one another and towards the DD – this is because all these variables include all the 420 observations, i.e. $105 * 4$ vignettes. However, for a particular category of CoI at a time (i.e. CoI-1, CoI-2, CoI-3 or CoI-4), the impact of only 105 observations (representing the presence of that particular CoI) has to be captured. Therefore, the following steps were taken to analyse the model for one category of CoI at a time;

1. Taking CoI-1 as an example, the following interaction terms have been added to the model; (i) 3 interaction terms 'POE*CoI-1' leading towards DD, PD and EJ, respectively, (ii) 2 interaction terms 'PD*CoI-1' leading towards DD and EJ, respectively, (iii) 1 interaction term 'EJ*CoI-1' leading towards DD, (iv) 1 interaction term 'OSE*CoI-1' leading towards DD and (v) 1 interaction term 'PMD*CoI-1' leading towards DD. All these interaction terms include COI-1 as a moderator and capture the change in relationship from, say, POE → EJ when CoI-1 changes in value from '0' to '1'. The same step applies to all other categories of conflict of interests. This step is informed by the literature related to *moderated mediation* (Preacher, Rucker and Hayes, 2007; Martin, 2008; Preacher and Hayes, 2008; Hayes and Preacher, 2014).
2. The inclusion of interaction terms enabled computation of *simple slopes* that represent the regression of predicted variable (e.g., DD) on the predictor (e.g., POE) at the specific conditional values, i.e. '0' and '1' of the moderator (e.g., CoI-1). If b_1 is the coefficient for

effect of the predictor (say, POE) on the predicted variable (say, DD) and b_3 is the coefficient of the interaction term (say, POE*CoI-1 leading towards DD), then the simple slope is computed as ' $b_1 + b_3CoI-1$ '. When CoI-1 assumes the value of 0, the simple slope reduces to b_1 and when CoI-1 changes to 1, the new coefficient representing simple slope is ' $b_1 + b_3$ ' which will then capture the impact of relevant 105 observations against the conflict of interests due to self-interest threat (i.e. CoI-1). This step is informed by the extant literature on *simple slope analysis* (Cohen, Cohen, West and Aiken, 2002; Bauer and Curran, 2005; Preacher, Curran and Bauer, 2006; Fu, Tan and Zhang, 2011).

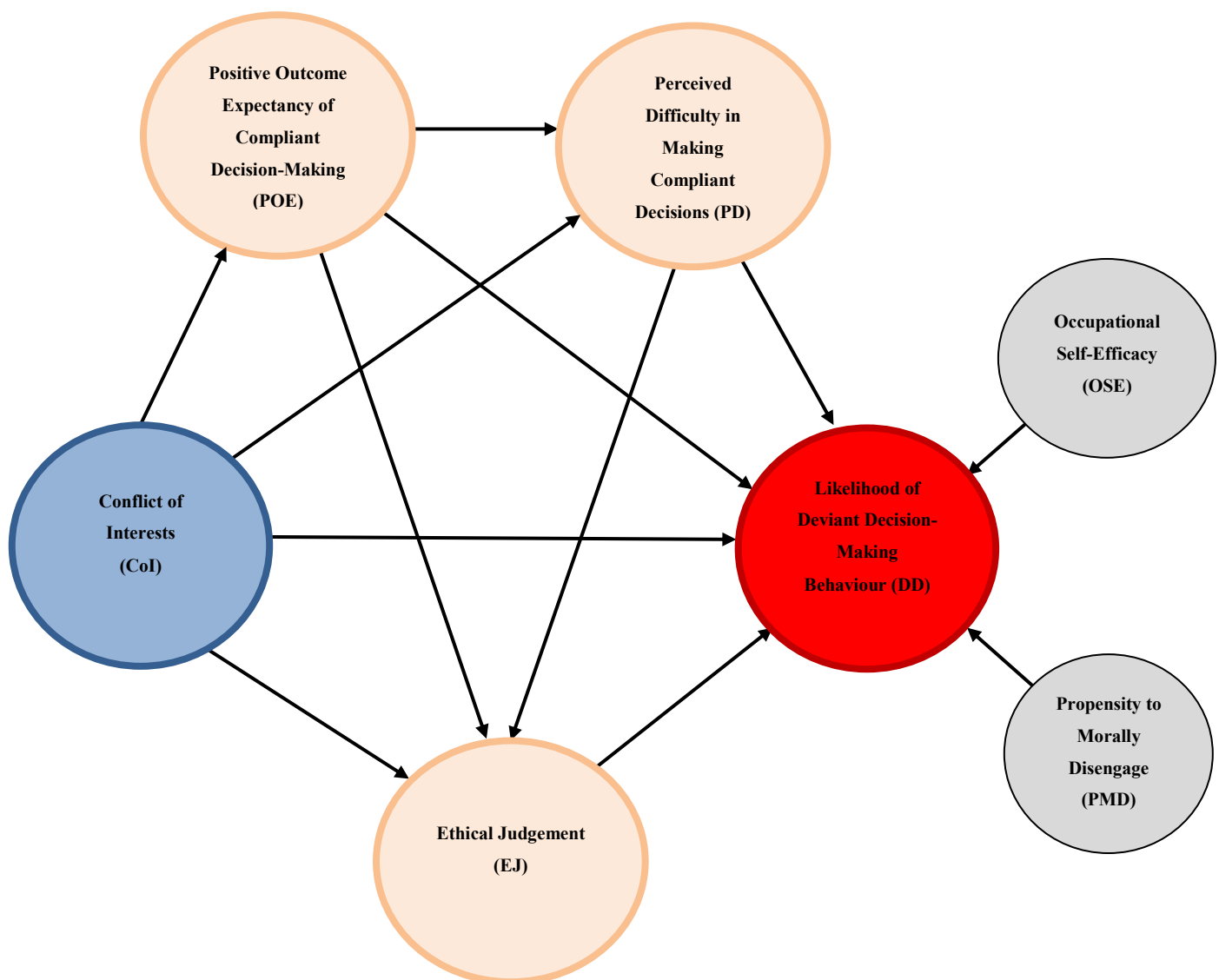


Figure 5.1: Path Model _ Conflict of interests and Deviant Decision-Making Behaviour
(Note: The different colours are for differentiation and clarity purposes only)

3. The significance of simple slope (i.e. t statistic) has been computed in two stages. First, the

standard error for simple slope (S_{ss}) has been calculated using the formula ' $S_{ss} = \sqrt{S_{b1} + \text{cov}(b_1, b_3)2\text{CoI} - 1 + \text{CoI} - 1^2 S_{b3}}$ ' where S_{b1} is the variance of predictor coefficient, S_{b3} is the variance of interaction coefficient and $\text{cov}(b_1, b_3)$ is the covariance of the two. SmartPLS 3 enables calculation of the said variances and covariance. The t statistic is, then, computed by dividing the simple slope (i.e. $b_1 + b_3$) by its standard error (S_{ss}). Finally, the p -value for a t statistic has been calculated using the online statistics calculator available at danielsoper.com (Preacher, 2003).

Following the aforementioned steps for data analysis, the effect of one category of conflict of interests at a time could be captured. Thus, the main model was run in four subsets with particular category of CoI at a time. The same steps were followed for complementary analysis with the 'likelihood of compliant decision-making behaviour (CD)' as the dependent variable. For the sake of better understanding, all the results will be reported after the simple slopes have been taken into account. The figures of the tested models will also show the simple slope coefficients because interaction effects are not the primary concern of this study and have been considered only to facilitate the intended data analysis.

The detailed screenshots of the tested models, with interaction terms included, have been presented in the Appendix 3.

5.4.2 Coefficient of Determination

The coefficient of determination (R^2) is a measure of the percentage of variation in the dependent variable that is explained by variation in the independent variable. The magnitude of R^2 values is examined as a standard of predictive accuracy (Field, 2009). R^2 is one of the primary criteria for model evaluation.

The decision regarding what level of this coefficient is high is discipline-specific. For instance, behavioural studies consider 0.20 as high R^2 , while marketing studies regard 0.75 as high (Hair, Ringle and Sarstedt, 2011). In the accounting and auditing studies, it is difficult to specify any threshold for low and high R^2 . Nonetheless, there is evidence of comparatively low values of the coefficient. For instance, R^2 ranged in value from 0.12 to 0.379 in the study by Guiral, Rodgers, Ruiz and Gonzalo (2010). Similarly, Chenhall (2005) reports R^2 ranging from 0.17 to 0.32. The study on the ethical intent of professional accountants (Roth, 2012) also found as low R^2 as 0.006.

Table 5.8: Coefficients of determination (R^2)

| Coefficient of Determination (R^2) | | | | |
|--|-------|-------|-------|-------|
| Variables | CoI-1 | CoI-2 | CoI-3 | CoI-4 |
| DD | 0.404 | 0.416 | 0.351 | 0.377 |
| CD | 0.393 | 0.432 | 0.350 | 0.341 |
| POE | 0.013 | 0.090 | 0.020 | 0.002 |
| PD | 0.273 | 0.297 | 0.220 | 0.222 |
| EJ | 0.154 | 0.254 | 0.144 | 0.155 |

Arguably, the low values of R^2 in the case of POE make sense because the only path leading to this variable is from the conflict of interests (i.e. CoI-1, CoI-2, CoI-3, or CoI-4). In real professional accounting environment, many contextual factors (such as regulations, quality control reviews and inspections, codes of conduct ethics and compliance programs and the organisational culture etc.) are also the important predictors of POE. The rest of the R^2 values range from 0.144 to 0.432 that are in accordance with an acceptable range in other comparable studies.

5.4.3 Path Coefficients

The path coefficients of PLS path model represent the standardised beta coefficients of the ordinary least squares regression (Hair, Ringle and Sarstedt, 2011). The sign of the estimated regression coefficient is an indicative of a positive or negative relationship between the variables. Provided that the estimated coefficient is statistically significant, its value denotes the degree of relationship between two variables (Hair, Black, Babin and Anderson, 2010). Path coefficients are interpreted as ‘the change in the dependent variable when an independent variable is increased by one standard deviation’, while keeping all other independent variables constant (Henseler, Hubona and Ray, 2016). Specifically, if the path leading from X to Y has a coefficient of 0.81 and if X increases by one standard deviation from its mean, Y is expected to increase by 0.81 its own standard deviation from its own mean, *ceteris paribus*

(Saengphueng, 2015).

In order to assess the significance of path coefficients, SmartPLS 3 employs bootstrapping procedure to compute a *t statistic* and *p*-values for the observed effects of predictors on that predicted. A hypothesised relationship is said to be supported if the path is significant and shows the sign in concordance with the hypothesised direction. Since PLS does not presume normality of data, it applies nonparametric bootstrapping – this process involves obtaining standard errors for hypothesis testing by creating the bootstrap samples, through repeated random sampling with replacement. The so created samples enable the estimated coefficients in PLS path model to be tested for their significance (Henseler, Ringle and Sinkovics, 2009).

In order to assess the significance of path coefficients, this study uses recommended 5000 bootstrap samples in the bootstrapping procedure. The critical *t* values are 1.65 for a two-tailed test and 1.282 for one-tailed, at a significance level of 10% (Hair, Ringle and Sarstedt, 2011). All the hypotheses in this study are directional, which specify not only that the effect will take place but also the direction of that effect – according to Field (2009), the one-tailed test is used in case of directional hypotheses. Thus, the results of this study are based on 10% significance level ($p < 0.10$), one-tailed. The path coefficients will be tabulated and reported in the section on hypotheses testing.

5.4.4 Effect Sizes

Having a significant *t* statistic is not an all in itself and it becomes necessary to consider what we can and what we cannot conclude from a significant *t* statistic. For instance, if the null hypothesis is not true and alternative hypothesis is accepted, we say that there is an effect if a *t statistic* is significant – however, even the unimportant effects may turn out to be statistically significant just because a huge number of people were used in the experiment. Furthermore, the probability of the *t statistic* occurring by chance is calculated and if the *p*-value is greater than 0.05, we reject our alternative hypothesis – however, this does not mean that the null hypothesis is true because all that null hypothesis tells us is that there is no effect and even if the effect is nonsignificant, there still is some effect and should never be interpreted as having no effect. This implies that even the significant tests allow us to say little about the null hypothesis (Field, 2009).

In order to account for the above-mentioned limitations, it is recommended to measure, in a

standardised way, the size of the effect. Conceptually, an *effect size* denotes the objective and standardised measure of the magnitude of an observed effect. The purpose of calculating effect sizes is to determine if exogenous variables substantially affect the endogenous variables. One of the common measures of effect sizes in PLS path analysis is the f^2 which tells us about the quantum of variability the model can explain. Thus, f^2 is used to determine if the fitted regression model predicts the outcome significantly well.

Table 5.9: Effect Sizes (f^2)

| Effect Sizes (f^2) | | | | |
|------------------------|-------|-------|-------|-------|
| Variables | CoI-1 | CoI-2 | CoI-3 | CoI-4 |
| DD | 0.678 | 0.712 | 0.541 | 0.605 |
| CD | 0.647 | 0.760 | 0.538 | 0.517 |
| POE | 0.013 | 0.099 | 0.021 | 0.002 |
| PD | 0.376 | 0.422 | 0.282 | 0.285 |
| EJ | 0.182 | 0.340 | 0.168 | 0.183 |

The f^2 values of 0.02, 0.15 and 0.35 represent the small, medium and large effect sizes, respectively (Marcoulides, 1998; Hair, Ringle and Sarstedt, 2013). The f^2 values for the POE in all the categories of CoI signify very small to small effect sizes, while f^2 against all other predictors depict medium to sufficiently large effect sizes. Smaller values of f^2 in the case of POE are justifiable since the only path leading to this variable is from the conflict of interests (i.e. CoI-1, CoI-2, CoI-3 or CoI-4) – any category of conflict of interests, in itself, is not expected to have a large effect size for POE. Many other contextual factors (such as regulations, quality control reviews and inspections, codes of conduct ethics and compliance programs and organisational culture etc.) are also the important predictors of POE.

5.4.5 Predictive Relevance

Predictive relevance denotes the model's capability to predict. *Stone-Geisser's* Q^2 is used to assess the predictive relevance of the model. Q^2 postulates that the model should have the capability to adequately predict each of the endogenous variables. $Q^2 > 0$ indicates the

predictive relevance of the model, which means that the exogenous constructs have predictive relevance for the endogenous constructs under consideration. Thus, $Q^2 > 0$ implies that the proposed structural relationships are not limited to the current data and can be conveniently used to predict endogenous constructs using other sets of data (Hair, Ringle and Sarstedt, 2011). Generally, the Q^2 values of 0.02, 0.15 and 0.35 represent weak, moderate and strong degrees of predictive relevance (Hair, Ringle and Sarstedt, 2013).

SmartPLS employs *blindfolding* procedure to assess Q^2 . Blindfolding is a sample-reuse technique that tends to omit every d^{th} data point and the resulting estimates are used to predict the omitted part. The omission distance d of 5 to 10 is suggested, so that the number of valid observations divided by d is not an integer. Two types of prediction techniques can be used to obtain Q^2 , i.e. *cross-validated communality* and *cross-validated redundancy*. While cross-validated communality measures the quality of measurement model, cross-validated redundancy is a measure of the quality of structural model (Hair, Ringle and Sarstedt, 2011). Since only the structural model is of relevance to this study, cross-validated redundancy will be examined.

Table 5.10: Predictive Relevance (Q^2)

| Predictive Relevance (Q^2) | | | | |
|--------------------------------|-------|-------|-------|--------|
| Variables | CoI-1 | CoI-2 | CoI-3 | CoI-4 |
| DD | 0.363 | 0.334 | 0.316 | 0.331 |
| CD | 0.363 | 0.389 | 0.318 | 0.306 |
| POE | 0.009 | 0.089 | 0.017 | -0.002 |
| PD | 0.260 | 0.289 | 0.211 | 0.216 |
| EJ | 0.135 | 0.236 | 0.127 | 0.140 |

Except for POE in the case of CoI-4, all the Q^2 values are positive which imply that the proposed structural relationships are not limited to the current data and can be used to predict endogenous constructs using the other sets of data. In accordance with the criterion provided

by Hair, Ringle and Sarstedt (2013), the Q^2 values for POE in cases of CoI-1 and CoI-3 signify very weak predictive relevance. The Q^2 values against most of the variables depict moderate to strong predictive relevance, with the exception of that for POE in case of CoI-2 where the evidence of weak to moderate relevance is found. The low values of Q^2 in the case of POE make sense because the only path leading to this variable is from the conflict of interests (i.e. CoI-1, CoI-2, CoI-3 or CoI-4). In real professional accounting environment, many other contextual factors are also the important predictors of POE.

5.4.6 Goodness of Fit

This study employs ‘*Standardized Root Mean Square Residuals*’ (SRMR) as a criterion for model fit. Determining the *Goodness of Fit (GoF)* is about establishing if the model fits the data well. A model not fitting the data means that the data comprises of more information than the model conveys and, resultantly, the estimates obtained from model might be meaningless and the conclusions drawn on them become dubious (Henseler, Hubona and Ray, 2016).

Unlike the covariance-based methods, PLS path analysis does not have adequate global measures of goodness of fit (Hair, Ringle and Sarstedt, 2011). However, PLS path analysis in SmartPLS 3 offers SRMR as the approximate model fit criterion. The test of model fit in PLS path analysis relies on bootstrapping, in order to determine the likelihood of obtaining discrepancy between empirical and the model-implied correlation matrix. The bootstrap samples are drawn and assessed for the value of the discrepancy. The model is said to fit the data if the bootstrap samples yield discrepancy values more than that of the actual model. The approximate model fit criteria, including SRMR, tend to determine the substantiality of discrepancy (i.e. square root of the sum of squared differences) between the empirical and the model-implied correlation matrix. An SRMR equal to 0 denotes perfect fit (Henseler, Hubona and Ray, 2016).

There is a difference of opinion amongst scholars, for the acceptable value of SRMR. For instance, Hu and Bentler (1999) suggested SRMR value of 0.08 and below as an indication of acceptable model fit. Hair, Ringle, Sarstedt and Ringle (2014) found that a correctly specified model can even have SRMR of 0.06 and over and Byrne (2008) proposed that a cut-off value of 0.05 indicates acceptable model fit. Based on the different thresholds so proposed, Henseler, Hubona and Ray (2016) asserted that an SRMR value of 0.08 and below is appropriate.

Table 5.11: Goodness of Fit – SRMR

| SRMR | Sample Mean | Standard Deviation | T-Statistics | P-Value |
|------|-------------|--------------------|--------------|---------|
| 0.02 | 0.029 | 0.005 | 4.033 | 0.000 |

As indicated in the table 5.11, the SRMR for this study's model is 0.02 which indicates a very good fit and also meets the established criterion for the acceptable value of SRMR (i.e. ≤ 0.08). This implies that the model fits the data well and conveys the intended information. Consequently, the estimates obtained from the model are meaningful and the conclusions drawn on them are not susceptible to doubtfulness.

5.4.7 Multicollinearity

It is desirable to have a high correlation between the predictor and the predicted variables. However, a strong correlation among the predictor variables is undesirable and leads to the problem termed multicollinearity. The higher levels of multicollinearity threaten the validity of the results provided by the model being tested. With the increase in multicollinearity, the total as well as the unique variance explained by the predictor variables decrease (Hair et al. 2010).

There are two common ways to check for multicollinearity. The first is to examine the *correlation matrix* of predictor variables. According to this method, the predictor variables with correlation ≥ 0.90 represent a multicollinearity problem. The correlation matrix of predictors, as shown in table 5.12, provides that the correlation coefficients are well below 0.90 in case of all the four categories of conflict of interests, with a maximum value of -0.535. Hence the data does not suffer from multicollinearity problem.

The second way to assess multicollinearity is to examine the *variance inflation factor (VIF)* of the predictor. VIF indicates if the predictor has a strong linear relationship with the other predictor(s). Multicollinearity is said to exist if $VIF > 5$ (Hair, Ringle and Sarstedt, 2011; 2013). As shown in the table 5.13, the VIF values of all the predictors are well below 5 in the events of all the four categories of conflict of interests, with a maximum value of 2.051 which indicates the absence of multicollinearity problem.

Table 5.12: Multicollinearity – Correlation Matrix

| Correlation Matrix | | | | | | | | | |
|--------------------|------------|--------|--------|--------|--------|--------|--------|--------|-----|
| CoI-1 | Predictors | DD | CD | CoI-1 | EJ | OSE | PD | PMD | POE |
| | DD | 1 | | | | | | | |
| | CD | | 1 | | | | | | |
| | CoI-1 | -0.330 | 0.290 | 1 | | | | | |
| | EJ | -0.215 | 0.008 | 0.170 | 1 | | | | |
| | OSE | -0.071 | 0.008 | 0.000 | 0.162 | 1 | | | |
| | PD | 0.205 | -0.071 | -0.260 | -0.092 | 0.013 | 1 | | |
| | PMD | 0.318 | 0.032 | 0.000 | -0.089 | -0.225 | 0.067 | 1 | |
| | POE | -0.232 | 0.140 | 0.120 | 0.155 | 0.159 | -0.276 | -0.071 | 1 |
| CoI-2 | Predictors | DD | CD | CoI-1 | EJ | OSE | PD | PMD | POE |
| | DD | 1 | | | | | | | |
| | CD | | 1 | | | | | | |
| | CoI-2 | 0.483 | -0.535 | 1 | | | | | |
| | EJ | -0.444 | 0.475 | -0.437 | 1 | | | | |
| | OSE | -0.153 | 0.102 | 0.000 | 0.194 | 1 | | | |
| | PD | 0.339 | -0.270 | 0.409 | -0.176 | -0.155 | 1 | | |
| | PMD | 0.230 | -0.138 | 0.000 | -0.214 | -0.225 | 0.189 | 1 | |
| | POE | -0.388 | 0.534 | -0.301 | 0.378 | 0.282 | -0.373 | -0.197 | 1 |
| CoI-3 | Predictors | DD | CD | CoI-1 | EJ | OSE | PD | PMD | POE |
| | DD | 1 | | | | | | | |
| | CD | | 1 | | | | | | |
| | CoI-3 | -0.143 | 0.180 | 1 | | | | | |
| | EJ | -0.291 | 0.318 | 0.110 | 1 | | | | |
| | OSE | -0.221 | 0.359 | 0.000 | 0.196 | 1 | | | |
| | PD | 0.500 | -0.389 | -0.050 | -0.14 | -0.27 | 1 | | |
| | PMD | 0.315 | -0.320 | 0.000 | -0.165 | -0.225 | 0.217 | 1 | |
| | POE | -0.481 | 0.311 | 0.142 | 0.099 | 0.113 | -0.535 | -0.205 | 1 |
| CoI-4 | Predictors | DD | CD | CoI-1 | EJ | OSE | PD | PMD | POE |
| | DD | 1 | | | | | | | |
| | CD | | 1 | | | | | | |
| | CoI-4 | -0.015 | 0.062 | 1 | | | | | |
| | EJ | -0.090 | 0.270 | 0.159 | 1 | | | | |
| | OSE | -0.160 | 0.198 | 0.000 | 0.128 | 1 | | | |
| | PD | 0.176 | -0.180 | -0.102 | -0.213 | -0.209 | 1 | | |
| | PMD | 0.259 | -0.197 | 0.000 | -0.220 | -0.225 | 0.123 | 1 | |
| | POE | -0.312 | 0.254 | 0.043 | 0.158 | 0.336 | -0.465 | -0.179 | 1 |

Table 5.13: Multicollinearity – Variance Inflation Factors (VIFs)

| Variance Inflation Factors (VIFs) | | | | | | |
|-----------------------------------|------------|-------|-------|-------|-------|-------|
| CoI-1 | Predictors | DD | CD | CoI-1 | EJ | PD |
| | CoI-1 | 1.259 | 1.259 | | | |
| | EJ | 1.255 | 1.255 | 1.158 | | |
| | OSE | 1.103 | 1.103 | | | |
| | PD | 1.293 | 1.293 | 1.026 | 1.268 | |
| | PMD | 1.068 | 1.068 | | | |
| | POE | 1.282 | 1.282 | 1.000 | 1.216 | 1.034 |
| CoI-2 | Predictors | DD | CD | CoI-2 | EJ | PD |
| | CoI-2 | 2.051 | 2.051 | | | |
| | EJ | 1.550 | 1.550 | 1.783 | | |
| | OSE | 1.124 | 1.124 | | | |
| | PD | 1.731 | 1.731 | 1.242 | 1.700 | |
| | PMD | 1.104 | 1.104 | | | |
| | POE | 1.524 | 1.524 | 1.000 | 1.329 | 1.137 |
| CoI-3 | Predictors | DD | CD | CoI-3 | EJ | PD |
| | CoI-3 | 1.118 | 1.118 | | | |
| | EJ | 1.137 | 1.137 | 1.081 | | |
| | OSE | 1.134 | 1.134 | | | |
| | PD | 1.487 | 1.487 | 1.076 | 1.387 | |
| | PMD | 1.103 | 1.103 | | | |
| | POE | 1.566 | 1.566 | 1.000 | 1.524 | 1.107 |
| CoI-4 | Predictors | DD | CD | CoI-4 | EJ | PD |
| | CoI-4 | 1.113 | 1.113 | | | |
| | EJ | 1.240 | 1.240 | 1.027 | | |
| | OSE | 1.149 | 1.149 | | | |
| | PD | 1.337 | 1.337 | 1.005 | 1.297 | |
| | PMD | 1.098 | 1.098 | | | |
| | POE | 1.395 | 1.395 | 1.000 | 1.282 | 1.005 |

Therefore, both the correlation matrix and the VIF values provide evidence for the absence of multicollinearity. This implies that the data does not suffer from the problem of strong correlation among the predictor variables.

Due to the absence of multicollinearity, the validity of the results provided by the tested model is, therefore, not threatened.

5.5 Hypotheses Testing

This section will test and report the results of research hypotheses against each of the four categories of conflict of interests (i.e. CoI-1: conflict of interests due to self-interest threat, CoI-2: that due to intimidation threat, CoI-3: that due to a combination of self-interest and self-review threats and CoI-4: conflict of interests due to a combination of self-interest, intimidation, self-review and familiarity threats).

The significance of path coefficients has been reported using the p -values instead of the t values. The p -values associated with path coefficients reflect the degree of relationship and also the power of the test. Compared to t values, the p -values are more meaningful when testing the research hypotheses. Furthermore, the bootstrapping procedure in SmartPLS 3 relies on random samples drawn from the data and the t value changes every time the PLS algorithm is run to test the model – the change, however, is not substantial enough to convert the significant relationship into nonsignificant and vice versa (Kock, 2011).

The tables 5.14, 5.15, 5.15 and 5.16 include path coefficients (β) and correlation coefficients (r) for hypothesised relationships.

Table 5.14: Hypotheses Testing _ Conflict of interests due to Self-interest threat (CoI-1)

| Hypothesis Testing: CoI-1 [Path Coefficients (β s) & Correlation Coefficients (r)] | | | | | |
|--|------------------|---|--|--|--|
| Paths from | Predicted Signs | Paths to | | | |
| | | POE | PD | EJ | DD |
| CoI-1 | +/-, +/-, +/-, + | $\beta = 0.116^{**}$ $r = 0.120^{***}$ | $\beta = -0.220^{****}$ $r = -0.260^{****}$ | $\beta = 0.132^{****}$ $r = 0.170^{****}$ | $\beta = -0.258^{****}$ $r = -0.330^{****}$ |
| POE | -, +, - | | $\beta = -0.337^{****}$ $r = -0.276^{***}$ | $\beta = 0.148^{**}$ $r = 0.155^{*}$ | $\beta = -0.144^{**}$ $r = -0.232^{***}$ |
| PD | -, + | | | $\beta = -0.094^{*}$ $r = -0.092$ | $\beta = 0.111^{**}$ $r = 0.205^{**}$ |
| EJ | - | | | | $\beta = -0.165^{***}$ $r = -0.215^{**}$ |
| OSE | - | | | | $\beta = 0.021$ $r = -0.071$ |
| PMD | + | | | | $\beta = 0.143^{****}$ $r = 0.318^{****}$ |
| * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$, **** $p < 0.001$, 1 tailed | | | | | |

Table 5.15: Hypothesis Testing _ Conflict of interests due to Intimidation Threat (CoI-2)

| Hypothesis Testing: CoI-2 | | | | | |
|---|------------------|--|--|--|--|
| [Path Coefficients (β s) & Correlation Coefficients (r)] | | | | | |
| Paths from | Predicted Signs | Paths to | | | |
| | | POE | PD | EJ | DD |
| CoI-2 | +/-, +/-, +/-, + | $\beta = -0.301^{****}$ $r = -0.301^{****}$ | $\beta = 0.314^{****}$ $r = 0.409^{****}$ | $\beta = -0.301^{****}$ $r = -0.437^{****}$ | $\beta = 0.193^{****}$ $r = 0.483^{****}$ |
| POE | -, +, - | | $\beta = -0.323^{****}$ $r = -0.373^{****}$ | $\beta = 0.331^{****}$ $r = 0.378^{****}$ | $\beta = -0.200^{****}$ $r = -0.388^{****}$ |
| PD | -, + | | | $\beta = -0.075$ $r = -0.176^{**}$ | $\beta = 0.264^{****}$ $r = 0.339^{****}$ |
| EJ | - | | | | $\beta = -0.250^{****}$ $r = -0.444^{****}$ |
| OSE | - | | | | $\beta = 0.004$ $r = -0.153^*$ |
| PMD | + | | | | $\beta = 0.120^{***}$ $r = 0.230^{***}$ |
| * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$, **** $p < 0.001$, 1 tailed | | | | | |

Table 5.16: Hypothesis Testing _ Conflict of interests due to Self-Interest and Self-Review Threats (CoI-3)

| Hypothesis Testing: CoI-3 | | | | | |
|---|------------------|--|--|--|--|
| [Path Coefficients (β s) & Correlation Coefficients (r)] | | | | | |
| Paths from | Predicted Signs | Paths to | | | |
| | | POE | PD | EJ | DD |
| CoI-3 | +/-, +/-, +/-, + | $\beta = 0.142^{****}$ $r = 0.142^{****}$ | $\beta = 0.032$ $r = -0.050$ | $\beta = 0.090^{**}$ $r = 0.110^{**}$ | $\beta = -0.079^{**}$ $r = -0.143^{***}$ |
| POE | -, +, - | | $\beta = -0.567^{****}$ $r = -0.535^{****}$ | $\beta = 0.099^*$ $r = 0.099$ | $\beta = -0.223^{****}$ $r = -0.481^{****}$ |
| PD | -, + | | | $\beta = -0.154^{***}$ $r = -0.140^*$ | $\beta = 0.215^{****}$ $r = 0.500^{****}$ |
| EJ | - | | | | $\beta = -0.202^{***}$ $r = -0.291^{***}$ |
| OSE | - | | | | $\beta = -0.011$ $r = -0.221^{**}$ |
| PMD | + | | | | $\beta = 0.113^{****}$ $r = 0.315^{****}$ |
| * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$, **** $p < 0.001$, 1 tailed | | | | | |

Table 5.17: Hypothesis Testing _ Conflict of interests due to Self-Interest, Intimidation, Self-Review and Familiarity Threats (CoI-4)

| Hypothesis Testing: CoI-4 | | | | | |
|---|------------------|--------------------------------|--|---|--|
| [Path Coefficients (β s) & Correlation Coefficients (r)] | | | | | |
| Paths from | Predicted Signs | Paths to | | | |
| | | POE | PD | EJ | DD |
| CoI-4 | +/-, +/-, +/-, + | $\beta = 0.043$ $r = 0.043$ | $\beta = -0.083^{**}$ $r = -0.102^{**}$ | $\beta = 0.138^{***}$ $r = 0.159^{****}$ | $\beta = 0.018$ $r = -0.015$ |
| POE | -, +, - | | $\beta = -0.464^{****}$ $r = -0.465^{****}$ | $\beta = 0.125^{**}$ $r = 0.158^*$ | $\beta = -0.228^{****}$ $r = -0.312^{****}$ |
| PD | -, + | | | $\beta = -0.164^{***}$ $r = -0.213^{**}$ | $\beta = 0.114^{**}$ $r = 0.176^{**}$ |
| EJ | - | | | | $\beta = -0.107^*$ $r = -0.090$ |
| OSE | - | | | | $\beta = -0.005$ $r = -0.160^*$ |
| PMD | + | | | | $\beta = 0.162^{***}$ $r = 0.259^{***}$ |
| * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$, **** $p < 0.001$, 1 tailed | | | | | |

5.5.1 Relationship between Conflict of interests and Deviant Decision-Making

This subsection reports the results of the first group of hypotheses that relate conflict of interests (CoI) to the accounting professionals' likelihood of deviant decision-making behaviour (DD). CoI-1, CoI-2, CoI-3 and CoI-4 have been hypothesised to be positively related to DD ($H_{1.1/1}$, $H_{1.2/1}$, $H_{1.3/1}$ and $H_{1.4/1}$). The results indicate that CoI-1 is negatively and significantly related to DD ($\beta = -0.258$, $p < 0.001$), CoI-2 is positively and significantly related to DD ($\beta = 0.193$, $p < 0.001$), CoI-3 is negatively and significantly related to DD ($\beta = -0.079$, $p < 0.05$) and there is positive but nonsignificant relationship between CoI-4 and DD ($\beta = 0.018$, $p > 0.10$). Therefore, $H_{1.2/1}$ is supported while $H_{1.1/1}$, $H_{1.3/1}$ and $H_{1.4/1}$ are not.

5.5.2 Role of Situational Cognitive Processes towards Deviant Decision-Making

This subsection reports the results of the second group of hypotheses about the role of

accounting professionals' cognitive processes towards the likelihood of deviant decision-making behaviour. This group of hypotheses has, further, been divided into three subgroups, as follows;

5.5.2.1 Relationship of Conflict of interests with Positive Outcome Expectancy, Perceived Difficulty and Ethical Judgement

This subgroup of hypotheses is about the relationship of conflict of interests (CoI) with accounting professionals' positive outcome expectancy of compliant decision-making (POE), their perceived difficulty in making compliant decisions (PD) and their ethical judgement (EJ) towards the likelihood of deviant decision-making behaviour (DD).

1. CoI and POE

CoI-1, CoI-2, CoI-3 and CoI-4 have been hypothesised to be related to POE ($H_{1a/2.1}$, $H_{1b/2.1}$, $H_{1c/2.1}$ and $H_{1d/2.1}$). The results indicate that CoI-1 is positively and significantly related to POE ($\beta = 0.116$, $p < 0.05$), CoI-2 is negatively and significantly related to POE ($\beta = -0.301$, $p < 0.001$), CoI-3 is positively and significantly related to POE ($\beta = 0.142$, $p < 0.001$) and there is positive but nonsignificant relationship between CoI-4 and POE ($\beta = 0.043$, $p > 0.10$). Therefore, $H_{1a/2.1}$, $H_{1b/2.1}$ and $H_{1c/2.1}$, are supported while $H_{1d/2.1}$ is not.

2. CoI and PD

CoI-1, CoI-2, CoI-3 and CoI-4 have been hypothesised to be related to PD ($H_{2a/2.1}$, $H_{2b/2.1}$, $H_{2c/2.1}$ and $H_{2d/2.1}$). The results indicate that CoI-1 is negatively and significantly related to PD ($\beta = -0.220$, $p < 0.001$), CoI-2 is positively and significantly related to PD ($\beta = 0.314$, $p < 0.001$), CoI-4 is negatively and significantly related to PD ($\beta = -0.083$, $p < 0.05$) and there is positive but nonsignificant relationship between CoI-3 and PD ($\beta = 0.032$, $p > 0.10$). Therefore, $H_{2a/2.1}$, $H_{2b/2.1}$ and $H_{2d/2.1}$ are supported while $H_{2c/2.1}$ is not.

3. CoI and EJ

CoI-1, CoI-2, CoI-3 and CoI-4 have been hypothesised to be related to EJ ($H_{3a/2.1}$, $H_{3b/2.1}$, $H_{3c/2.1}$ and $H_{3d/2.1}$). The results indicate that CoI-1 is positively and significantly related to EJ ($\beta = 0.132$, $p < 0.001$), CoI-2 is negatively and significantly related to EJ ($\beta = -0.301$, $p < 0.001$), CoI-3 is positively and significantly related to EJ ($\beta = 0.090$, $p < 0.05$) and CoI-4 is positively and significantly related to EJ ($\beta = 0.138$, $p < 0.01$). Therefore, $H_{3a/2.1}$, $H_{3b/2.1}$, $H_{3c/2.1}$ and $H_{3d/2.1}$

are all supported.

5.5.2.2 Relationship of Positive Outcome Expectancy, Perceived Difficulty and Ethical Judgement with Deviant Decision-Making Behaviour

This subgroup of hypotheses is about the relationship of accounting professionals' positive outcome expectancy of compliant decision-making (POE), their perceived difficulty in making compliant decisions (PD) and their ethical judgement (EJ) with the likelihood of deviant decision-making behaviour (DD).

1. POE and DD

In the events of conflict of interests, POE has been hypothesised to be negatively related to DD ($H_{1a/2.2}$, $H_{1b/2.2}$, $H_{1c/2.2}$ and $H_{1d/2.2}$). The results indicate that POE is negatively and significantly related to DD in case of CoI-1 ($\beta = -0.144$, $p < 0.05$), CoI-2 ($\beta = -0.200$, $p < 0.001$), CoI-3 ($\beta = -0.223$, $p < 0.001$) and CoI-4 ($\beta = -0.228$, $p < 0.001$) Therefore, $H_{1a/2.2}$, $H_{1b/2.2}$, $H_{1c/2.2}$ and $H_{1d/2.2}$ are all supported.

2. PD and DD

In the events of conflict of interests, PD has been hypothesised to be positively related to DD ($H_{2a/2.2}$, $H_{2b/2.2}$, $H_{2c/2.2}$ and $H_{2d/2.2}$). The results indicate that PD is positively and significantly related to DD in case of CoI-1 ($\beta = 0.111$, $p < 0.05$), CoI-2 ($\beta = 0.264$, $p < 0.001$), CoI-3 ($\beta = 0.215$, $p < 0.001$) and CoI-4 ($\beta = 0.114$, $p < 0.05$). Therefore, $H_{2a/2.2}$, $H_{2b/2.2}$, $H_{2c/2.2}$ and $H_{2d/2.2}$ are all supported.

3. EJ and DD

In the events of conflict of interests, EJ has been hypothesised to be negatively related to DD ($H_{3a/2.2}$, $H_{3b/2.2}$, $H_{3c/2.2}$ and $H_{3d/2.2}$). The results indicate that EJ is negatively and significantly related to DD in case of CoI-1 ($\beta = -0.165$, $p < 0.01$), CoI-2 ($\beta = -0.250$, $p < 0.001$), CoI-3 ($\beta = -0.202$, $p < 0.001$) and CoI-4 ($\beta = -0.107$, $p < 0.10$). Therefore, $H_{3a/2.2}$, $H_{3b/2.2}$, $H_{3c/2.2}$ and $H_{3d/2.2}$ are all supported.

5.5.2.3 Interrelationships of Positive Outcome Expectancy, Perceived Difficulty and Ethical Judgement

This subgroup of hypotheses is about the interrelationship of accounting professionals' positive

outcome expectancy of compliant decision-making (POE), their perceived difficulty in making compliant decisions (PD) and their ethical judgement (EJ) in the events of conflict of interests (CoI).

1. POE and PD

In the events of conflict of interests, POE has been hypothesised to be negatively related to PD ($H_{1a/2.3}$, $H_{1b/2.3}$, $H_{1c/2.3}$ and $H_{1d/2.3}$). The results indicate that POE is negatively and significantly related to PD in case of CoI-1 ($\beta = -0.337$, $p < 0.001$), CoI-2 ($\beta = -0.323$, $p < 0.001$), CoI-3 ($\beta = -0.567$, $p < 0.001$) and CoI-4 ($\beta = -0.464$, $p < 0.001$). Therefore, $H_{1a/2.3}$, $H_{1b/2.3}$, $H_{1c/2.3}$ and $H_{1d/2.3}$ are all supported.

2. POE and EJ

In the events of conflict of interests, POE has been hypothesised to be positively related to EJ ($H_{2a/2.3}$, $H_{2b/2.3}$, $H_{2c/2.3}$ and $H_{2d/2.3}$). The results indicate that POE is positively and significantly related to EJ in case of CoI-1 ($\beta = 0.148$, $p < 0.05$), CoI-2 ($\beta = 0.331$, $p < 0.001$), CoI-3 ($\beta = 0.099$, $p < 0.10$) and CoI-4 ($\beta = 0.125$, $p < 0.05$). Therefore, $H_{2a/2.3}$, $H_{2b/2.3}$, $H_{2c/2.3}$ and $H_{2d/2.3}$ are all supported.

3. PD and EJ

In the events of conflict of interests, PD has been hypothesised to be negatively related to EJ ($H_{3a/2.3}$, $H_{3b/2.3}$, $H_{3c/2.3}$ and $H_{3d/2.3}$). The results indicate that PD is negatively and significantly related to EJ in case of CoI-1 ($\beta = -0.094$, $p < 0.10$), CoI-3 ($\beta = -0.154$, $p < 0.01$) and CoI-4 ($\beta = -0.164$, $p < 0.01$). In the case of CoI-2, there is a negative but a nonsignificant relationship between PD and EJ ($\beta = -0.075$, $p > 0.10$). Therefore, $H_{3a/2.3}$, $H_{3c/2.3}$ and $H_{3d/2.3}$ are supported, while $H_{3b/2.3}$ is not supported in terms of significance.

5.5.3 Biasing Role of Conflict of Interests

This subsection reports the results of the third group of hypotheses that relate the accounting professionals' perceptual biases to the likelihood of deviant decision-making behaviour (DD). In the events of conflict of interests, perceptual biases originate due to the interference of perceptions (i.e. POE and/or PD) with the analytical pathway to decision-making.

Consistent with the approach followed by Guiral, Rodgers, Ruiz and Gonzalo (2010), the

results of this set of hypotheses are based on two types of effects, i.e. path coefficients (β) to capture the variation in predicted variable for a unit change in the predictor and the correlation coefficients (r) to capture the strength of relationships. Although they considered either ' β ' (where relationships were hypothesised) or ' r ' (where relationships were not hypothesised), this study considers both the coefficients. Accordingly, in order for a relation between two variables to hold significant effect, both the β and r should be significant at, at least, $p < 0.10$. The rationale to consider both the β and r simultaneously can be attributed to the difference between the goals of the regression and that of the correlation. Field (2009) provides that while regression is meant to find the best line that predicts dependent variable from the independent variable and indicates the pattern of relationship, the correlation coefficient is meant to denote the strength of association between the variables.

In the events of conflict of interests, deviant decision-making has been hypothesised to be prone to perceptual biases due to the interference of their perceptions (POE and/or PD) with analytical pathway to deviant decision, i.e. $CoI \rightarrow EJ \rightarrow DD$ ($H_{1.1/3}$, $H_{1.2/3}$, $H_{1.3/3}$ and $H_{1.4/3}$). The interference of POE and/or PD implies their significant effect in one or more of the following decision-making pathway (s); $CoI \rightarrow POE \rightarrow DD$, $CoI \rightarrow POE \rightarrow EJ \rightarrow DD$, $POE \rightarrow EJ \rightarrow DD$, $CoI \rightarrow PD \rightarrow DD$, $CoI \rightarrow PD \rightarrow EJ \rightarrow DD$, $PD \rightarrow EJ \rightarrow DD$, $POE \rightarrow DD$ and the $PD \rightarrow DD$ path.

5.5.5.1 Perceptual Biases in case of CoI-1

In case of CoI-1, the results indicate significant effects between CoI-1 and POE ($\beta = 0.116$, $p < 0.05$; $r = 0.120$, $p < 0.01$), CoI-1 and PD ($\beta = -0.220$, $p < 0.001$; $r = -0.260$, $p < 0.001$), POE and EJ ($\beta = 0.148$, $p < 0.05$; $r = 0.155$, $p < 0.10$), POE and DD ($\beta = -0.144$, $p < 0.05$; $r = -0.232$, $p < 0.01$), PD and DD ($\beta = 0.111$, $p < 0.05$; $r = 0.205$, $p < 0.05$) and EJ and DD ($\beta = -0.165$, $p < 0.01$; $r = -0.215$, $p < 0.05$). The significant path coefficient, but nonsignificant correlation coefficient is found between PD and EJ ($\beta = -0.094$, $p < 0.10$; $r = -0.092$, $p > 0.10$). Based on β and r , the perceptual biases are more likely to interfere with analytical pathway to deviant decision-making through $CoI-1 \rightarrow POE \rightarrow EJ \rightarrow DD$ and the $CoI-1 \rightarrow PD \rightarrow DD$ pathways. The significant effects of POE and PD in decision-making pathways imply that $H_{1.1/3}$ is supported.

5.5.5.2 Perceptual Biases in case of CoI-2

In case of CoI-2, the results indicate significant effects between CoI-2 and POE ($\beta = -0.301$, p

< 0.001 ; $r = -0.301$, $p < 0.001$), CoI-2 and PD ($\beta = 0.314$, $p < 0.001$; $r = 0.409$, $p < 0.001$), POE and EJ ($\beta = 0.331$, $p < 0.001$; $r = 0.378$, $p < 0.001$), POE and DD ($\beta = -0.200$, $p < 0.001$; $r = -0.388$, $p < 0.001$), PD and DD ($\beta = 0.264$, $p < 0.001$; $r = 0.339$, $p < 0.001$) and EJ and DD ($\beta = -0.250$, $p < 0.001$; $r = -0.444$, $p < 0.001$). The nonsignificant path coefficient, but significant correlation coefficient is found between PD and EJ ($\beta = -0.075$, $p > 0.10$; $r = -0.176$, $p < 0.05$). Based on β and r , the perceptual biases are more likely to interfere with analytical pathway to deviant decision-making through CoI-2 \rightarrow POE \rightarrow EJ \rightarrow DD and the CoI-2 \rightarrow PD \rightarrow DD pathways. The significant effects of POE and PD in decision-making pathways imply that $H_{1.2/3}$ is supported.

5.5.5.3 Perceptual Biases in case of CoI-3

In case of CoI-3, the results indicate significant effects between CoI-3 and POE ($\beta = 0.142$, $p < 0.001$; $r = 0.142$, $p < 0.001$), PD and EJ ($\beta = -0.154$, $p < 0.01$; $r = -0.140$, $p < 0.10$), POE and DD ($\beta = -0.223$, $p < 0.001$; $r = -0.481$, $p < 0.001$), PD and DD ($\beta = 0.215$, $p < 0.001$; $r = 0.500$, $p < 0.001$) and EJ and DD ($\beta = -0.202$, $p < 0.01$; $r = -0.291$, $p < 0.01$). Nonsignificant path and correlation coefficients are found between CoI-3 and PD ($\beta = 0.032$, $p > 0.10$; $r = -0.050$, $p > 0.10$) and significant path coefficient, but nonsignificant correlation coefficient are found between POE and EJ ($\beta = 0.099$, $p < 0.10$; $r = 0.099$, $p > 0.10$). Based on β and r , the perceptual biases are more likely to interfere with analytical pathway to deviant decision-making through CoI-3 \rightarrow POE \rightarrow DD and the PD \rightarrow EJ \rightarrow DD pathways. The significant effects of POE and PD in decision-making pathways imply that $H_{1.3/3}$ is supported.

5.5.5.4 Perceptual Biases in case of CoI-4

In case of CoI-4, the results indicate significant effects between CoI-4 and PD ($\beta = -0.083$, $p < 0.05$; $r = -0.102$, $p < 0.05$), POE and EJ ($\beta = 0.125$, $p < 0.05$; $r = 0.158$, $p < 0.10$), PD and EJ ($\beta = -0.164$, $p < 0.01$; $r = -0.213$, $p < 0.05$), POE and DD ($\beta = -0.228$, $p < 0.001$; $r = -0.312$, $p < 0.001$) and PD and DD ($\beta = 0.114$, $p < 0.05$; $r = 0.176$, $p < 0.05$). Nonsignificant path and correlation coefficients are found between CoI-4 and POE ($\beta = 0.043$, $p > 0.10$; $r = 0.043$, $p > 0.10$) and significant path coefficient, but nonsignificant correlation coefficient is found between EJ and DD ($\beta = -0.107$, $p < 0.10$; $r = -0.090$, $p > 0.10$). Based on β and r , the perceptual biases are more likely to interfere with analytical pathway to deviant decision-making through POE \rightarrow DD and the CoI-4 \rightarrow PD \rightarrow DD pathways. The significant effects of POE and PD in the decision-making pathway imply that $H_{1.4/3}$ is supported.

In case of all the categories of conflict of interests (i.e. CoI-1, CoI-2, CoI-3 and CoI-4), the overall results indicate that deviant decision-making is likely to be prone to perceptual biases due to the interference of POE and/or PD through the $\text{CoI} \rightarrow \text{POE} \rightarrow \text{DD}$, $\text{CoI} \rightarrow \text{PD} \rightarrow \text{DD}$, $\text{CoI} \rightarrow \text{POE} \rightarrow \text{EJ} \rightarrow \text{DD}$, $\text{PD} \rightarrow \text{EJ} \rightarrow \text{DD}$ and the $\text{POE} \rightarrow \text{DD}$ pathways.

5.5.4 Role of Dispositional Cognitive Processes towards Deviant Decision-Making

Occupational self-efficacy (OSE) and propensity to morally disengage (PMD) are the dispositional cognitive processes that have been included as control variables in the tested model. In this regard, the previous research provides that OSE is negatively related to the likelihood of deviant decision-making behaviour (DD). Furthermore, the extant literature also establishes that PMD is positively related to DD. The results indicate that there is a nonsignificant relationship between OSE and DD for all the categories of conflict of interests, i.e. CoI-1 ($\beta = 0.021$, $p > 0.10$), CoI-2 ($\beta = 0.004$, $p > 0.10$), CoI-3 ($\beta = -0.011$, $p > 0.10$) and CoI-4 ($\beta = -0.005$, $p > 0.10$). Moreover, PMD is found to be significantly and positively related to DD for all the categories of conflict of interests, i.e. CoI-1 ($\beta = 0.143$, $p < 0.001$), CoI-2 ($\beta = 0.120$, $p < 0.01$), CoI-3 ($\beta = 0.113$, $p < 0.01$) and CoI-4 ($\beta = 0.162$, $p < 0.01$).

5.6 Multi-Group Analysis

The multi-group analysis is aimed at examining the statistically significant differences, if any, in the group-specific estimates (e.g. path coefficients) for predefined groups of data (Hair, Ringle, Sarstedt and Ringle, 2014). Conceptually, multi-group analysis can be considered a special case of modelling the moderating effects, in order to analyse the group differences related to the relationships in the model (Henseler and Chin, 2010; Henseler and Fassott, 2010).

Gender comprising of male and female groups has been subjected to multi-group analysis. The rationale behind conducting multi-group analysis across males and females can be attributed to the two main considerations. First, the extant research remains inconclusive about the impact of gender on decision-making in an ethical context (Lincoln and Holme, 2011; Shadmehr and Moradi, 2013). Second, just as other statistical methods, PLS path analysis rests on the assumption that the analysed data stems from a single population. In the real world, however, this assumption of homogeneity is unrealistic as the individuals hold heterogeneous perceptions and evaluations – ignoring this concern can seriously bias the results (Sarstedt,

Henseler and Ringle, 2011). Therefore, it seems robust to analyse the data for any differences in relationships that might exist for the male and female accounting professionals.

The multi-group analysis in SmartPLS 3 is performed using *permutation test* which allows determining if there are statistically significant differences in the group-specific estimates for the predefined groups of data (Sarstedt, Henseler and Ringle, 2011; Hair, Ringle, Sarstedt and Ringle, 2014). For the permutation test, females and males were assigned to group A and group B, respectively. The test creates permutations with observations that are drawn without replacement from the original set of data. The n observations are first assigned to group A and the number is same as that of the observations of group A in the original data. Similarly, the number of observations assigned to group B is same as that of the observations of group B in the original data. Resultantly, the group-specific sample size remains constant in each permutation run (Ringle, Wende and Becker, 2015).

The results of multi-group analysis for males and females indicate significant differences in the magnitude of path coefficients for relationships between $EJ \rightarrow DD$ [in case of CoI-1 ($p < 0.10$), CoI-2 ($p < 0.01$) and CoI-4 ($p < 0.10$)], $PD \rightarrow DD$ [in case of CoI-2 ($p < 0.05$) and CoI-4 ($p < 0.05$)], $POE \rightarrow EJ$ [in case of CoI-1 ($p < 0.10$), CoI-2 ($p < 0.05$) and CoI-3 ($p < 0.10$)] and $POE \rightarrow DD$ [in case of CoI-3 ($p < 0.05$) and CoI-4 ($p < 0.05$)]. However, all the results differ only in the magnitude of path coefficients while the hypothesised signs are the same across all the paths for males and females. Therefore, the results of permutation test for multi-group analysis indicate that the hypothesised relationships (i.e. the predicted signs) do not differ significantly across the male and female accounting professionals.

5.7 Complementary Analysis

The four main models tested in this study included the following paths; (i) leading from the conflict of interests (i.e. CoI-1, CoI-2, CoI-3 and CoI-4) towards the cognitive processes (i.e. POE, PD and EJ) and the likelihood of deviant decision-making behaviour (i.e. DD), (ii) amongst the cognitive processes and finally (ii) from the cognitive processes towards the DD. Further to the main models with DD as the dependent variable, four separate complementary models have been tested, with the ‘likelihood of compliant decision-making behaviour (CD)’ as the dependent variable.

For complementary analysis, this study tests the model presented in the figure 5.2. The only

difference between complementary and the main model is the inclusion of CD (instead of DD) as a dependent variable in the complementary model. This implies that the only path coefficients that would differ between the two models are; i) that leading from conflict of interests (i.e. CoI-1, CoI-2, CoI-3 and CoI-4) towards the likelihood of decision-making behaviour (i.e. DD or CD), (ii) from situational cognitive processes (i.e. POE, PD and EJ) towards DD or CD and (iii) from the dispositional cognitive processes (i.e. OSE and PMD – the control variables) towards CD or DD. However, the relationships among the cognitive processes will not differ.

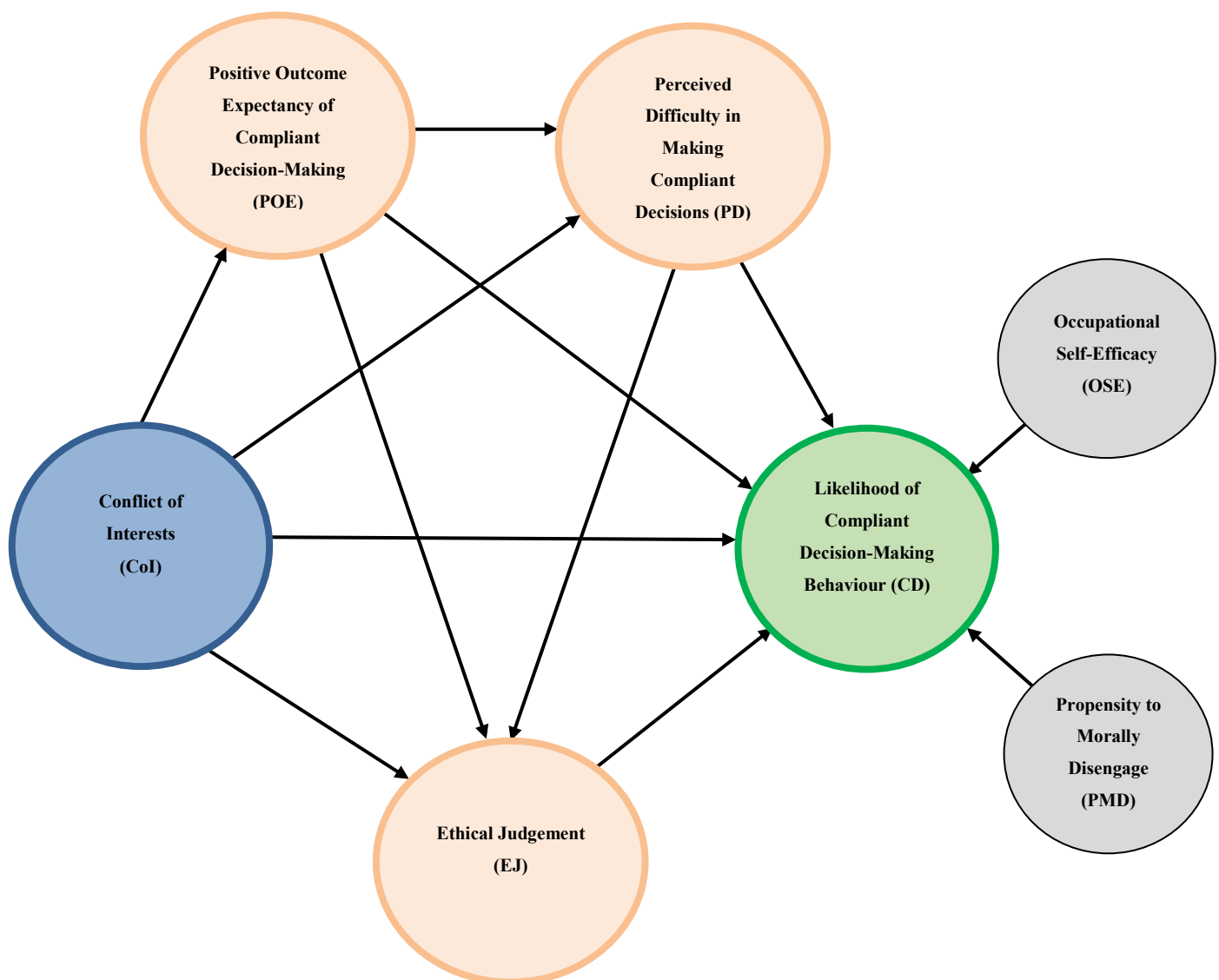


Figure 5.2: Path Model _ Conflict of interests and Compliant Decision-Making Behaviour
(Note: The different colours are for differentiation and clarity purposes only)

This approach makes sense in relation to managing conflict of interests due to the two main reasons. First, to check for the consistency of hypothesised relationships in the events of all the four categories of conflict of interests. For instance, if ‘high PD’ is the predictor of DD then it should not be the predictor of CD – if the signs of relationships do not differ towards DD and CD then we will never know if the efforts of accounting firms towards instigating ‘high PD’ will lead to the deviant (undesirable) or to the compliant decision-making (desirable). Secondly, under various categories of conflict of interests, the likelihood of deviant decision-making should not be interpreted as implying the automatic unlikelihood of compliant decision-making – empirical evidence is required for definite interpretations.

Conceptually, since the relationship between CoI (i.e. CoI-1, CoI-2, CoI-3 and CoI-4) and the DD was hypothesised to be positive, that between CoI and the CD should then be negative. Moreover, the results of the main data analysis revealed that the POE and EJ are negatively and the PD positively related to DD – now logically, POE and EJ should be positively and the PD be negatively related to CD. For instance, if PD is positively related to DD then, as a matter of fact, it should be related negatively to CD. Furthermore, the OSE was expected to be negatively and the PMD positively related to DD – thus, the OSE should be positively and the PMD be negatively related to CD.

Table 5.18 shows the results of the analysis with CD as the dependent variable. The regression and correlation coefficients for the paths leading from CoI (i.e. CoI-1, CoI-2, CoI-3 and CoI-4) towards CD, from situational cognitive processes (i.e. POE, PD and EJ) towards CD and from the dispositional cognitive processes (i.e. OSE and PMD – the control variables) towards CD have been tabulated. For the sake of comparison, the results with DD as the dependent variable have also been mentioned.

The results of the analysis with CD as the dependent variable reveal that all the significant paths leading to CD are opposite in sign to the paths leading towards DD. This complementary analysis has very important practical implications for managing conflict of interests in the professional accounting firms. One of the messages that complementary analysis reveals is that at various stages in the efforts towards managing conflict of interests, the professional accounting firms should direct their efforts towards facilitating amongst professionals; (i) high POE, (ii) low PD and (iii) high EJ. This is because where high POE leads to low DD, there it leads to high CD; where low PD leads to low DD, there it leads to high CD; where high EJ leads to low DD, there it leads to high CD.

Regarding the role of perceptual biases in compliant decision-making behaviour, the overall results indicate that compliant decision-making is likely to be prone to perceptual biases due to the interference of POE and/or PD through the CoI → POE → CD, CoI → POE → EJ → CD, CoI → PD → EJ → CD, POE → EJ → CD and the PD → EJ → CD. These results are also consistent with the main data analysis with DD as the dependent variable.

Table 5.18: Complementary Analysis: Conflict of interests & Compliant Decision-Making Behaviour

| Compliant Versus Deviant Decision-Making: Path Coefficients (βs), Correlation Coefficients (r) | | | | | | | | | |
|--|----------------|-------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|-------------------------------|---------------------------------|
| Paths from | Expected Signs | CoI-1 | | CoI-2 | | CoI-3 | | CoI-4 | |
| | | CD | DD | CD | DD | CD | DD | CD | DD |
| CoI | -, + | β = 0.248*** r = 0.290**** | β = -0.258*** r = -0.330**** | β = -0.288*** r = -0.535**** | β = 0.193*** r = 0.483**** | β = 0.125*** r = 0.180**** | β = -0.079** r = -0.143**** | β = 0.005 r = 0.062 | β = 0.018 r = -0.015 |
| POE | +, - | β = 0.150** r = 0.140* | β = -0.144** r = -0.232**** | β = 0.318*** r = 0.534**** | β = -0.200*** r = -0.388**** | β = 0.153** r = 0.311**** | β = -0.223*** r = -0.481**** | β = 0.171*** r = 0.254**** | β = -0.228*** r = -0.312**** |
| PD | -, + | β = -0.072 r = -0.071 | β = 0.111** r = 0.205** | β = -0.101** r = -0.270**** | β = 0.264*** r = 0.339**** | β = -0.173*** r = -0.389**** | β = 0.215*** r = 0.500**** | β = -0.097* r = -0.180** | β = 0.114** r = 0.176** |
| EJ | +, - | β = 0.102** r = 0.008 | β = -0.165*** r = -0.215** | β = 0.229*** r = 0.475**** | β = -0.250*** r = -0.444**** | β = 0.240*** r = 0.318**** | β = -0.202*** r = -0.291*** | β = 0.267*** r = 0.270**** | β = -0.107* r = -0.090 |
| OSE | +, - | β = 0.005 r = 0.008 | β = 0.021 r = -0.071 | β = -0.030 r = 0.102 | β = 0.004 r = -0.153* | β = 0.101** r = 0.359**** | β = -0.011 r = -0.221** | β = 0.052 r = 0.198** | β = -0.005 r = -0.160* |
| PMD | -, + | β = 0.009 r = 0.032 | β = 0.143*** r = 0.318**** | β = -0.016 r = -0.138* | β = 0.120*** r = 0.230**** | β = -0.086** r = -0.320**** | β = 0.113*** r = 0.315**** | β = -0.059* r = -0.197** | β = 0.162*** r = 0.259**** |
| * p<0.10, 1 tailed, ** p<0.05, 1 tailed, *** p<0.01, ****p<0.001, 1 tailed | | | | | | | | | |

Furthermore, the results regarding the control variables reveal that there is a nonsignificant relationship between OSE and CD in case of CoI- 1 (β = 0.005, p > 0.10), CoI-2 (β = -0.030, p

> 0.10) and CoI-4 ($\beta = 0.052$, $p > 0.10$). However, in the case of CoI-3, OSE is positively and significantly related to CD ($\beta = 0.101$, $p < 0.05$). PMD is found to be significantly and negatively related to CD in case of CoI-3 ($\beta = -0.086$, $p < 0.05$) and CoI-4 ($\beta = -0.059$, $p < 0.10$). However, there is a nonsignificant relationship between PMD and CD in case of CoI-1 ($\beta = 0.009$, $p > 0.10$) and CoI-2 ($\beta = -0.016$, $p > 0.10$).

The aforementioned comparisons of complementary analysis with that of main analysis will be, further, elaborated in the next chapter on discussions. The detailed screenshots of complementary analysis with CD as the dependent variable have been included in the Appendix 3.

5.8 Summary

This chapter provided a detailed account of data analysis procedures that have been applied to the empirical data. The data was examined for the possibility of outliers, the missing values and the normality assumption. Descriptive statistics were considered to summarize the research data and the model assessment procedures were also detailed.

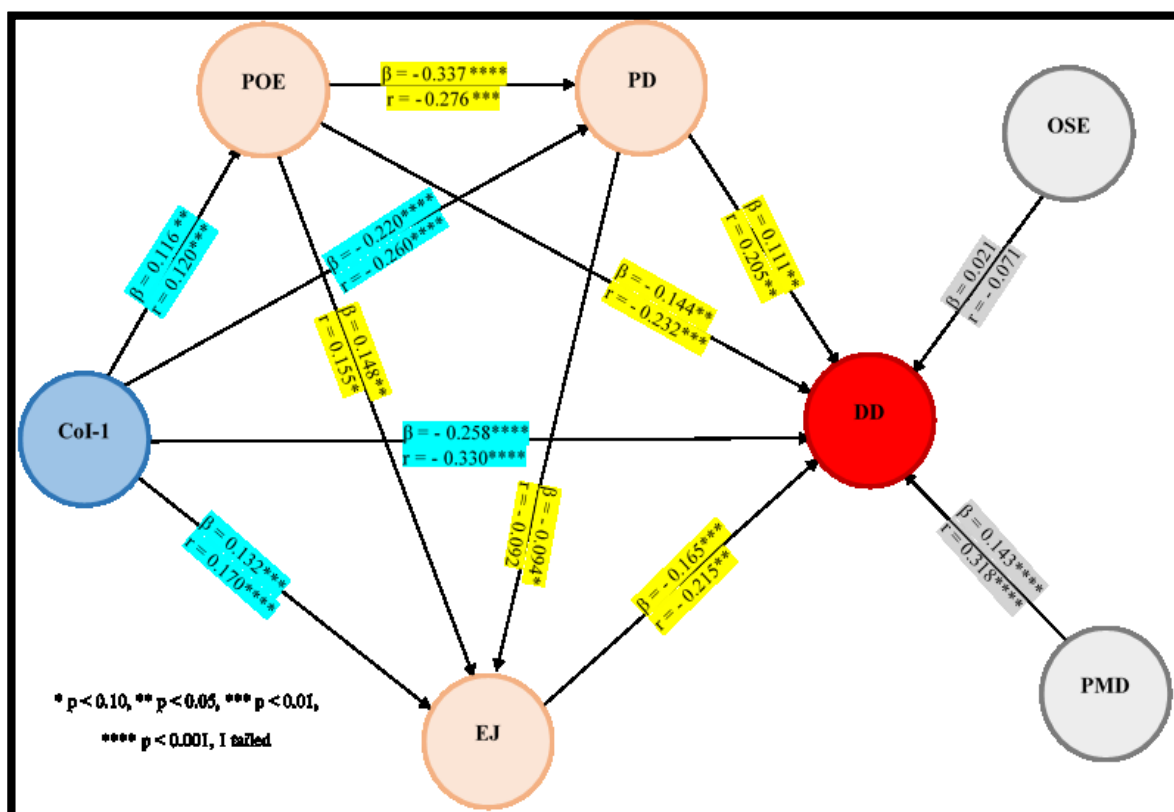


Figure 5.3: Path Model _ Conflict of interests due to Self-interest threat (CoI-1)

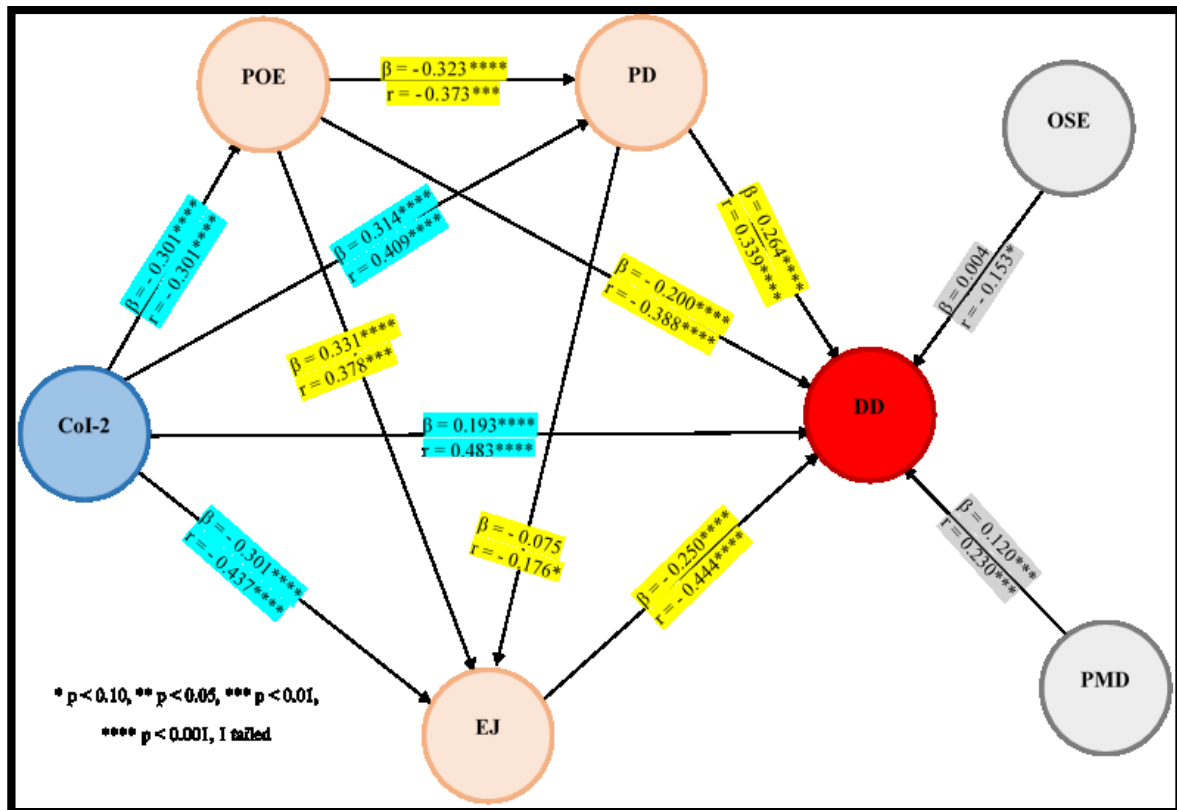


Figure 5.4: Path Model _ Conflict of interests due to Intimidation Threat (CoI-2)

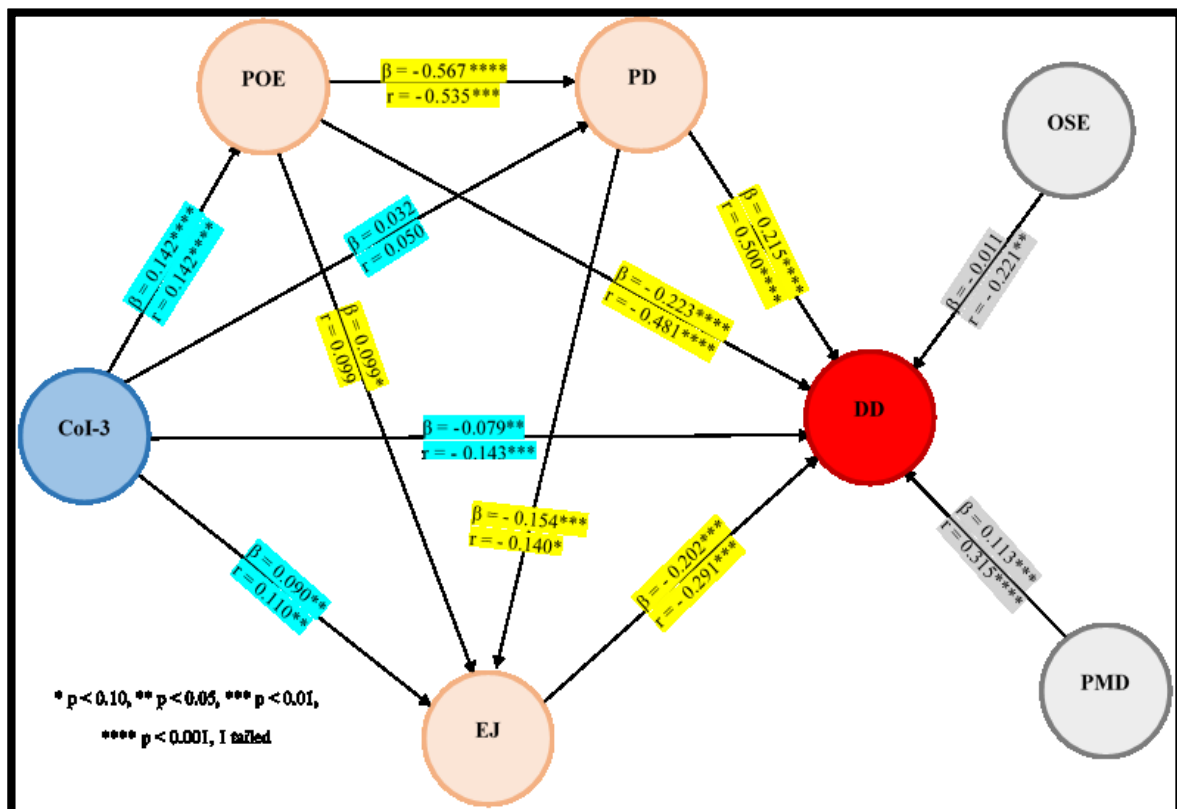


Figure 5.5: Path Model _ Conflict of interests due to Self-Interest and Self-Review Threats (CoI-3)

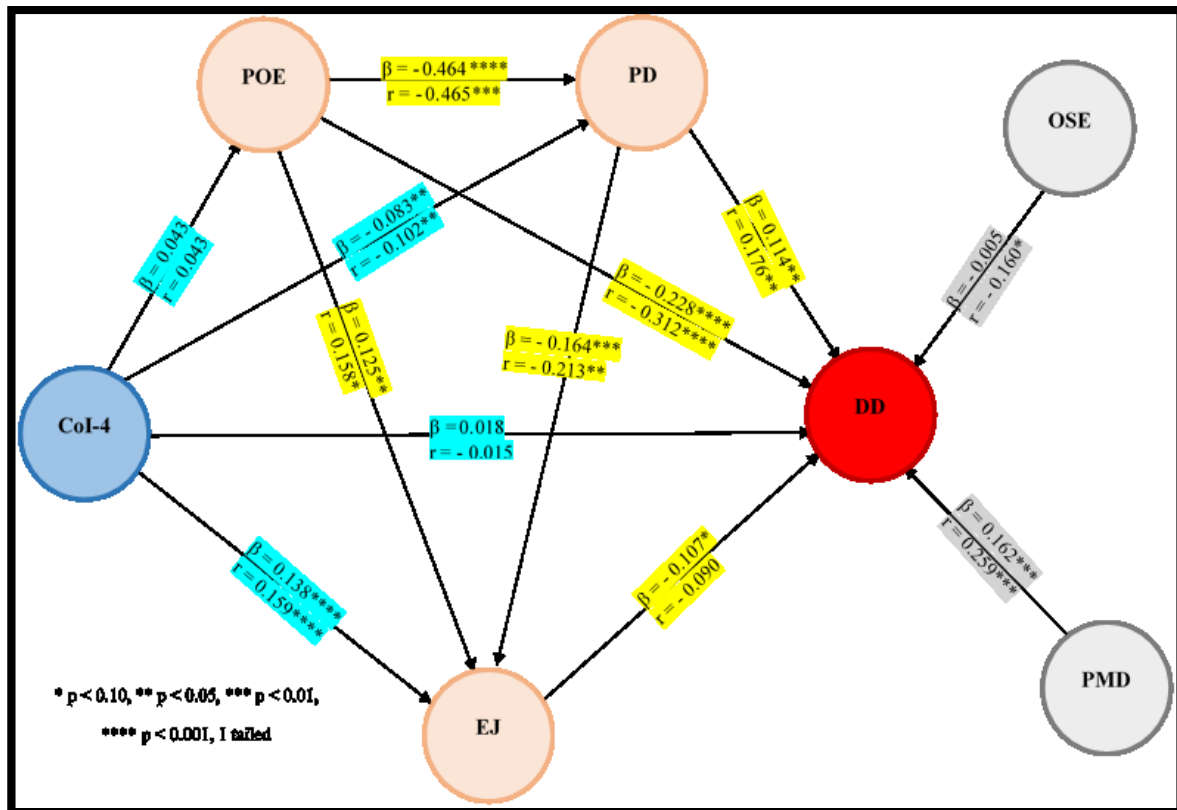


Figure 5.6: Path Model _ Conflict of interests due to Self-Interest, Intimidation, Self-Review and Familiarity Threats (CoI-4)

Figures 5.3 to 5.6 summarise the results of main path models tested in the study. Overall, the results of hypotheses testing evidenced significant relationship between the conflict of interests and the accounting professionals' decision-making behaviour. The professionals' cognitive processes were found to be significantly related to their decision-making behaviour. Furthermore, the professionals' decision-making behaviour was also evidenced to be prone to the perceptual biases.

Moreover, the results of multi-group analysis indicated that the hypothesised relationships (i.e. the predicted signs) do not differ, significantly, across the male and female accounting professionals who participated in this study. As expected, the results of the complementary analysis revealed that all the significant paths leading to the 'likelihood of compliant decision-making behaviour' were opposite in signs to the paths leading towards the 'likelihood of deviant decision-making behaviour'.

The results of data analysis will be discussed and interpreted in the next chapter.

CHAPTER 6: DISCUSSION OF RESULTS

“If you can’t explain it simply, you don’t understand it well enough”.

(Dykes, 2012)

6.1 Introduction

Regardless of the robustness of data analysis and the significance of insights, the findings and results are to be successfully communicated. The key is to simplify the message so that others understand how to act on the insights (Dykes, 2012). This chapter is meant to interpret and discuss the empirical results obtained against the hypotheses tested in the previous chapter on data analysis. The primary purpose is to relate the demonstrated results to the aim, objectives, research questions and the research problem driving this study. The results will be discussed in relation to the extant literature and the theoretical framework that draws on the integration of social cognitive theory (Bandura, 1986; 2006; 2008) with the throughput model of decision-making (Rodgers, 1997; 2006; 2009; Rodgers and Gago, 2001; 2006; Guiral, Rodgers, Ruiz and Gonzalo, 2010).

The second section to the sixth will include interpretation and discussion of the empirical results. The results regarding the control variables will be elaborated in the seventh section. The eighth section pertains to the results of the complementary model. The recap of the connections between empirical results and the aim of this study will be included in the ninth section, followed by a summary of the chapter in the tenth section.

6.2 Conflict of Interests & Deviant Decision-Making Behaviour

All the four categories of conflict of interests (i.e. CoI-1: conflict of interests due to self-interest threat, CoI-2: that due to intimidation threat, CoI-3: that due to a combination of self-interest and self-review threats and CoI-4: conflicts interests due to a combination of self-interest, intimidation, self-review and familiarity threats) were hypothesised ($H_{1.1/1}$, $H_{1.2/1}$, $H_{1.3/1}$ and $H_{1.4/1}$) to be positively related to the professionals’ likelihood of deviant decision-making behaviour (DD). The results indicated that CoI-1 and CoI-3 are negatively and significantly related to DD, CoI-2 is positively and significantly related to DD and there is positive but a nonsignificant relationship between CoI-4 and DD. Therefore, $H_{1.2/1}$ is supported while $H_{1.1/1}$, $H_{1.3/1}$ and $H_{1.4/1}$ are not.

The significant positive relationship between CoI-2 and DD implies that the ‘conflict of interests due to intimidation threat’ increased the likelihood of deviant decision-making behaviour. This result is consistent with the literature relating conflict of interests to the reduced quality of audit (Beattie and Fearnley, 2002; Stumpf, Doh and Clark, 2002; Boyd, 2004; McMillan, 2004; Reinstein and McMillan, 2004; Favere-Marchesi and Emby, 2005; Young, 2005; Pierce, 2007; Daugherty, Dickins, Hatfield and Higgs, 2012), that relating CoI to the impaired independence of professionals (Ronen, 2010; Bae, Kallapur and Rho, 2013; Ahmad, 2015), that relating CoI to the audit-quality threatening behaviours (Craswell, Stokes and Laughton, 2002; Frankel, Johnson and Nelson, 2002; Kinney, Palmrose and Scholz, 2004; Ruddock, Taylor and Taylor, 2004) and the literature that relates CoI to the dysfunctional practices in professional accounting firms (Malone and Roberts, 1996; Willett and Page, 1996; Anderson-Gough, Grey and Robson, 2001; Sikka, 2004; Davis, DeZoort and Kopp, 2006; Wickramasinghe, Hamid, Pirzada and Ahmad, 2015).

The significant negative relationship of CoI-1 and CoI-3 with DD imply that the conflict of interests due to self-interest threat and that due to a combination of self-interest and self-review threats’ decreased the likelihood of deviant decision-making behaviour. Furthermore, the nonsignificant relationship between CoI-4 and DD means that the conflict of interests due to a combination of self-interest, intimidation, self-review and familiarity threats did not have a significant effect on the likelihood of deviant decision-making. These results are, apparently, inconsistent with the prior relevant studies (e.g., Favere-Marchesi and Emby, 2005; Young, 2005; Daugherty, Dickins, Hatfield and Higgs, 2012). However, these empirical results are justifiable because this study has considered different categories of conflict of interests as ‘risks’ that are ‘expected to threaten’ the adoption of compliant behaviour (Davis, 1993; Gaa, 1994; Moore, Tetlock, Tanlu and Bazerman, 2006; Thagard, 2007; Lo and Field, 2009; Florio, 2012), but do not always result in deviant behaviour.

The results for different categories of conflict of interests are, therefore, inconsistent and there might be even more variations for other categories not explicitly included in this study. These inconsistent results against $H_{1.1/1}$, $H_{1.2/1}$, $H_{1.3/1}$ and $H_{1.4/1}$ call for probing into more details of the process through which conflict of interests operates at the level of an individual accounting professional. In this regard, literature relevant to the cognitive psychology of conflict of interests (Rodgers and Gago, 2001; 2006; Chugh, Banaji and Bazerman, 2005; Rodgers, 2006; 2009, Guiral, Rodgers, Ruiz and Gonzalo, 2010; Moore, Tanlu and Bazerman, 2010), the social

cognitive theory (Bandura, 2008) and the throughput model (Rodgers, 2009) suggest that the relationship between CoI (the stimuli) and DD (the response) can only be explained by taking into account the intervening cognitive processes (i.e. POE, PD and EJ). Accordingly, the results for hypotheses in the subsequent sections will be linked back to the results obtained for hypotheses in this section – the main concern will be to understand the reasons behind inconsistencies in the direction and strength of relationship between the different categories of CoI and the DD.

6.3 Role of Situational Cognitive Processes

This section includes discussion of the results for the role of accounting professionals' situational cognitive processes (i.e. positive outcome expectancy of compliant decision-making, perceived difficulty in making a compliant decision and ethical judgement) towards deviant decision-making behaviour in the face of a conflict of interests. Results will be discussed in three subsections, as below;

6.3.1 Relationship of Conflict of interests with Positive Outcome Expectancy, Perceived Difficulty and Ethical Judgement

1. Conflict of interests & Positive Outcome Expectancy

All the four categories of conflict of interests (i.e. CoI-1, CoI-2, CoI-3 and CoI-4) were hypothesised ($H_{1a/2.1}$, $H_{1b/2.1}$, $H_{1c/2.1}$ and $H_{1d/2.1}$) to be related to the professionals' positive outcome expectancy of compliant decision-making (POE). The results indicated that CoI-1 and CoI-3 are positively and significantly related to POE, CoI-2 is negatively and significantly related to POE and there is a positive but nonsignificant relationship between CoI-4 and POE. Therefore, $H_{1a/2.1}$, $H_{1b/2.1}$ and $H_{1c/2.1}$ are supported while $H_{1d/2.1}$ is not.

The significant positive relationship of CoI-1 and CoI-3 with POE imply that in the events of conflict of interests due to self-interest threat and that due to a combination of self-interest and self-review threats, the accounting professionals expected the positive outcomes of making compliant decisions to outweigh its negative outcomes. Likewise, the significant negative relationship between CoI-2 and POE implies that in the event of a conflict of interests due to intimidation threat, the accounting professionals did not expect the positive outcomes of making compliant decision to outweigh its negative outcomes (or alternatively expected the

negative outcomes of making compliant decision to outweigh its positive outcomes). These mixed results are justified and are consistent with prior studies (Rodgers, 1997; 2006; 2009; Rodgers and Gago, 2001; 2006; Guiral, Rodgers, Ruiz and Gonzalo, 2010; Cvejic, Lloyd and Vollmer-Conna, 2016), because the perceptions are subjective and two or more individuals could perceive the same situation differently.

Furthermore, the nonsignificant relationship between CoI-4 and POE means that the conflict of interests due to a combination of self-interest, intimidation, self-review and familiarity threats did not have a significant effect on accounting professionals' positive outcome expectancy of compliant decision-making. In accordance with the social cognitive theory's concept of person-environment interaction, the nonsignificant role of CoI-4 draws attention towards the strong impact, on POE, of the other contextual factors. As per the literature, the main contextual factors are the codes of conduct (Shafer, Morris and Ketchand, 2001; Jones, Massey and Thorne, 2003; Bazerman and Gino, 2012), the ethics and compliance programs (Florio, 2012; Williford and Small, 2013), the organizational culture (Booth and Schulz, 2004; Bobek and Radtke, 2007; Caldarelli et al., 2012; Florio 2012) and the reward systems (Schminke, Arnaud and Kuenzi; 2007; Amali, 2010; Green and Zimiles; 2013).

With particular reference to the throughput model, the mixed results for the relationship between CoI and POE are justifiable (Rodgers, 1997; 2006; 2009; Rodgers and Gago, 2001; 2006; Guiral, Rodgers, Ruiz and Gonzalo, 2010). For instance, the model provides that an accounting professional can take various pathways to reach a particular decision and the information surrounding conflict of interests might well be disregarded during this process (due to incomplete information, inadequate understanding, conflicting information signals and the undifferentiated alternatives). In the cases where CoI is significantly related to POE, the decision-making process is driven by CoI. Moreover, in the cases where CoI has a nonsignificant relationship with POE, the decision-making process is driven by the professional's perceptions (i.e. POE and/or PD).

Interestingly, the results demonstrated for the relationship between CoI and POE seemingly make some connections to the results evidenced for the relationship between CoI and DD. The CoI-1 and CoI-3 are negatively and significantly related to DD, while positively and significantly to POE; CoI-2 is positively and significantly related to DD, while negatively and significantly to POE. Furthermore, there is a nonsignificant relationship of CoI-4 with DD as well as with POE. These results indicate that conflict of interests tends to decrease the

likelihood of deviant decision-making behaviour, if accounting professionals expect the positive outcomes of making compliant decisions to outweigh its negative outcomes. Similarly, conflict of interests increases the likelihood of deviant decision-making behaviour, if accounting professionals expect the negative outcomes of making compliant decisions to outweigh its positive outcomes. Hence, as provided by the social cognitive theory and the throughput model, the relationship between conflict of interests (i.e. the stimulus) and the decision-making behaviour (i.e. the response) is affected by POE as the intervening cognitive process.

2. Conflict of interests & Perceived Difficulty

All the four categories of conflict of interests (i.e. CoI-1, CoI-2, CoI-3 and CoI-4) were hypothesised ($H_{2a/2.1}$, $H_{2b/2.1}$, $H_{2c/2.1}$ and $H_{2d/2.1}$) to be related to the professionals' perceived difficulty in making a compliant decision (PD). The results indicated that CoI-1 and CoI-4 are negatively and significantly related to PD, CoI-2 is positively and significantly related to PD and there is positive but a nonsignificant relationship between CoI-3 and PD. Therefore, $H_{2a/2.1}$, $H_{2b/2.1}$ and $H_{2d/2.1}$ are supported while $H_{2c/2.1}$ is not.

The significant negative relationship of CoI-1 and CoI-4 with PD implies that in the events of conflict of interests due to self-interest threat and that due to a combination of self-interest, intimidation, self-review and familiarity threats, the accounting professionals perceived low difficulty in making the given compliant decisions. Likewise, the significant positive relationship between CoI-2 and PD implies that in the event of a conflict of interests due to intimidation threat, the accounting professionals perceived high difficulty in making the given compliant decision. These mixed results are justified and are consistent with the prior studies (Rodgers, 1997; 2006; 2009; Rodgers and Gago, 2001; 2006; Guiral, Rodgers, Ruiz and Gonzalo, 2010; Cvejic, Lloyd and Vollmer-Conna, 2016) which provide that, since the perceptions are subjective, two or more individuals could perceive the same situation differently.

The nonsignificant relationship between CoI-3 and PD means that the conflict of interests due to a combination of self-interest and self-review threats did not have a significant effect on the accounting professionals' perceived difficulty in making a given compliant decision. In accordance with the social cognitive theory's concept of person-environment interaction, the nonsignificant role of CoI-3 draws attention towards the strong impact, on PD, of the various

contextual factors. The main contextual factors are the codes of conduct (Shafer, Morris and Ketchand, 2001; Jones, Massey and Thorne, 2003; Bazerman and Gino, 2012), the ethics and compliance programs (Florio, 2012; Williford and Small, 2013), the organizational culture (Booth and Schulz, 2004; Bobek and Radtke, 2007; Caldarelli et al., 2012; Florio 2012) and the reward systems (Schminke, Arnaud and Kuenzi; 2007; Amali, 2010; Green and Zimiles; 2013).

With particular reference to the throughput model (Rodgers, 1997; 2006; 2009; Rodgers and Gago, 2001; 2006; Guiral, Rodgers, Ruiz and Gonzalo, 2010), the mixed results for the relationship between CoI and PD are justifiable. For instance, the model provides that an accounting professional can take various pathways to reach a particular decision and the information surrounding conflict of interests might well be disregarded during this process (due to incomplete information, inadequate understanding, conflicting information signals and the undifferentiated alternatives). In the cases where CoI is significantly related to PD, the decision-making process is driven by CoI. Moreover, in the cases where CoI has a nonsignificant relationship with PD, the decision-making process is driven by the professional's perceptions (i.e. PD and/or POE).

The results evidenced for the relationship between CoI and PD make some connections to the results demonstrated for the relationship between CoI and DD. For instance, CoI-1 is negatively and significantly related to both DD and PD and CoI-2 is positively and significantly related to both DD and PD. These results indicate that the conflict of interests decreases the likelihood of deviant decision-making behaviour, if the accounting professionals perceive less difficulty in making the given compliant decision. Similarly, conflict of interests tends to increase the likelihood of deviant decision-making behaviour, if accounting professionals perceive high difficulty in making the given compliant decision. Thus, as provided by the social cognitive theory and the throughput model, the relationship between conflict of interests (i.e. the stimulus) and decision-making behaviour (i.e. the response) is affected by PD as the intervening cognitive process.

3. Conflict of interests & Ethical Judgement

All the four categories of conflict of interests (i.e. CoI-1, CoI-2, CoI-3 and CoI-4) were hypothesised ($H_{3a/2.1}$, $H_{3b/2.1}$, $H_{3c/2.1}$ and $H_{3d/2.1}$) to be related to the professionals' judgement about the ethicality of compliant decision choices (EJ). The results indicated that CoI-1, CoI-3

and CoI-4 are positively and significantly related to EJ and the CoI-2 is negatively and significantly related to EJ. Therefore, $H_{3a/2.1}$, $H_{3b/2.1}$, $H_{3c/2.1}$ and $H_{3d/2.1}$ are all supported. These results are consistent with the literature regarding ethical judgement in the context-specific behaviour (Bandura, 2001; Armstrong, Ketz and Owsen, 2003; Cohen and Bennie, 2006; Rodgers and Gago, 2006; Rodgers, 2009; Guiral, Rodgers, Ruiz and Gonzalo, 2010; Johari, Mohd-Sanusi, Rahman and Omar, 2013). In accordance with the social cognitive theory's concept of person-environment interaction, the significant relationship between CoI and EJ implies that the accounting professionals' judgement is modified by different conflict of interests that serve as an external factor from the environment.

The significant positive relationship of CoI-1, CoI-3 and CoI-4 with EJ implies that in the events of conflict of interests due to self-interest threat, that due to a combination of self-interest and self-review threats and that due to a combination of self-interest, intimidation, self-review and familiarity threats, the accounting professionals formed highly ethical judgements. Likewise, the significant negative relationship between CoI-2 and EJ implies that in the event of a conflict of interests due to intimidation threat, the accounting professionals formed a less ethical judgement. The mixed results are justified and are consistent with prior studies (Rodgers and Gago, 2001; 2006; Rodgers, 2006; 2009) which provide that since judgement implies subjective and deliberate information processing strategies, two or more individuals could form different judgements in the same ethical situation.

The mixed results for the relationship between CoI and EJ are also justified in the light of the throughput model (Rodgers, 1997; 2006; 2009; Rodgers and Gago, 2001; 2006; Guiral, Rodgers, Ruiz and Gonzalo, 2010). For instance, the model provides that an accounting professional can adopt various pathways to a particular decision and that the information surrounding conflict of interests might well be disregarded during this process (due to incomplete information, inadequate understanding, conflicting information signals and the undifferentiated alternatives). The significance of the relationship between CoI and EJ implies that the available information pertaining to CoI is not disregarded, but subjected to a thorough analysis at the judgement stage in decision-making.

The results demonstrated for the relationship between CoI and EJ make some connections to the results evidenced for the relationship between CoI and DD. For instance, CoI-1 and CoI-3 are negatively and significantly related to DD, while positively and significantly to EJ. Moreover, CoI-2 is positively and significantly related to DD, while negatively and

significantly to EJ. These results indicate that conflict of interests tends to decrease the likelihood of deviant decision-making behaviour, if accounting professionals form the judgement that a given compliant decision choice is the most ethical course of action. Similarly, conflict of interests increases the likelihood of deviant decision-making behaviour, if accounting professionals form the judgement that a given compliant decision choice is the least (or less) ethical course of action. Therefore, as provided by the social cognitive theory and the throughput model, the relationship between conflict of interests (i.e. the stimulus) and decision-making behaviour (i.e. the response) is affected by EJ as the intervening cognitive process.

6.3.2 Relationship of Positive Outcome Expectancy, Perceived Difficulty and Ethical Judgement with Deviant Decision-Making Behaviour

1. Positive Outcome Expectancy & Deviant Decision-Making Behaviour

In the events of conflict of interests (i.e. CoI-1, CoI-2, CoI-3 and CoI-4), the accounting professionals' positive outcome expectancy of compliant decision-making (POE) was hypothesised ($H_{1a/2.2}$, $H_{1b/2.2}$, $H_{1c/2.2}$ and $H_{1d/2.2}$) to be negatively related to their likelihood of deviant decision-making behaviour (DD).

The results indicated that POE is negatively and significantly related to DD in the case of CoI-1, CoI-2, CoI-3 and CoI-4. Therefore, $H_{1a/2.2}$, $H_{1b/2.2}$, $H_{1c/2.2}$ and $H_{1d/2.2}$ are all supported. These results are consistent with the literature relevant to POE and behaviour, in a wide variety of contexts (e.g., Sniehotta, Schwarzer, Scholz and Schüz, 2005; Smith, Simpson and Huang, 2007; Baker-Eveleth and Stone, 2008; Brown, Littlewood and Venable, 2013; Cheng and Chu, 2013). The significant negative relationship between the POE and DD implies that in the events of conflict of interests, the likelihood of deviant decision-making behaviour is low in case of the professionals who expect the positive outcomes of making compliant decision to outweigh its negative outcomes. Similarly, the likelihood of deviant decision-making behaviour is high in the case of the professionals who tend to expect the negative outcomes of compliant decision-making to outweigh its positive outcomes. Specifically, low POE is demonstrated to be one of the situational cognitive predictors of DD.

In agreement with the social cognitive theory's concept of person-behaviour interaction, the significant role of POE towards DD implies that the accounting professionals' decision-making is also affected by their perception about the positive versus the negative outcomes of

performing a compliant behaviour (Bandura, 2006; 2008). The results for the relationship between POE and DD are also directly relatable to the throughput model of decision-making (Rodgers, 1997; 2006; 2009; Rodgers and Gago, 2001; 2006; Guiral, Rodgers, Ruiz and Gonzalo, 2010). For instance, the model provides that there can be various pathways to a particular decision – the significant relationship between POE and DD implies that the accounting professionals' deviant decision-making behaviour is an outcome of the pathway characterised by the important role of their POE.

Importantly, the consistent negative relationship between POE and DD provides that the accounting firms should increase their efforts towards encouraging high positive outcome expectancy of compliant decision-making. This could be a plausible step towards effective management of conflict of interests in professional accounting firms. The consistent results also imply that one of the risk management tools, for accounting firms to decrease (increase) the likelihood of deviant (compliant) decision-making in the events of the conflict of interests, could be the increased efforts to facilitate high POE – social cognitive theory (Bandura, 2008) suggests that the desired behavioural change can be encouraged by making adjustments to the environment, or by influencing personal attitudes.

2. Perceived Difficulty & Deviant Decision-Making Behaviour

In the events of conflict of interests, the accounting professionals' perceived difficulty in making compliant decisions (PD) was hypothesised ($H_{2a/2.2}$, $H_{2b/2.2}$, $H_{2c/2.2}$ and $H_{2d/2.2}$) to be positively related to their likelihood of deviant decision-making behaviour (DD).

The results indicated that PD is positively and significantly related to DD in the case of CoI-1, CoI-2, CoI-3 and CoI-4. Therefore, $H_{2a/2.2}$, $H_{2b/2.2}$, $H_{2c/2.2}$ and $H_{2d/2.2}$ are all supported. These results are consistent with the extant literature relevant to PD and behaviour in a wide variety of contexts (e.g., Schwarzer and Renner, 2000; Palfai, 2002; Garcia and Mann, 2003; Zebracki and Drotar, 2004; Sniehotta, Schwarzer, Scholz and Schüz, 2005; Bandura, 2006; Baker-Eveleth and Stone, 2008; Brown, Littlewood and Vanable, 2013; Cheng and Chu, 2013). The significant positive relationship between PD and DD implies that the likelihood of deviant decision-making is high in the case of the professionals who perceive high difficulty in making a given compliant decision. Similarly, the likelihood of deviant decision-making is low in case of the professionals who tend to perceive less difficulty in making a compliant decision. Specifically, high PD is demonstrated to be one of the situational cognitive predictors of DD.

In accordance with the social cognitive theory's concept of person-behaviour interaction, the significant role of PD towards DD implies that the accounting professionals' decision-making is affected by their perception about the level of difficulty in making compliant decisions (Bandura, 2006; 2008). The results for the relationship between PD and DD are also directly relatable to the throughput model (Rodgers, 1997; 2006; 2009; Rodgers and Gago, 2001; 2006; Guiral, Rodgers, Ruiz and Gonzalo, 2010). For instance, the model provides that there can be different pathways to reach a particular decision. A significant relationship between PD and DD implies that the accounting professionals' deviant decision-making is an outcome of the pathway characterised by the important role of their PD.

Importantly, the consistent positive relationship between PD and DD provides that the accounting firms should increase their efforts towards encouraging low perceived difficulty in making compliant decisions. The consistent results also imply that one of the risk management tools, to decrease (increase) the likelihood of 'deviant (compliant) decision-making in the events of the conflict of interests, is the firms' efforts to facilitate low PD – social cognitive theory (Bandura, 2008) suggests that the desired behavioural change can be encouraged by making adjustments to the environment, or by influencing personal attitudes.

3. Ethical Judgement & Deviant Decision-Making Behaviour

In the events of conflict of interests, the accounting professionals' ethical judgement (EJ) was hypothesised ($H_{3a/2.2}$, $H_{3b/2.2}$, $H_{3c/2.2}$ and $H_{3d/2.2}$) to be negatively related to their likelihood of deviant decision-making behaviour (DD). The results indicated that EJ is negatively and significantly related to DD in cases of CoI-1, CoI-2, CoI-3 and CoI-4. Therefore, $H_{3a/2.2}$, $H_{3b/2.2}$, $H_{3c/2.2}$ and $H_{3d/2.2}$ are all supported.

The demonstrated results are consistent with the literature relevant to EJ and ethical behaviour (Trevino and Youngblood, 1990; Jones, 1991; Ponemon, 1992; Adams, Tashchian and Shore, 2001; Sullivan, 2004; Cohen and Bennie, 2006; Sauers, Ballantine and Kennedy, 2006; Rodgers and Gago, 2006; Rodgers, 2009). The significant negative relationship between EJ and DD implies that the likelihood of deviant decision-making is low in case of the professionals who form a judgement that compliant decision choice is the most ethical course of action. Similarly, the likelihood of deviant decision-making is high in the case of the professionals who form a judgement that compliant decision choice is not the most ethical course of action or that deviant decision choice is the most ethical. Specifically, low EJ is

demonstrated to be one of the situational cognitive predictors of DD.

In accordance with the social cognitive theory's concept of person-behaviour interaction, the significant role of EJ towards DD implies that the accounting professionals' decision-making is the result of their judgement about the ethicality of compliant decision choice (Bandura, 2006; 2008). The results for the relationship between EJ and DD are also directly relatable to the throughput model of decision-making (Rodgers, 1997; 2006; 2009; Rodgers and Gago, 2001; 2006; Guiral, Rodgers, Ruiz and Gonzalo, 2010). For instance, the model provides that an accounting professional can take various pathways to reach a particular decision – significant relationship between EJ and DD implies that the accounting professionals' deviant decision-making is an outcome of the pathway characterised by important role of their judgement about the ethicality of compliant decision choice.

Essentially, the consistent negative relationship between EJ and DD suggests that the accounting firms should increase their efforts towards encouraging the formation of highly ethical judgements. The consistent results also imply that one of the risk management tools, to decrease (increase) the likelihood of deviant (compliant) decision-making in the events of the conflict of interests, is the firms' efforts to facilitate high ethical judgements towards compliant decision-making – social cognitive theory (Bandura, 2008) suggests that the desired behavioural change can be encouraged by making adjustments to the environment, or by influencing personal attitudes.

6.3.3 Interrelationships of Positive Outcome Expectancy, Perceived Difficulty and Ethical Judgement

1. Positive Outcome Expectancy & Perceived Difficulty

In the events of conflict of interests, the accounting professionals' positive outcome expectancy of compliant decision-making (POE) was hypothesised ($H_{1a/2.3}$, $H_{1b/2.3}$, $H_{1c/2.3}$ and $H_{1d/2.3}$) to be negatively related to their perceived difficulty in making a compliant decision (PD). The results indicated that POE is negatively and significantly related to PD in the case of CoI-1, CoI-2, CoI-3 and CoI-4. Therefore, $H_{1a/2.3}$, $H_{1b/2.3}$, $H_{1c/2.3}$ and $H_{1d/2.3}$ are all supported.

The demonstrated results are consistent with the extant literature that relates POE to self-efficacy, in general and to the perceived difficulty, in particular (Borkovec, 1978; Teasdale, 1978; Kazdin, 1978; 1982; 1985; Sherer et al., 1982; Corcoran, 1991; 1995; Eastman and

Marzillier, 1984; Sniehotta, Scholz and Schwarzer, 2005; Lin, Ko and Wu, 2008; Williams, 2010; Wongpinunwatana and Panchoo, 2014). The significant negative relationship between POE and PD implies that, in the events of a conflict of interests, lower perceived difficulty in making compliant decisions is probable in case of the accounting professionals who tend to expect that compliant decision-making has more positive than the negative outcomes. Similarly, higher perceived difficulty in making compliant decisions is probable in case of the professionals who expect that compliant decision-making has less positive than the negative outcomes.

With particular reference to managing conflict of interests, the consistent negative relationship between POE and PD provides that the accounting firms should increase their efforts towards inducing, amongst professionals, the higher positive outcome expectancy of compliant decision-making. Resultantly, the lower perceived difficulty in making compliant decisions is expected (due to the negative relationship between POE and PD) which, in turn, decreases the likelihood of deviant decision-making behaviour (due to the, earlier demonstrated, positive relationship between PD and DD). In accordance with the provisions of social cognitive theory (Bandura, 1986; 2006; 2008) and that of the throughput model (Rodgers and Gago, 2001; 2006; Rodgers, 2006; 2009; Guiral, Rodgers, Ruiz and Gonzalo, 2010), these discussions support the indispensable interconnectedness of conflict of interests with the accounting professionals' cognitive processes (i.e. POE and PD) and their behaviour. This implies that in the events of conflict of interests, the accounting professionals' mental processes play an important role towards their decision-making behaviour.

2. Positive Outcome Expectancy & Ethical Judgement

In the events of conflict of interests, the accounting professionals' positive outcome expectancy of compliant decision-making (POE) was hypothesised ($H_{2a/2.3}$, $H_{2b/2.3}$, $H_{2c/2.3}$ and $H_{2d/2.3}$) to be positively related to their ethical judgement (EJ). The results indicated that POE is positively and significantly related to EJ in the case of CoI-1, CoI-2, CoI-3 and CoI-4. Therefore, $H_{2a/2.3}$, $H_{2b/2.3}$, $H_{2c/2.3}$ and $H_{2d/2.3}$ are all supported.

The demonstrated results are consistent with the extant literature that relates POE to ethical decision-making, in general and to the ethical judgements, in particular (e.g. Zebracki and Drotar, 2004; Sniehotta, Schwarzer, Scholz and Schütz, 2005; Smith, Simpson and Huang, 2007; Baker-Eveleth and Stone, 2008; Charles, 2011; Brown, Littlewood and Venable, 2013;

Cheng and Chu, 2013; Agle, Hart, Thompson and Hendricks, 2014). The significant positive relationship between POE and EJ implies that the accounting professionals who expect that compliant decision-making has more positive than the negative outcomes, are expected to form highly ethical judgements. Similarly, the professionals who tend to expect that compliant decision-making has less positive than the negative outcomes, are expected to form less ethical judgements.

With particular reference to managing conflict of interests, the consistent positive relationship between POE and EJ suggests that the accounting firms should increase their efforts towards inducing amongst professionals, the higher positive outcome expectancy of compliant decision-making. Resultantly, the highly ethical judgements are expected (due to a positive relationship between POE and EJ) which, in turn, decreases the likelihood of deviant decision-making (due to, the earlier demonstrated, negative relationship between EJ and DD). In accordance with the provisions of social cognitive theory (Bandura, 1986; 2006; 2008) and that of the throughput model (Rodgers and Gago, 2001; 2006; Rodgers, 2006; 2009; Guiral, Rodgers, Ruiz and Gonzalo, 2010), the aforementioned discussions support the interconnectedness of conflict of interests with the accounting professionals' cognitive processes (i.e. POE and EJ) and their behaviour. This implies that in the events of conflict of interests, the accounting professionals' mental processes play an important role towards their decision-making behaviour.

3. Perceived Difficulty & Ethical Judgement

In the events of conflict of interests, the accounting professionals' perceived difficulty in making a compliant decision (PD) was hypothesised ($H_{3a/2.3}$, $H_{3b/2.3}$, $H_{3c/2.3}$ and $H_{3d/2.3}$) to be negatively related to their ethical judgement (EJ). The results indicated that PD is negatively and significantly related to EJ in the case of CoI-1, CoI-3 and CoI-4. Moreover, there is a negative but a nonsignificant relationship between PD and EJ in the case of CoI-2. Therefore, $H_{3a/2.3}$, $H_{3c/2.3}$ and $H_{3d/2.3}$ are supported, while $H_{3b/2.3}$ is supported in terms of the direction of a relationship but not in terms of significance.

The significant negative relationship between PD and EJ is consistent with the extant literature that relates PD to ethical decision-making, in general and to the ethical judgements, in particular (Schwarzer and Renner, 2000; Palfai, 2002; Garcia and Mann, 2003; Zebracki and Drotar, 2004; Bandura, 2006; Baker-Eveleth and Stone, 2008; Iskandar and Sanusi, 2011;

Brown, Littlewood and Vanable, 2013; Cheng and Chu, 2013; Afifah, Sari, Anugerah and Sanusi, 2015). The demonstrated results for the negative relationship between PD and EJ imply that the accounting professionals who tend to perceive that compliant decisions are difficult to undertake, are expected to form less ethical judgements. Similarly, the professionals who tend to perceive that compliant decisions are easy (less difficult) to undertake, are expected to form highly ethical judgements.

In the case of conflict of interests due to intimidation threat (i.e. CoI-2), the perceived difficulty in making a compliant decision is found to have a negative but a nonsignificant relationship with ethical judgement. This nonsignificant relationship implies the main effects of other variables (including the CoI-2, POE and the other contextual factors) on the professionals' EJ (Bobek and Radtke, 2007; Bedard, Deis, Curtis and Jenkins, 2008; Bazerman and Gino, 2012; Caldarelli et al., 2012; Florio, 2012; Williford and Small, 2013).

With reference to managing conflict of interests, the consistent negative relationship between PD and EJ indicate that the accounting firms should increase their efforts towards inducing, amongst professionals, the perceptions of less difficulty in performing a compliant behaviour. Resultantly, the highly ethical judgements are expected (due to a negative relationship between PD and EJ) which, in turn, decreases the likelihood of deviant decision-making (due to, the earlier demonstrated, negative relationship between EJ and DD). Thus, as long as the negative relationship is empirically demonstrated for the relationship between PD and EJ, even the nonsignificant strength of relationship does not invalidate the discussions in this section.

In accordance with provisions of the social cognitive theory (Bandura, 1986; 2006; 2008) and the throughput model (Rodgers and Gago, 2001; 2006; Rodgers, 2006; 2009; Guiral, Rodgers, Ruiz and Gonzalo, 2010), the results support interconnectedness of conflict of interests with the accounting professionals' cognitive processes (i.e. PD and EJ) and their behaviour. This implies that in the events of conflict of interests, the accounting professionals' mental processes play an important role towards their decision-making behaviour.

6.4 Biasing Role of the Conflict of Interests

This section includes the discussion of results for the role of perceptual biases towards decision-making behaviour in the events of conflict of interests. The professionals' positive outcome expectancy of compliant decision-making (POE) and their perceived difficulty in

making compliant decisions (PD) serve as the sources of perceptual biases (Rodgers and Gago, 2001; 2006; Rodgers, 2006; 2009; Guiral, Rodgers, Ruiz and Gonzalo, 2010). In the events of conflict of interests, the accounting professionals' deviant decision-making behaviour is hypothesised ($H_{1.1/3}$, $H_{1.2/3}$, $H_{1.3/3}$ and $H_{1.4/3}$) to be prone to bias, due to the interference of their perceptions (i.e. POE and/or PD) with the analytical pathway to deviant decision (i.e. $CoI \rightarrow EJ \rightarrow DD$).

In case of all the categories of conflict of interests (i.e. $CoI-1$, $CoI-2$, $CoI-3$ and $CoI-4$), the overall results indicate that deviant decision-making is likely to be prone to perceptual biases due to the interference of POE and/or PD through $CoI \rightarrow POE \rightarrow DD$, $CoI \rightarrow PD \rightarrow DD$, $CoI \rightarrow POE \rightarrow EJ \rightarrow DD$, $PD \rightarrow EJ \rightarrow DD$ and the $POE \rightarrow DD$ paths. The significant effects of POE and PD in the decision-making pathways imply that $H_{1.1/3}$, $H_{1.2/3}$, $H_{1.3/3}$ and $H_{1.4/3}$ are all supported. Particularly, perceptions as a direct driver of decision (i.e. the $POE \rightarrow DD$ path) introduces intentional bias in decision-making and the other paths involving the role of perceptions (i.e. the $CoI \rightarrow POE \rightarrow DD$, $CoI \rightarrow PD \rightarrow DD$, $CoI \rightarrow POE \rightarrow EJ \rightarrow DD$ and the $PD \rightarrow EJ \rightarrow DD$ paths) introduce unintentional bias in decision-making.

The accounting standards require the professionals to adopt bias-free analytical pathway to decision-making, i.e. $CoI \rightarrow EJ \rightarrow DD$ (Guiral, Rodgers, Ruiz and Gonzalo, 2010). Since this path does not involve the role of professionals' perceptions, its adoption implies that the information surrounding conflict of interests (CoI) is subjected to the detailed analysis (EJ), which leads the professionals to refrain from deviant decision-making (DD) or alternatively to adopt compliant decision-making behaviour (Rodgers, 1997; 2006; 2009; Rodgers and Gago, 2001; 2006). The results, however, reveal the significance of perceptions which means that in situations involving a conflict of interests, the accounting professionals are prone to disregarding the adoption of the analytical pathway and, resultantly, their likelihood of deviant behaviour increases.

The demonstrated results comply with the extant literature which supports the idea that conflict of interests leads to biases in decision-making (Foot, 1967; Thomson, 1986; Unger, 1996; Greene et al., 2001; Casebeer and Churchland, 2003; Chugh, Banaji and Bazerman, 2005; Moore, Tetlock, Tanlu and Bazerman, 2006; Green, Ha and Bullock, 2010; Guiral, Rodgers, Ruiz and Gonzalo, 2010). Accordingly, the decision outcome in any given conflict of interests' situations is largely affected by the decision-makers' subjective experience. These biases serve as the psychological and cognitive barriers which, in turn, threaten the accounting

professional's *independence in fact*.

As detailed in the theoretical framework chapter, the pathways to decision-making are characterised by particular moral philosophies (Rodgers and Gago, 2001; 2006, Rodgers, 2006; 2009). For instance, CoI → POE → DD and CoI → PD → DD are underpinned by '*ethical relativism*', CoI → POE → EJ → DD by '*ethics of care*', PD → EJ → DD by '*deontology*' and the POE → DD path is characterised by '*psychological egoism*'. Resultantly, such ethical predispositions lead to a wide variety of biases in decision-making. For instance *ethical relativism* supports the determination of group consensus on a given behaviour and the professionals with *psychological egoism* would be motivated to act in their perceived self-interest. The findings are in agreement with the literature (e.g. Reiter, 1996; Bay, 2002; McPhail, 2006) that highlights the important role of ethical predispositions towards decision-making.

Similarly, the results regarding the role of perceptual biases can also be related to literature that highlights the positive relationship between employees' perceptions of organizational culture and the resultant ethical behaviour (Greene et al., 2001; 2004; Shafer, Morris and Ketchand, 2001; Casebeer and Churchland, 2003; Jones, Massey and Thorne, 2003; Ashkanasy, Windsor and Trevino, 2006). Accordingly, the POE and PD aligned with the compliant decision-making are likely to induce accounting professionals refrain from deviant decision-making behaviour – professionals who expect the overall positive outcomes of compliant decision-making to outweigh its negative outcomes and those who perceive less difficulty in making compliant decisions, will be likely to refrain from deviant decision-making behaviour.

With reference to managing conflict of interests, the above results and findings suggest that decision-making in the face of conflict of interests is prone to the perceptual biases through various pathways. However, this is not necessarily a bad news. Thankfully, the *process thinking approach*, that draws on the interaction of information, perception, judgement and decision choice, provides a constructive way of formulating thoughts and biases into a successful strategy (Rodgers and Gago, 2001; 2006). The immediate usefulness of process thinking is that it can alert individuals of the particular pathway they use to arrive at a decision. Generally, success across the pathway journey is achieved when an individual and those governing individuals' behaviour are aware of the obstacles they encounter during decision-making (Rodgers, 2006; 2009; Guiral, Rodgers, Ruiz and Gonzalo, 2010). These provisions are useful in developing behavioural interventions for facilitating effective management of conflict of

interests.

Therefore, conflict of interests plays a biasing role by introducing perceptual biases in the decision-making process. POE and PD serve as the sources of said perceptual biases that have been demonstrated to be, largely, unintentional. This implies that in the events of conflict of interests, the deviations from compliant behaviour can even occur undesirably.

6.5 Role of Dispositional Cognitive Processes

This section includes the discussions of results for the relationship of two types of dispositional cognitive processes, i.e. occupational self-efficacy (OSE) and the propensity to morally disengage (PMD), with the likelihood of deviant decision-making behaviour (DD). OSE and PMD have been included in this study's model as the control variables.

6.5.1 Occupational Self-Efficacy & Deviant Decision-Making Behaviour

In the events of conflict of interests, a negative relationship was expected between the professionals' OSE and DD. The empirical results, however, indicate that there is a nonsignificant relationship between OSE and DD for all the categories of conflict of interests (i.e. CoI-1, CoI-2, CoI-3 and CoI-4).

The demonstrated results, therefore, are not consistent with the literature that suggests a negative relationship between an accounting professional's OSE and DD (MacNab and Worthley, 2008; Iskandar and Sanusi, 2011; Palmer, 2013; Agle, Hart, Thompson and Hendricks, 2014; Afifah, Sari, Anugerah and Sanusi, 2015). This nonsignificant relationship can be related to the provision by Bandura (1986; 2006; 2008) that self-efficacy is largely context-specific. Since situations involving a conflict of interests are also specific to the given context (Cohen and Bennie, 2006), the results suggest that, compared to OSE, the accounting professionals' situational cognitive processes (i.e. POE, PD and EJ) had a dominant impact on their deviant decision-making behaviour.

In relation to managing conflict of interests, the nonsignificant impact of dispositional OSE suggests that accounting firms might mitigate the devastating impacts of conflict of interests by influencing the professionals' situational cognitive processes (Bandura, 2008). Since, the dispositional OSE is not found to significantly affect decision-making behaviour, using the situational POE, PD and EJ, to develop behavioural interventions, seems a promising tool to

facilitate effective management of conflict of interests in professional accounting firms.

6.5.2 Propensity to Morally Disengage & Deviant Decision-Making Behaviour

In the events of conflict of interests, the professionals' propensity to morally disengage (PMD) was expected to be positively related to their likelihood of deviant decision-making behaviour (DD). The empirical results also indicate that there is a significant positive relationship between PMD and DD for all the categories of conflict of interests (i.e. CoI-1, CoI-2, CoI-3 and CoI-4).

The demonstrated results, therefore, are consistent with the literature that suggests a positive relationship between an accounting professional's PMD and DD (Bandura, Barbaranelli, Caprara and Pastorelli, 1996; Bandura, 1999; 2002; Bandura, Caprara and Zsolnai, 2000; Moore, 2008; Cabrera-Fria, 2012; Moore et al., 2012). This significant relationship implies that the accounting professionals' PMD is as important as are the situational cognitive processes (i.e. POE, PD and EJ), in affecting their likelihood of deviant decision-making behaviour. Specifically, low PMD is demonstrated to be one of the dispositional cognitive predictors of deviant decision-making behaviour.

In relation to managing conflict of interests, the significant impact of PMD suggests that accounting firms might be able to alleviate the devastating impacts of conflict of interests, by influencing the professionals' PMD and their situational cognitive processes (i.e. POE, PD and EJ). Considering the situational POE, PD and EJ along with the dispositional PMD, to develop behavioural interventions, seems a promising tool to facilitate effective management of conflict of interests in professional accounting firms.

6.6 Discussion of Results for Complementary Model

The complementary analysis was also performed for the complementary model of this study, which includes the likelihood of compliant decision-making behaviour (CD), instead of the deviant decision-making behaviour (DD), as the dependent variable. The independent and intervening variables remain the same. Thus, the only results that would differ between the two models were expected to be; i) that leading from conflict of interests (i.e. CoI-1, CoI-2, CoI-3 and CoI-4) towards the likelihood of decision-making behaviour (i.e. DD or CD), (ii) from situational cognitive processes (i.e. POE, PD and EJ) towards DD or CD and (iii) from

the dispositional cognitive processes (i.e. OSE and PMD – the control variables) towards CD or DD.

The results of complementary analysis reveal that in the case of CoI-1, CoI-2, CoI-3 and CoI-4, all the significant paths leading to CD (i.e. CoI \rightarrow CD; POE \rightarrow CD, PD \rightarrow CD and the EJ \rightarrow CD) are opposite in sign to the paths leading towards DD (i.e. CoI \rightarrow DD; POE \rightarrow DD, PD \rightarrow DD and the EJ \rightarrow DD). The complementary analysis has very important practical implications for managing conflict of interests in professional accounting firms. This further analysis provides that at various stages in the entire process of managing conflict of interests, the professional accounting firms should direct their efforts towards encouraging amongst professionals; (i) the high POE (where high POE leads to low DD, there it leads to high CD), (ii) the low PD (where low PD leads to low DD, there it leads to high CD) and (iii) the high EJ (where high EJ leads to low DD, there it leads to high CD).

Regarding the role of perceptual biases in compliant decision-making behaviour, the overall results indicate that compliant decision-making is likely to be prone to perceptual biases due to the interference of POE and/or PD through the CoI \rightarrow POE \rightarrow CD, CoI \rightarrow POE \rightarrow EJ \rightarrow CD, CoI \rightarrow PD \rightarrow EJ \rightarrow CD, POE \rightarrow EJ \rightarrow CD and the PD \rightarrow EJ \rightarrow CD pathways. These results are also consistent with analysis of the main model with DD as the dependent variable. With reference to managing conflict of interests, the results suggest that decision-making in the face of conflict of interests is prone to perceptual biases (i.e. due to POE and PD) through various pathways. With the process thinking approach (Rodgers and Gago, 2006), such biases can be directed into a successful strategy. These provisions can be useful for developing behavioural interventions to facilitate effective management of conflict of interests.

Since a negative relationship was expected between the OSE and DD, it would have made sense for OSE to positively affect CD. The results revealed the nonsignificant relationship between OSE and CD in the case of CoI-1, CoI-2 and CoI-4 and the significant positive relationship in case of CoI-3. Similarly, since the positive relationship was demonstrated between the PMD and DD, it would have made sense for PMD to negatively affect CD. The results demonstrated the significant negative relationship between PMD and CD in the case of CoI-3 and CoI-4 and the nonsignificant relationship in the case of CoI-1 and CoI-2. The explanations for nonsignificant relationships is beyond the scope of this study. However, the results demonstrated for complementary model do not invalidate the overall nonsignificant impact of dispositional OSE on DD and the overall significant positive impact of dispositional

PMD on DD in the events of conflicting interests.

When considered in relation to the main theoretical model of this study, the results for complementary model provide empirical evidence for the reliability of hypothesised relationships. For instance, if the directions of relationships had not differed across DD and CD, we would have never known if the efforts of accounting firms to encourage, for example, 'low PD' will lead to compliant decision-making (i.e. desirable behaviour) or to the deviant (i.e. undesirable behaviour). With complementary analysis, it has been affirmed that low perceived difficulty leads to the higher likelihood of compliant decision-making. The same arguments are applicable to other variables of the study.

6.7 Empirical Results and the Research Aim & Objectives

This section will recap connections between the empirical results and the aim of this study. The purpose is to specify how the demonstrated results inform the aim and objectives and contribute towards filling the gaps in the literature. Results for the three groups of hypotheses, corresponding to the three groups of research questions, were discussed. These groups can be considered as the pieces of puzzle regarding the research problem.

The discussion of results for the relationship between conflict of interests (CoI) and the likelihood of deviant decision-making behaviour (DD) puts the first piece in the puzzle. Specifically, different categories of CoI might have significant positive, significant negative or even nonsignificant relationship with DD. This inconsistency in the direction of relationship draws attention towards understanding the process through which the relationship between CoI and DD is governed.

The discussion of results for the relationship between conflict of interests (CoI) and the situational cognitive processes (i.e. POE, PD and EJ) sheds some light on the process through which the relationship between CoI and DD is governed and puts the second piece in the puzzle. Specifically, different categories of CoI might have significant positive, significant negative, or even nonsignificant relationship with POE, PD and EJ. This inconsistency in the direction of the relationship is justified because perceptions and judgement are subjective in nature. Thus, two or more individuals could perceive the same situation differently and could also form different judgements in the same ethical situation. Importantly, different categories of conflict of interests have been evidenced to decrease DD for the accounting professionals with high

POE, low PD and the high EJ.

The discussion of results for the relationship between the cognitive processes (i.e. POE, PD and EJ) and the likelihood of deviant decision-making behaviour (DD) sheds more light on the process through which the relationship between CoI and DD is governed and puts the third piece in the puzzle. Specifically, low POE, high PD and the low EJ serve as the situational cognitive predictors of DD. Similarly, for the complementary model, high POE, low PD and the high EJ are the situational cognitive predictors of the likelihood of compliant decision-making behaviour (CD).

The discussion of results for the interrelationships of cognitive processes (i.e. POE, PD and EJ) puts the fourth piece in the puzzle. Specifically, POE is negatively related to PD and positively to EJ. Furthermore, PD is negatively related to EJ. The accounting firms should increase their efforts towards encouraging high POE and low PD – resultantly, the accounting professionals are expected to form highly ethical judgements and the likelihood of deviant (compliant) decision-making will decrease (increase).

The discussion of results for the role of perceptual biases towards decision-making behaviour, in the event of a conflict of interests, puts the fifth piece in the puzzle. Specifically, decision-making is prone to perceptual biases (i.e. due to POE and PD) through various pathways. The process thinking approach can, however, provide a constructive way of formulating such biases into a successful strategy, with an ultimate focus on decreasing (increasing) the likelihood of deviant (compliant) decision-making behaviour.

The discussion of results for the relationship of OSE and PMD (the control variables) with decision-making adds strength to the puzzle regarding the research problem. Specifically, dispositional OSE is found to have a nonsignificant impact on DD and the dispositional PMD is demonstrated to have a significant positive impact on DD. Thus, high propensity to morally disengage is the dispositional cognitive predictor of DD. When managing conflict of interests, accounting firms should take into consideration the accounting professionals' PMD.

Therefore, the interpretation and discussions of the empirical results against the hypotheses, corresponding to the research questions, enhance our understanding of the process through which conflict of interests affects accounting professionals' decision-making behaviour and, thus, contribute towards understanding how the conflict of interests operate at the level of an individual accounting professional. Consequently, many useful insights have been sought for

addressing this study's research problem. For instance, the situational cognitive predictors of DD (CD) are (i) low (high) POE, (ii) high (low) PD and (iii) less (high) EJ. Similarly, the dispositional cognitive predictor of DD (CD) is the high (low) PMD. The said insights will be combined to propose behavioural interventions to be incorporated in the framework(s) for managing conflict of interests in professional accounting firms.

Following the suggestions of some scholars (e.g., Nelson, 2004; Chugh, Banaji and Bazerman, 2005; Moore, Tetlock, Tanlu and Bazerman, 2006; Moore, Tanlu and Bazerman, 2010; Ayal and Gino, 2012), the aim and objectives were meant to address the accounting professionals' *independence in fact*. Since all the insights revealed by this study's empirical results are directly relevant to the professionals' state of mind and is about their unbiasedness and actual objectivity in the events of a conflict of interests, the interventions developed on the basis of these insights will help strengthen accounting professionals' *independence in fact*. Arguably (Moore, Tanlu and Bazerman, 2010; Bazerman and Gino, 2012; Williford and Small, 2013), the enhancement of *independence in fact* will facilitate effective management of conflict of interests in professional accounting firms.

6.8 Summary

This chapter elaborated the empirical results obtained against the hypotheses tested in the previous chapter on data analysis. The primary purpose was to relate demonstrated results to the aim and objectives and the research problem driving this study. The results were discussed in relation to the extant literature, the social cognitive theory and the throughput model of decision-making. The connections between empirical results and the aim of this study were specified. The purpose was to discuss how the demonstrated results informed the aim and objectives and how the evidence so obtained contributed in filling the gap towards accounting professionals' deviant behaviour due to conflicts of interest.

The next chapter on conclusions will detail how the insights sought against the research questions can be combined to propose the behavioural interventions for strengthening the accounting professionals' *independence in fact* and, thus, to facilitate effective management of conflict of interests in professional accounting firms.

CHAPTER 7: CONCLUSIONS

7.1 Introduction

This study views conflict of interests through the lens of behavioural risk management. It defines conflict of interests as *a situation involving a disagreement between the accounting profession's primary interest and the professional's secondary interest(s) which, in turn, leads to the likelihood of deviant behaviour*. The research problem driving this study is the accounting professionals' deviant decision-making behaviour due to conflict of interests. The prevalence of said problem is attributable to the ineffective management of conflict of interests, since the existing procedures do not account, sufficiently, for the accounting professionals' *independence in fact* (Moore, Tetlock, Tanlu and Bazerman, 2006; Clements, Neill and Stovall, 2012; Bazerman and Gino, 2012; Crump, 2013; Williford and Small, 2013). Some scholars (Nelson, 2004; Chugh, Banaji and Bazerman, 2005; Moore, Tetlock, Tanlu and Bazerman, 2006; Moore, Tanlu and Bazerman, 2010; Ayal and Gino, 2012) suggested that one of the potential solutions to this problem could be the increased focus on professionals' *independence in fact*. In this regard, the significant gap in literature was identified to be the lack of understanding about how conflict of interests operates at the level of an individual accounting professional.

In order to fill the gap in the literature, this study was aimed at examining the process through which conflict of interests affects accounting professionals' decision-making behaviour. With particular reference to facilitating effective management of conflict of interests, the aim and objectives were meant to address the research problem through a specific focus on the accounting professionals' *independence in fact*. In order to achieve the research aim and objectives, the theoretical framework was developed through the integration of the social cognitive theory with the throughput model of decision-making. The framework served as a filtering tool for selecting appropriate research questions and to determine the methodology adopted for seeking answers to these questions. Accordingly, the empirical data were collected using web-based quasi-experiments, conducted with 105 accounting professionals from the Big Four accounting firms in the UK. The results and findings were produced by subjecting the data to analysis, using SmartPLS 3 for path analysis. These results lead to the conclusions that will provide an account of how this study has achieved its aim and objectives for addressing the problem that drove this study.

The second section will revisit this study's research questions. The third section will revisit the aim, followed by development of the behavioural framework in the fourth section. The main contributions of this study will be presented in the fifth section and the practical implications will be discussed in the sixth section. Limitations of this research and the directions for future research will be presented in the seventh section. The epilogue to close this research will be presented in the eighth section.

7.2 Revisiting the Research Questions

This study considered the four important categories of conflict of interests (CoI), i.e. conflict of interests due to self-interest threat (CoI-1), that due to intimidation threat (CoI-2), that due to a combination of self-interest and self-review threats (CoI-3) and conflict of interests due to a combination of self-interest, intimidation, self-review and familiarity threats (CoI-4). The intervening variables included three situational cognitive processes, i.e. the positive outcome expectancy of compliant decision-making (POE), the perceived difficulty in making compliant decisions (PD) and the ethical judgement (EJ). The dependent variables included the likelihood of deviant decision-making behaviour (DD) for this study's main model and the likelihood of compliant decision-making behaviour (CD) for complementary analysis. Two dispositional cognitive processes, i.e. occupational self-efficacy (OSE) and the propensity to morally disengage (PMD) were considered as the control variables.

The empirical results have generated possible answers to this study's research questions. In order to clarify how the so generated answers have informed this study's aim and objectives, the research questions have been revisited in this section.

7.2.1 First Group of Research Questions

The first research question examined relationship between the conflict of interests and the accounting professionals' likelihood of deviant decision-making behaviour. This question was meant to testify the threatening impact of the different categories of conflict of interests on the accounting professionals' adoption of compliant behaviour.

RQ₁: What is the relationship between the conflict of interests and the accounting professionals' likelihood of deviant decision-making behaviour?

All the categories of conflict of interests were hypothesised to be positively related to the

accounting professionals' likelihood of deviant decision-making behaviour. Empirical results demonstrated that CoI-1 and CoI-3 have significant negative, while CoI-2 has a significant positive relationship with DD. However, CoI-4 has a positive but nonsignificant relationship. In the case of complementary analysis, CoI-1 and CoI-3 have significant positive, while CoI-2 has a significant negative relationship with CD. However, CoI-4 has a positive but nonsignificant relationship. As evidenced, different categories of conflict of interests can have positive, negative, or even nonsignificant relationship with the likelihood of deviant (and compliant) decision-making behaviour. The differing directions of relationships suggest that there can be more variations in the results for other categories of conflict of interests, not explicitly included in this study.

In relation to the first objective of this study (i.e. to examine the relationship between the conflict of interests and the accounting professionals' likelihood of deviant decision-making behaviour), the main insight the answer(s) to this research question provides is that since conflict of interests is a risk, it is expected to threaten the adoption of compliant behaviour and does not always result in the deviant behaviour. Therefore, conflict of interests threatens the accounting professionals' adoption of compliant decision-making behaviour.

Compliant behaviour is about compliance with the fundamental principles of accounting profession, i.e. integrity, objectivity, professional competence and due care, confidentiality and the professional behaviour. The said compliance constitutes primary interest of the accounting profession (IESBA, 2015). However, the inconsistent relationships between the different categories of conflict of interests and the likelihood of deviant decision-making behaviour raise another thought-provoking concern, i.e. *why is it that some conflict of interests increase the likelihood of deviant decision-making (i.e. undesirable behaviour), while some decrease its likelihood (i.e. desirable behaviour)?* With particular reference to the professionals' *independence in fact*, this concern draws attention towards understanding the role of professionals' intervening mental processes towards their decision-making in the events of conflict of interests (Moore, Tetlock, Tanlu and Bazerman, 2006; Moore, Tanlu and Bazerman, 2010; Bazerman and Gino, 2012; Clements, Neill and Stovall, 2012) – the second and third research questions address this concern.

7.2.2 Second Group of Research Questions

The second group of research questions was meant to understand the role of accounting

professionals' cognitive processes (i.e. positive outcome expectancy, perceived difficulty and ethical judgement) towards their decision-making behaviour in the events of conflict of interests.

RQ₂: *What is the role of accounting professionals' cognitive processes towards their deviant decision-making behaviour in the events of conflict of interests?*

This question was, further, divided into three subgroups.

7.2.2.1 Subgroup-1

The first subgroup examined the relationship between conflict of interests and the accounting professionals' positive outcome expectancy, perceived difficulty and the ethical judgement. The purpose was to understand the process through which the relationship between conflict of interests and the likelihood of deviant decision-making behaviour is governed.

1. Conflict of interests & Positive Outcome Expectancy

RQ_{1/2.1}: *What is the relationship between the conflict of interests and the accounting professionals' positive outcome expectancy of compliant decision-making?*

All the categories of conflict of interests were hypothesised to be related to the accounting professionals' positive outcome expectancy of compliant decision-making. Empirical results demonstrated that CoI-1 and CoI-3 have significant positive, while CoI-2 has a significant negative relationship with POE. However, CoI-4 has a positive but a nonsignificant relationship with POE. As evidenced, different categories of conflict of interests can have a positive, a negative, or even nonsignificant relationship with the professionals' positive outcome expectancy of compliant decision-making. Accordingly, conflict of interests might lead an accounting professional to expect that the positive outcomes of making a compliant decision will outweigh its negative outcomes. Similarly, they might expect the negative outcomes of making a compliant decision to outweigh its positive outcomes. In some cases, conflict of interests might not even significantly affect the professionals' positive outcome expectancy. Since the perceptions are highly subjective (Rodgers, 1997; 2006; 2009; Rodgers and Gago, 2001; 2006; Guiral, Rodgers, Ruiz and Gonzalo, 2010; Cvejic, Lloyd and Vollmer-Conna, 2016), the mixed results are justified because different individuals could perceive the same situation differently.

Interestingly, the relationship between the conflict of interests and the accounting professionals' positive outcome expectancy is connected to the results demonstrated for the relationship between the conflict of interests and the likelihood of deviant decision-making. Specifically, conflict of interests decreases the likelihood of deviant decision-making, if accounting professionals expect the positive outcomes of making compliant decisions to outweigh its negative outcomes. Similarly, conflict of interests increases the likelihood of deviant decision-making behaviour, if professionals expect the negative outcomes of making a compliant decision to outweigh its positive outcomes. Thus, the relationship between the conflict of interests and the deviant decision-making behaviour is, in part, governed by the agency of accounting professionals' POE.

Furthermore, as discussed in the chapter on data analysis, the lower numerical values of coefficient of determination (R^2), effect size (f^2) and predictive relevance (Q^2) indicate the eminent role of other contextual factors in affecting the accounting professionals' positive outcome expectancy. As emphasised in the literature review, the main environmental or contextual factors include professional accounting regulations, codes of conduct ethics and compliance programs, organisational culture and the reward systems. In cases where the conflict of interests has nonsignificant relationship with the professionals' positive outcome expectancy, the impact of context is, arguably, even stronger (Booth and Schulz, 2004; Bobek and Radtke, 2007; Schminke, Arnaud and Kuenzi; 2007; Amali, 2010; Caldarelli et al., 2012; Florio 2012; Green and Zimiles; 2013). However, since positive outcome expectancy is a situation-specific process (Bandura, 1986; 2006; 2008), the nonsignificant or weak relationships does not, in any way, imply the irrelevance of conflict of interests. In fact, POE is affected by contextual factors, strictly, in relation to the given conflict of interests (Bandura, 2008).

In relation to the second objective of this study (i.e. to understand the role of accounting professionals' cognitive processes towards their decision-making behaviour in the events of conflict of interests), the answer(s) against this sub-question provide two main insights. First, different categories of conflict of interests tend to decrease (increase) the likelihood of deviant decision-making behaviour for accounting professionals with high (low) positive outcome expectancy of compliant decision-making. Second, the argued important role of contextual factors invites the attention of professional accounting firms towards introducing behavioural interventions for strengthening the professionals' *independence in fact*, in order to facilitate

effective management of conflict of interests. Specifically, the said interventions should encourage high positive outcome expectancy of compliant decision-making.

Therefore, the above-mentioned insights testify that the process through which different conflict of interests threatens compliant behaviour (i.e. compliance with the fundamental principles of accounting profession – integrity, objectivity, professional competence and due care, confidentiality and the professional behaviour) is, partly, governed through the agency of accounting professionals' positive outcome expectancy.

2. Conflict of interests & Perceived Difficulty

RQ2/2.1: What is the relationship between the conflict of interests and the accounting professionals' perceived difficulty in making compliant decisions?

All the categories of conflict of interests were hypothesised to be related to the accounting professionals' perceived difficulty in making compliant decisions. Empirical results demonstrated that CoI-1 and CoI-4 have significant negative, while CoI-2 has a significant positive relationship with PD. However, CoI-3 has a positive but nonsignificant relationship. As evidenced, different categories of conflict of interests can have a positive, a negative, or even nonsignificant relationship with the professionals' perceived difficulty in making compliant decisions. Accordingly, conflict of interests might lead an accounting professional to perceive high difficulty in making compliant decisions or, similarly, they might perceive less difficulty in making compliant decisions. In some cases, conflict of interests might not even significantly affect the professionals' perceived difficulty. Since the perceptions are highly subjective (Rodgers, 1997; 2006; 2009; Rodgers and Gago, 2001; 2006; Guiral, Rodgers, Ruiz and Gonzalo, 2010; Cvejic, Lloyd and Vollmer-Conna, 2016), the mixed results are justified.

Interestingly, the relationship between the conflict of interests and the accounting professionals' perceived difficulty is connected to the results demonstrated for the relationship between the conflict of interests and the likelihood of deviant decision-making. Specifically, the conflict of interests decreases the likelihood of deviant decision-making, if accounting professionals perceive less difficulty in making compliant decisions. Similarly, conflict of interests tends to increase the likelihood of deviant decision-making, if the professionals perceive high difficulty in making compliant decisions. Thus, the relationship between the conflict of interests and the deviant decision-making behaviour is, in part, governed by the

agency of accounting professionals' perceived difficulty in making compliant decisions.

Furthermore, as discussed in the chapter on data analysis, the numerical values of coefficient of determination (R^2), effect size (f^2) and predictive relevance (Q^2) indicate the eminent role of other contextual factors in affecting the accounting professionals' perceived difficulty in making compliant decisions. As emphasised in the literature review, the main contextual factors include professional accounting regulations, codes of conduct ethics and compliance programs, organisational culture and the reward systems. In cases where conflict of interests has a nonsignificant relationship with the professionals' perceived difficulty, the impact of context is, arguably, even stronger (Booth and Schulz, 2004; Bobek and Radtke, 2007; Schminke, Arnaud and Kuenzi; 2007; Amali, 2010; Caldarelli et al., 2012; Florio 2012; Green and Zimiles; 2013. However, since perceived difficulty is a situation-specific process (Bandura, 1986; 2006; 2008), the nonsignificant or weak relationships do not, in any way, imply the irrelevance of conflict of interests. In fact, PD is affected by the contextual factors, strictly, in relation to the given conflict of interests (Bandura, 2008).

In relation to the second objective of this study (i.e. to understand the role of accounting professionals' cognitive processes towards their decision-making behaviour in the events of conflict of interests), the answer(s) against this sub-question provide two main insights. First, different categories of conflict of interests tend to decrease (increase) the likelihood of deviant decision-making behaviour for the accounting professionals with low (high) perceived difficulty in making compliant decisions. Second, the argued important role of contextual factors invites the attention of professional accounting firms towards introducing behavioural interventions for strengthening the professionals' *independence in fact*, in order to facilitate effective management of conflict of interests. Specifically, the said interventions should encourage low perceived difficulty in making compliant decisions.

Therefore, the above-mentioned insights testify that the process through which different conflict of interests threatens compliant behaviour (i.e. compliance with the fundamental principles of accounting profession – integrity, objectivity, professional competence and due care, confidentiality and the professional behaviour) is, in part, governed by the agency of accounting professionals' perceived difficulty in making compliant decisions.

3. Conflict of interests & Ethical Judgement

RQ_{3/2.1}: *What is the relationship between the conflict of interests and the accounting*

professionals' ethical judgement?

All the categories of conflict of interests were hypothesised to be related to the accounting professionals' ethical judgement. Empirical results demonstrated that CoI-1, CoI-3 and CoI-4 have significant positive, while CoI-2 has a significant negative relationship with EJ. As evidenced, different categories of conflict of interests can have significant positive or significant negative relationship with the professionals' judgements about the ethicality of compliant decision choices. Accordingly, conflict of interests might lead an accounting professional to form a judgement that the given compliant decision choice is the most ethical course of action. Similarly, they might even form a judgement that the given compliant decision choice is the least ethical course or, alternatively, that the deviant decision choice is the most ethical course of action. Since judgement implies subjective and deliberate information processing strategies (Rodgers, 1997; 2006; 2009; Rodgers and Gago, 2001; 2006; Guiral, Rodgers, Ruiz and Gonzalo, 2010), the mixed results are justified because different individuals could form different judgements in the same ethical situation.

Interestingly, the relationship between the conflict of interests and the accounting professionals' ethical judgements is connected to the results demonstrated for the relationship between the conflict of interests and the likelihood of deviant decision-making behaviour. Specifically, conflict of interests decreases the likelihood of deviant decision-making, if the accounting professionals form a judgement that the given compliant decision choice is the most ethical course of action. Similarly, conflict of interests increases the likelihood of deviant decision-making, if the professionals form a judgement that the given compliant decision choice is the least ethical course of action or, alternatively, that the noncompliant/deviant decision choice is the most ethical course of action. Thus, the relationship between the conflict of interests and the likelihood of deviant decision-making behaviour is, in part, governed by the agency of accounting professionals' judgements about the ethicality of compliant decision choices.

Furthermore, as discussed in the chapter on data analysis, the numerical values of coefficient of determination (R^2), effect size (f^2) and predictive relevance (Q^2) indicate the eminent role of other contextual factors in affecting the accounting professionals' ethical judgements. As emphasised in the literature review, the main contextual factors include professional accounting regulations, codes of conduct ethics and compliance programs and the organisational culture. However, since situational ethical judgement is a situation-specific

process (Bandura, 1986; 2006; 2008), even the weak or less strong relationships do not, in any way, imply the irrelevance of conflict of interests. In fact ethical judgements about compliant decision choices are affected by the contextual factors, strictly in relation to the given conflict of interests (Bandura, 2008).

In relation to the second objective of this study (i.e. to understand the role of accounting professionals' cognitive processes towards their decision-making behaviour in the events of conflict of interests), the answer(s) against this sub-question provide two main insights. First, different categories of conflict of interests tend to decrease (increase) the likelihood of deviant decision-making behaviour for accounting professionals who form a judgement that the given compliant decision choice is (is not) the most ethical course of action. Second, the argued important role of contextual factors invites the attention of professional accounting firms towards introducing behavioural interventions for strengthening the professionals' *independence in fact*, in order to facilitate effective management of conflict of interests. Specifically, the said interventions should encourage highly ethical judgements about the compliant decision choices.

Therefore, the above-mentioned insights testify that the process through which different conflict of interests threatens compliant behaviour (i.e. compliance with the fundamental principles of accounting profession – integrity, objectivity, professional competence and due care, confidentiality and the professional behaviour) is, in part, governed by the agency of accounting professionals' judgements about the ethicality of compliant decision choices.

7.2.2.2 Subgroup-2

The second subgroup examined the relationship of the accounting professionals' positive outcome expectancy, perceived difficulty and ethical judgement with their likelihood of deviant decision-making behaviour. The purpose was to establish, in the events of conflict of interests, the situational cognitive predictors of the accounting professionals' likelihood of deviant decision-making behaviour.

1. Positive Outcome Expectancy & Deviant Decision-Making Behaviour

RQ_{1/2.2}: *How in the events of conflict of interests, is the accounting professionals' positive outcome expectancy of compliant decision-making related to their likelihood of deviant decision-making behaviour?*

The accounting professionals' positive outcome expectancy of compliant decision-making was hypothesised to be negatively related to their likelihood of deviant decision-making behaviour. Empirical results demonstrated that in the events of all the categories of conflict of interests (i.e. CoI-1, CoI-2, CoI-3 and CoI-4), the accounting professionals' positive outcome expectancy of compliant decision-making has a negative (positive) relationship with their likelihood of deviant (compliant) decision-making behaviour. Accordingly, given the conflict of interests, the likelihood of deviant decision-making decreases in case of the accounting professionals who expect the positive outcomes of compliant decision-making to outweigh its negative outcomes. Similarly, the likelihood of deviant decision-making behaviour increases in case of the professionals who do not expect the positive outcomes of compliant decision-making to outweigh its negative outcomes or, alternatively, expect the negative outcomes to outweigh the positive outcomes. Thus, low (high) positive outcome expectancy of compliant decision-making is one of the situational cognitive predictors of the likelihood of deviant (compliant) decision-making behaviour.

In relation to the second objective of this study (i.e. to understand the role of accounting professionals' cognitive processes towards decision-making behaviour in the events of conflict of interests), the answer(s) against this sub-question provides that the professionals' POE plays an important role as a predictor of their likely behaviour. The consistent negative (positive) relationship between the positive outcome expectancy of compliant decision-making and the likelihood of deviant (compliant) decision-making behaviour has important implications for managing conflict of interests. In this regard, with particular reference to strengthening the professionals' *independence in fact*, behavioural interventions should be introduced at the stage of assessment of conflict of interests. When identifying the sources, causes, consequences and the likely impact of conflict of interests, the risk managers should take into consideration that the lower the professionals' positive outcome expectancy of compliant decision-making, the higher is the likelihood of their deviant decision-making behaviour.

Therefore, the insights reveal that one of the situational cognitive predictors of the deviation from compliant behaviour (i.e. compliance with the fundamental principles of accounting profession – integrity, objectivity, professional competence and due care, confidentiality and the professional behaviour), in the events of a conflict of interests, is the low positive outcome expectancy of compliant decision-making.

2. Perceived Difficulty & Deviant Decision-Making Behaviour

RQ_{2/2.2}: *How in the events of conflict of interests, is the accounting professionals' perceived difficulty in making compliant decisions related to their likelihood of deviant decision-making behaviour?*

The accounting professionals' perceived difficulty in making a compliant decision was hypothesised to be positively related to their likelihood of deviant decision-making behaviour. Empirical results demonstrated that in the events of all the categories of conflict of interests (i.e. CoI-1, CoI-2, CoI-3 and CoI-4), the accounting professionals' perceived difficulty in making compliant decisions has a positive (negative) relationship with their likelihood of deviant (compliant) decision-making behaviour. Accordingly, given the conflict of interests, the likelihood of deviant decision-making behaviour increases in case of the accounting professionals who perceive high difficulty in making compliant decisions. Similarly, the likelihood of deviant decision-making behaviour decreases in case of the professionals who perceive low difficulty in making compliant decisions. Thus, high (low) perceived difficulty in making compliant decisions is one of the situational cognitive predictors of the likelihood of deviant (compliant) decision-making behaviour.

In relation to the second objective of this study (i.e. to understand the role of accounting professionals' cognitive processes towards their decision-making behaviour in the events of conflict of interests), the answer(s) against this sub-question provides that the professionals' PD plays an important role as a predictor of their likely behaviour. The consistent positive (negative) relationship between the perceived difficulty in making compliant decisions and the likelihood of deviant (compliant) decision-making has important implications for managing conflict of interests. In this regard, with particular reference to strengthening the professionals' *independence in fact*, behavioural interventions should be introduced at the stage of assessment of conflict of interests. When identifying the sources, causes, consequences and the likely impact of conflict of interests, the risk managers should take into consideration that the higher the professionals' perceived difficulty in making compliant decisions, the higher is the likelihood of their deviant decision-making behaviour.

Therefore, the insights reveal that one of the situational cognitive predictors of the deviation from compliant behaviour (i.e. compliance with the fundamental principles of accounting profession – integrity, objectivity, professional competence and due care, confidentiality and the professional behaviour), in the events of a conflict of interests, is the high perceived difficulty in making compliant decisions.

3. Ethical Judgement & Deviant Decision-Making Behaviour

RQ_{3/2.2}: *How in the events of conflict of interests, is the accounting professionals' ethical judgement related to their likelihood of deviant decision-making behaviour?*

The accounting professionals' ethical judgement was hypothesised to be negatively related to their likelihood of deviant decision-making behaviour. Empirical results demonstrated that in the events of all the categories of conflict of interests (i.e. CoI-1, CoI-2, CoI-3 and CoI-4), the accounting professionals' ethical judgement has a negative (positive) relationship with their likelihood of deviant (compliant) decision-making behaviour. Accordingly, given the conflict of interests, the likelihood of deviant decision-making behaviour decreases in case of the accounting professionals who form a judgement that the given compliant decision choice is the most ethical course of action. Similarly, the likelihood of deviant decision-making behaviour increases in case of the professionals who form a judgement that the given compliant decision choice is the least ethical course of action or, alternatively, the deviant decision choice is the most ethical course. Thus, less (high) ethical judgement about compliant decision choices is one of the situational cognitive predictors of the likelihood of deviant (compliant) decision-making behaviour.

In relation to the second objective of this study (i.e. to understand the role of accounting professionals' cognitive processes towards their decision-making behaviour in the events of conflict of interests), the answer(s) against this sub-question provides that the professionals' EJ plays an important role as a predictor of their likely behaviour. The consistent negative (positive) relationship between the ethical judgements regarding compliant decision choices and the likelihood of deviant (compliant) decision-making behaviour has important implications for managing conflict of interests. In this regard, with particular reference to strengthening the professionals' *independence in fact*, behavioural interventions should be introduced at the stage of assessment of conflict of interests. When identifying the sources, causes, consequences and the likely impact of conflict of interests, the risk managers should take into consideration that the less ethical is the professionals' judgement about compliant decision choice, the higher is their likelihood of deviant decision-making behaviour.

Therefore, the insights reveal that one of the situational cognitive predictors of the deviation from compliant behaviour (i.e. compliance with the fundamental principles of accounting profession – integrity, objectivity, professional competence and due care, confidentiality and

the professional behaviour), in the events of a conflict of interests, is the professionals' judgement that compliant decision choice is the least or less ethical course of action.

7.2.2.3 Subgroup-3

The third subgroup examined the interrelationships of accounting professionals' positive outcome expectancy, perceived difficulty and ethical judgement. The purpose was to understand the process through which the relationship of the accounting professionals' cognitive processes with their likelihood of deviant decision-making behaviour is governed.

1. Positive Outcome Expectancy & Perceived Difficulty

RQ_{1/2.3}: How in the events of conflict of interests, are the accounting professionals' positive outcome expectancy of compliant decision-making and their perceived difficulty in making compliant decisions interrelated?

The accounting professionals' positive outcome expectancy of compliant decision-making was hypothesised to be negatively related to their perceived difficulty in making a compliant decision. In the events of all the categories of conflict of interests (CoI-1 CoI-2, CoI-3 and CoI-4), the accounting professionals' positive outcome expectancy of compliant decision-making is evidenced to have a negative relationship with their perceived difficulty in making a compliant decision. Accordingly, in the events of conflict of interests, the accounting professionals who expect the positive outcomes of compliant decision-making to outweigh its negative outcomes are likely to perceive less difficulty in making that compliant decision. Similarly, the professionals who do not expect the positive outcomes of compliant decision-making to outweigh its negative outcomes (or, alternatively, that the negative outcomes will outweigh the positive outcomes) are likely to perceive high difficulty in making that compliant decision.

In accordance with the earlier discussed positive (negative) relationship of the PD with DD (CD), the said interrelationship also suggests that the low (high) perceived difficulty in making compliant decisions, in response to the high (low) positive outcome expectancy, tends to decrease (increase) the likelihood of deviant decision-making behaviour. Thus, in the events of a conflict of interests, the relationship between positive outcome expectancy and the likelihood of deviant decision-making behaviour is, in part, governed by the agency of perceived difficulty. Moreover, the evidenced interrelationship also testifies the predictive power of the

low (high) positive outcome expectancy towards the likelihood of deviant (compliant) decision-making behaviour – the lower (higher) the positive outcome expectancy, the more (less) is the perceived difficulty in making compliant decisions and the more is the likelihood of deviant (compliant) decision-making behaviour.

In relation to the second objective of this study (i.e. to understand the role of accounting professionals' cognitive processes towards their decision-making behaviour in the events of conflict of interests), the answer(s) against this sub-question provides that POE and PD interact to affect professionals' decision-making behaviour. The consistent negative relationship between POE and PD has important implications for managing conflict of interests. In this regard, with particular reference to strengthening the professionals' *independence in fact*, behavioural interventions should be introduced in the stages of establishing the context and during the assessment of conflict of interests. The risk managers should take into consideration that interventions aimed at encouraging the high positive outcome expectancy of compliant decision-making will lead to the low perceived difficulty in making that compliant decision (due to a negative relationship between the two) which, in turn, will decrease the likelihood of deviant decision-making behaviour (due to, the earlier demonstrated, positive relationship between the perceived difficulty and the likelihood of deviant decision-making).

Therefore, the insights testify that, in the events of a conflict of interests, the process through which the positive outcome expectancy of compliant decision-making affects compliant behaviour (i.e. compliance with the fundamental principles of accounting profession – integrity, objectivity, professional competence and due care, confidentiality and the professional behaviour) is, in part, governed by the agency of accounting professionals' perceived difficulty in making the given compliant decision.

2. Positive Outcome Expectancy & Ethical Judgements

RQ2/2.3: How in the events of conflict of interests, are the accounting professionals' positive outcome expectancy of compliant decision-making and their ethical judgement interrelated?

The accounting professionals' positive outcome expectancy of compliant decision-making was hypothesised to be positively related to their ethical judgement. In the events of all the categories of conflict of interests (i.e. CoI-1 CoI-2, CoI-3 and CoI-4), the accounting professionals' positive outcome expectancy of compliant decision-making is found to have a positive relationship with their ethical judgements about the compliant decision choices.

Accordingly, in the events of conflict of interests, the accounting professionals who expect the positive outcomes of compliant decision-making to outweigh its negative outcomes, are likely to form a judgement that the given compliant decision choice is the most ethical course of action. Similarly, the professionals who do not expect the positive outcomes of compliant decision-making to outweigh its negative outcomes (or, alternatively, that the negative outcomes will outweigh the positive outcomes), are likely to form a judgement that the given compliant decision choice is the least ethical course of action or, alternatively, that the noncompliant/deviant decision choice is the most ethical course.

In accordance with the earlier discussed negative (positive) relationship between EJ and DD (CD), the said interrelationship also suggests that the high (less) ethical judgements about the compliant decision choices, in response to the high (low) positive outcome expectancy, tend to decrease (increase) the likelihood of deviant decision-making behaviour. Thus, the relationship between positive outcome expectancy and the likelihood of deviant decision-making behaviour is, in part, governed by the agency of the professionals' judgements about the ethicality of compliant decision choices. Moreover, the interrelationship also testifies the predictive power of low (high) positive outcome expectancy towards the likelihood of deviant (compliant) decision-making behaviour – the lower (higher) the positive outcome expectancy, the less (more) ethical the judgements and the more is the likelihood of deviant (compliant) decision-making behaviour.

In relation to the second objective of this study (i.e. to understand the role of accounting professionals' cognitive processes towards their decision-making behaviour in the events of conflict of interests), the answer(s) against this sub-question provides that POE and EJ interact to affect professionals' decision-making behaviour. The consistent positive relationship between POE and EJ has important implications for managing conflict of interests. In this regard, with particular reference to strengthening the professionals' *independence in fact*, behavioural interventions should be introduced in the stages of establishing the context and during the assessment of conflict of interests. The risk managers should take into consideration that the interventions aimed at encouraging high positive outcome expectancy of compliant decision-making will lead to the more ethical judgements (due to a positive relationship between the two) which, in turn, will decrease the likelihood of deviant decision-making behaviour (due to, the earlier demonstrated, negative relationship between ethical judgements and the likelihood of deviant decision-making).

Therefore, the insights testify that in the events of a conflict of interests, the process through which the positive outcome expectancy of compliant decision-making affects compliant behaviour (i.e. compliance with the fundamental principles of accounting profession – integrity, objectivity, professional competence and due care, confidentiality and the professional behaviour) is, in part, governed by the agency of the accounting professionals' judgements about the ethicality of compliant decision choice.

3. Perceived Difficulty & Ethical Judgement

RQ_{3/2.3}: How in the events of conflict of interests, are the accounting professionals' perceived difficulty in making compliant decisions and their ethical judgement interrelated?

The accounting professionals' perceived difficulty in making compliant decision was hypothesised to be negatively related to their ethical judgement. In the events of all the categories of conflict of interests (i.e. CoI-1 CoI-2, CoI-3 and CoI-4), the accounting professionals' perceived difficulty in making compliant decisions is found to have a negative relationship with their ethical judgements about the compliant decision choices. Accordingly, in the events of conflict of interests, the accounting professionals who perceive less difficulty in making a compliant decision, are likely to form a judgement that the given compliant decision choice is the most ethical course of action. Similarly, the professionals who perceive high difficulty in making a compliant decision, are likely to form a judgement that the given compliant decision choice is the least ethical course of action or, alternatively, that the deviant decision choice is the most ethical course.

In accordance with the earlier discussed negative (positive) relationship between EJ and DD (CD), the said interrelationship also suggests that the high (less) ethical judgements about the compliant decision choices, in response to the low (high) perceived difficulty, decreases (increases) the likelihood of deviant decision-making behaviour. Thus, in the events of conflict of interests, the relationship between the perceived difficulty and the likelihood of deviant decision-making is, in part, governed by the agency of the judgements about the ethicality of compliant decision choices. Moreover, the interrelationship also testifies the predictive power of high (low) perceived difficulty towards the likelihood of deviant (compliant) decision-making behaviour – the higher (lower) the perceived difficulty in making compliant decisions, the less (more) ethical the judgements and the more is the likelihood of deviant (compliant) decision-making behaviour.

In relation to the second objective of this study (i.e. to understand the role of accounting professionals' cognitive processes towards their decision-making behaviour in the events of conflict of interests), the answer(s) against this sub-question provides that PD and EJ interact to affect professionals' decision-making behaviour. The consistent negative relationship between the perceived difficulty and the ethical judgement has important implications for managing conflict of interests. In this regard, with particular reference to strengthening the professionals' *independence in fact*, behavioural interventions should be introduced in the stages of establishing the context and during the assessment of conflict of interests. The risk managers should take into consideration that the interventions aimed at encouraging low perceived difficulty in making compliant decisions will lead to more ethical judgements (due to a negative relationship between the two) which, in turn, decreases the likelihood of deviant decision-making behaviour (due to the earlier demonstrated negative relationship between the ethical judgements and the likelihood of deviant decision-making).

Therefore, the insights testify that in the events of a conflict of interests, the process through which the perceived difficulty in making compliant decisions affects compliant behaviour (i.e. compliance with the fundamental principles of accounting profession – integrity, objectivity, professional competence and due care, confidentiality and the professional behaviour) is, in part, governed by the agency of accounting professionals' judgements about the ethicality of compliant decision choices.

7.2.3 Third Group of Research Questions

The third group of research questions sought to examine the biasing role of conflict of interests towards accounting professionals' decision-making behaviour. The main purpose was to understand the process through which the unintentional and/or intentional perceptual biases might, in the events of a conflict of interests, increase the likelihood of deviant decision-making behaviour.

RQ3: *Why in the events of conflict of interests, might the accounting professionals' deviant decision-making behaviour be prone to perceptual biases?*

The accounting professionals' deviant decision-making behaviour was hypothesised to be prone to bias due to the interference of their perceptions (i.e. the positive outcome expectancy of compliant decision-making and the perceived difficulty in making compliant decisions) with

the analytical pathway to deviant decision-making. Since the analytical path (i.e. conflict of interests → ethical judgement → decision) does not involve the role of perceptions, its adoption implies that the information surrounding conflict of interests is subjected to the detailed analysis, which results in the formation of ethical judgements and, resultantly, the professionals refrain from deviant decision-making or alternatively adopt compliant decision-making behaviour. This argument, however, is based on the assumption that the professionals are well equipped with all the required technical knowledge and scepticism – the experimental vignettes used in data collection were kept simple and straightforward enough to ensure that the level of professionals' knowledge and scepticism do not affect any of the observed relationships.

Perceptions as the indirect drivers of decisions were evidenced to introduce unintentional biases in decision-making, by interfering with analytical pathway through the following paths; *Conflict of Interests* → *Positive Outcome Expectancy* → *Decision* and *Conflict of Interests* → *Perceived Difficulty* → *Decision*, underpinned by ethical relativism, *Conflict of Interests* → *Positive Outcome Expectancy* → *Ethical Judgement* → *Decision* and *Conflict of Interests* → *Perceived Difficulty* → *Ethical Judgement* → *Decision*, underpinned by ethics of care and *Positive Outcome Expectancy* → *Ethical Judgement* → *Decision* and *Perceived Difficulty* → *Ethical Judgement* → *Decision* path, underpinned by deontology. Moreover, perceptions as the direct drivers of decisions were evidenced to introduce intentional biases in decision-making by interfering with the analytical pathway through the *Positive Outcome Expectancy* → *Decision* path, underpinned by psychological egoism. Resultantly, the ethical predispositions underlying these pathways lead professionals to behave in a biased manner and, therefore, increase the likelihood of biased decision-making.

In relation to the third objective of this study (i.e. to understand the biasing role of conflict of interests towards the accounting professionals' decision-making behaviour), the answer(s) to this research question provides that the conflict of interests plays its biasing role by introducing perceptual biases in the decision-making process – POE and PD serve as the sources of said biases that have been demonstrated to be, largely, unintentional. This implies that in the events of conflict of interests, deviations from the compliant behaviour can even occur undesirably. The finding that decision outcome, in the events of conflict of interests, is largely affected by the decision-makers' subjective experiences, has important implications for managing conflict of interests. In this regard, with particular reference to strengthening the professionals' *independence in fact*, behavioural interventions should be introduced in the stages of treatment

and control regarding the conflict of interests. The firms' decision to adopt a particular treatment of conflict of interests should be informed by the fact that decision-making in the events of conflict of interests is largely prone to bias. As one of the control measures, implementation of the *process thinking approach* (Rodgers and Gago, 2001; 2006) seems promising. This approach provides a constructive way of formulating biases into a successful strategy, by alerting professionals of the pathway they use to arrive at a decision and also by increasing their awareness of the obstacles and shortcuts they encounter during decision-making.

Therefore, the insights testify that in the events of a conflict of interests, the accounting professionals are prone to disregarding the adoption of the analytical pathway. Particularly, the perceptual biases serve as the psycho-cognitive barriers that impair the professionals' *independence in fact* and, resultantly, threaten compliance with the fundamental principles (i.e. integrity, objectivity, professional competence and due care, confidentiality and the professional behaviour) of the accounting profession.

7.2.4 Control Variables

The occupational self-efficacy (OSE) and the propensity to morally disengage (PMD) were empirically observed for their relationship with the likelihood of deviant decision-making behaviour (DD). Both the OSE and PMD represent the professionals' dispositional cognitive processes and were included in the theoretical model as the control variables.

In the events of all the categories of conflict of interests (i.e. CoI-1, CoI-2, CoI-3 and CoI-4), the empirical results revealed the nonsignificant relationship between OSE and DD and the positive relationship between PMD and DD. Specifically, the high (low) propensity to morally disengage is demonstrated to be one of the dispositional cognitive predictors of the deviant (compliant) decision-making behaviour in the face of conflict of interests. The consistent positive (negative) relationship between PMD and the likelihood of deviant (compliant) decision-making behaviour has important implications for managing conflict of interests. In this regard, with particular reference to strengthening the professionals' *independence in fact*, behavioural interventions should be introduced at the stage of assessment of conflict of interests. When identifying the sources, causes, consequences and the likely impact of conflict of interests, the risk managers should take into consideration the level (high or low) of the professionals' propensity to morally disengage.

7.3 Revisiting the Research Aim

Some scholars (e.g., Nelson, 2004; Chugh, Banaji and Bazerman, 2005; Moore, Tetlock, Tanlu and Bazerman, 2006; Moore, Tanlu and Bazerman, 2010; Ayal and Gino, 2012) suggested that one of the potential solutions to accounting professionals' deviant decision-making behaviour is to facilitate effective management of conflict of interests, through increased focus on the professionals' *independence in fact*. Accordingly, the lack of understanding about how the conflict of interests operates at the level of an individual accounting professional was identified as a significant gap in the extant literature. Consequently, the aim and objectives of this study were meant to fill this gap in relation to the professionals' independence in fact.

The previous sections clarified how the answers to this study's research questions have informed the objectives of this study. Revelations against each of the objectives, eventually, serve the aim of this study (i.e. examination of the process through which conflict of interests affects accounting professionals' decision-making behaviour). Accordingly, the process through which conflict of interests affects the accounting professionals' decision-making behaviour can be summarised as follows;

Conflict of interests in professional accounting firms tends to threaten the accounting professionals' adoption of compliant decision-making behaviour. The process through which conflict of interests threatens compliant behaviour is governed by the agency of the accounting professionals' positive outcome expectancy of compliant decision-making (POE), their perceived difficulty in making compliant decisions (PD) and their judgements about the ethicality of compliant decision choices (EJ). As such, the situational cognitive predictors of the likelihood of deviant (compliant) decision-making behaviour are the low (high) POE, high (low) PD and the less (high) EJ. Moreover, POE, PD and EJ interact to affect the professionals' decision-making in the events of conflict of interests – specifically, high (low) POE leads to low (high) PD and high (low) EJ and high (low) PD leads to low (high) EJ. During this process, the conflict of interests plays biasing role towards the accounting professionals' decision-making process – the professionals' POE and PD serve as the sources of perceptual biases that have been demonstrated to be, largely, unintentional. This implies that, in the events of a conflict of interests, the deviations from compliant behaviour often occur undesirably.

With particular reference to facilitating the effective management of conflict of interests, the empirical results of this study offer some useful insights towards developing the behavioural

interventions for strengthening the accounting professionals' *independence in fact*.

7.4 Behavioural Framework to Manage Conflict of interests

The answers to research questions (through main analysis) and the other supplementary findings (through complementary analysis) have revealed some useful insights, that can be combined into a behavioural framework for facilitating the effective management of conflict of interests in professional accounting firms. The said framework draws on some behavioural interventions that can potentially serve as a complement to the existing frameworks that the firms implement for managing conflict of interests. As a possible solution to this study's research problem, the intention is to strengthen the accounting professionals' *independence in fact* – this, according to Bandura (2008), can be achieved through encouragement of the desired behavioural change, by making adjustments to the environment or by influencing personal attitudes.

As per this study's findings, the situational cognitive predictors of the likelihood of deviant decision-making behaviour (DD) are; (i) low positive outcome expectancy of compliant decision-making (POE), (ii) high perceived difficulty in making compliant decisions (PD) and (iii) less ethical judgements about the compliant decision choices (EJ). Furthermore, the dispositional cognitive predictor of DD is the high propensity to morally disengage (PMD). Moreover, the situational cognitive predictors of the likelihood of compliant decision-making behaviour (CD) are; (i) high POE, (ii) low PD and (iii) high EJ. Moreover, the dispositional cognitive predictor of CD is the low PMD. Following the insights revealed, a behavioural framework is developed to propose various interventions at the typical stages of establishing the context, assessment (i.e. identification, analysis and evaluation), treatment and the control and monitoring of conflict of interests. This framework is proposed as a complement to the accounting firms' current efforts towards managing conflict of interests. The highlights of this framework are as follows;

- 1.** When establishing the context for managing conflict of interests, the accounting firms should introduce the interventions aimed at encouraging high POE, low PD and high EJ. According to Bandura (2008), this could be achieved by making adjustments to the environment/context. For instance, the firms should improve ethical codes of conduct for their provisions regarding prioritization of adopting the compliant behaviour (Bazerman and Gino, 2012; Clements, Neill and Stovall, 2012), a strong ethics and compliance program should be implemented that

promotes a culture of compliance (Williford and Small, 2013), organizational culture should reinforce ethical conduct and must not tolerate anything that casts doubts on high ethical standards (Florio, 2012), reward systems should be aligned with the primary interest of the profession, such that the compliant decision-making is rewarded and the deviant punished (Amali, 2010; Green and Zimiles, 2013). Arguably, such adjustments are likely to work as the interventions towards reducing the instances of deviant behaviour, by encouraging high POE, low PD and high EJ.

2. When assessing (i.e. identifying, analysing and evaluating) conflict of interests, the risk managers should take into consideration the predictive powers of the professionals' cognitive processes. Specifically, Low (High) POE → DD (CD), High (Low) PD → DD (CD), Less (High) EJ → DD (CD), High (Low) POE → Low (High) PD, High (Low) POE → High (Less) EJ, High (Low) PD → Less (High) EJ and the High (Low) PMD → DD (CD). This implies that the identification of the sources, causes, consequences and the likely impact of conflict of interests is bound to be affected by the decision-makers' cognitive processes. As such, there is a need to determine the level (i.e. high versus low) of the said cognitive predictors. This could possibly be achieved through electronic decision aids (Pierce and Sweeney, 2004) that might be customized to include some checklists or measures for the levels of POE, PD, EJ and PMD of the professionals who have to make decisions. Similarly, a review of the firms' codes of conduct (Clements, Neill and Stovall, 2012), their ethics and compliance program (Williford and Small, 2013), organizational culture (Florio, 2012) and the reward systems (Green and Zimiles, 2013) can also be indicative of the probable level of professionals' POE, PD and EJ in the firms' working environment. Consultation units within the firm (Trotman, Wright and Wright, 2005) might also provide support in this regard.

3. The firms' decision to adopt particular treatment of conflict of interests should be informed by the fact that decision-making in the face of conflict of interests is largely prone to bias. Particularly, the evidence that unintentional and intentional biases threaten the compliant behaviour should inform the decisions to accept, avoid, share or reduce the conflict of interests. For instance, if the interventions at the stages of establishing the context and assessing conflict of interests (as discussed above) suggest that the likelihood of deviant decision-making is not very high or is low then the firms might want to accept or reduce the conflict of interests. Similarly, if the level of the professionals' cognitive processes indicates that the likelihood of deviant decision-making behaviour is high, then the firms might want to avoid or share the

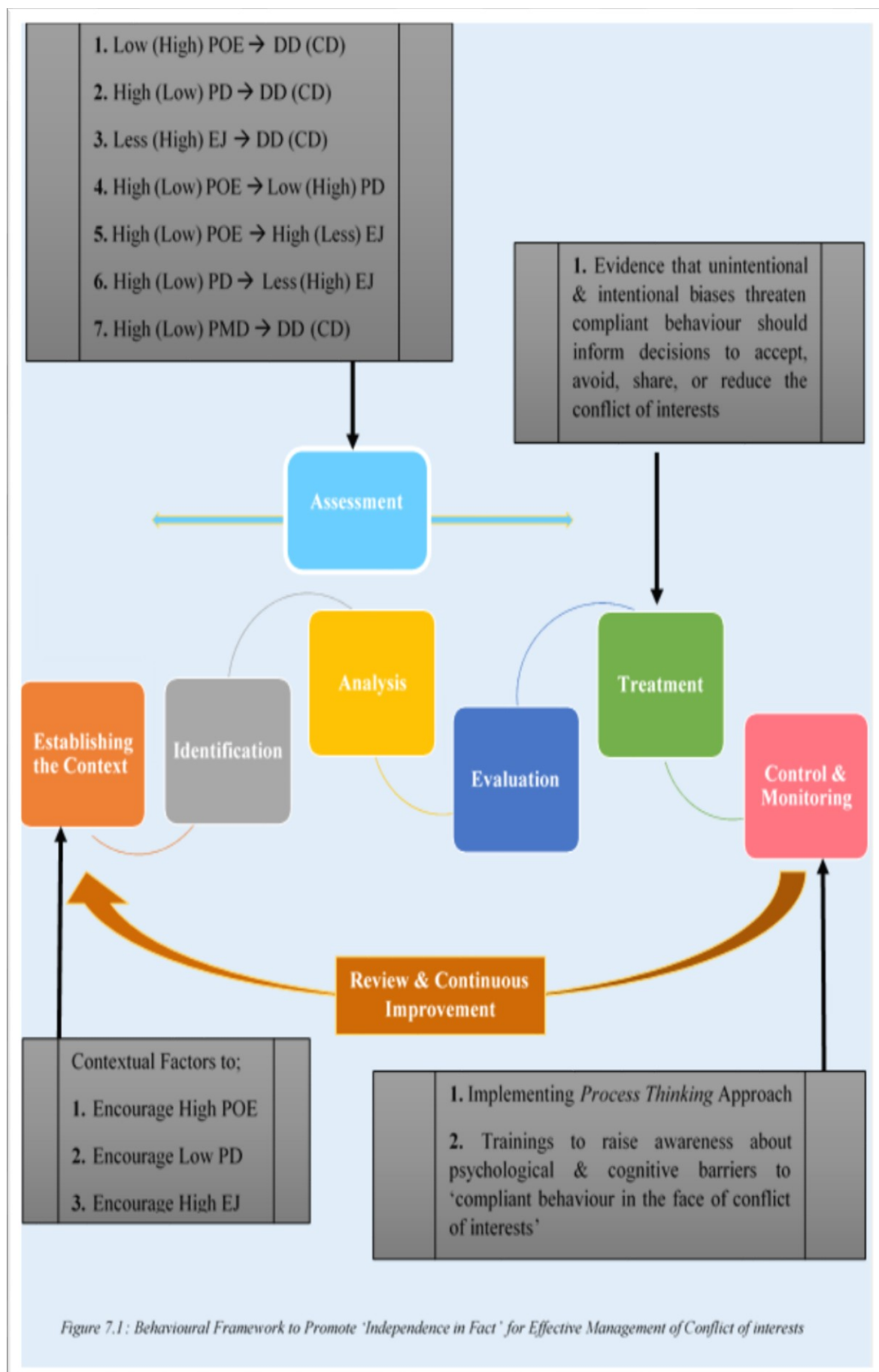
probable ramifications, of the conflict of interests, with the third parties. In this regard, the quality control reviews and inspections (Bedard, Deis, Curtis and Jenkins, 2008) and the consultation units (Trotman, Wright and Wright, 2005) might also be useful when implementing the treatment for conflict of interests.

4. Having evidenced that the professionals' low POE, high PD, low EJ and high PMD serve as the cognitive barriers to compliant decision-making and that their perceptual biases play an indispensable role in this regard, implementation of the process thinking approach (Rodgers and Gago, 2001; 2006) as one of the control measures seems promising. The proposition of this intervention follows the suggestions by Tenbrunsel (2005) that the essential steps to facilitate effective management of conflict of interests include the recognition of cognitive barriers to compliant decision-making and then finding the ways to overcome these barriers. This approach provides a constructive way of formulating biases into a successful strategy by alerting professionals of the pathway they use to arrive at a decision and also by increasing their awareness of the obstacles and shortcuts they encounter during decision-making. This could possibly be achieved through provision of trainings (Florio, 2012; Williford and Small, 2013) to raise awareness about psycho-cognitive barriers to compliant behaviour. The use of electronic decision aids (Dowling, 2009) might also help reducing the instances of biased decision-making.

5. Finally, the interventions introduced in the entire process of managing conflict of interests require review and continuous improvement. In this regard, the potential benefits of accounting consultation units (Kadous, Kennedy and Peecher, 2003; Iyer and Rama, 2004), quality control reviews (Ayers and Kaplan, 2003), peer reviews (Bedard, Deis, Curtis and Jenkins, 2008) and whistleblowing (Curtis, 2006) are well documented in the extant literature.

Due to their potential to strengthen the accounting professionals' *independence in fact*, it is expected that the adoption of the interventions proposed in this study's behavioural framework will contribute towards facilitating effective management of conflict of interests in professional accounting firms.

Figure 7.1 presents the behavioural framework that combines the aforementioned interventions into a coherent framework.



The framework is flexible enough and offers different options to the professional accounting firms and the professionals, for facilitating effective management of conflict of interests. For instance, the cognitive predictors (i.e. POE, PD, EJ and PMD) have been empirically evidenced to work in exactly the opposite manners towards the deviant and compliant decision-making behaviour – low (high) POE, high (low) PD, less (more) EJ and the high (low) PMD tend to increase (decrease) the likelihood of deviant behaviour, or alternatively, low (high) POE, high (low) PD, less (more) EJ and the high (low) PMD tend to decrease (increase) the likelihood of compliant behaviour. In relation to the accounting professionals' deviant behaviour in the events of conflict of interests, the firms might want to focus on decreasing the instances of deviant behaviour or on increasing the instances of compliant behaviour, such as, by making adjustments to the environment or by influencing their personal attitudes.

7.5 Research Contributions

The main addressees of this research are the academic researchers, individual accounting professionals, the professional accounting firms and the regulators and policy makers. The outcome of this research makes several theoretical, methodological and the empirical contributions to the existing knowledge.

7.5.1 Theoretical Contribution

In the wake of repeated calls to examine conflict of interests as a topic deserving of its own focus and from a behavioural ethics perspective (Moore, Tetlock, Tanlu and Bazerman, 2006; Moore, Tanlu and Bazerman, 2010; Ayal and Gino, 2012; Bazerman and Gino, 2012), this study has contributed to existing knowledge by viewing conflict of interests through the lens of behavioural risk management and has adopted a cognitive approach to address the research problem driving this study. In this way, this study provides a new solution for addressing the longstanding problem of accounting professionals' deviant behaviour due to the conflict of interests. It has focused on the professionals' *independence in fact*, in order to complement the existing measures that are focused on their *independence in appearance*.

The study's theoretical framework draws on the integration of social cognitive theory with the throughput model, that offers the much-needed cognitive approach to examine the process through which conflict of interests affects accounting professionals' decision-making behaviour. By allowing examination of the role of mental processes and the biases in decision-

making, this approach enables addressing the professionals' *independence in fact*. Conceptually, the Stimulus-Organism-Response paradigm (Holt et al., 2015) that underlies the theoretical framework offers a fresh perspective to address a wide range of behavioural concerns – this paradigm allows examining the cognitive processes as intervening variables (the organism dimension), between the situations involving conflict of interests as an independent variable (the stimulus dimension) and the behaviour as the dependent variable (the response dimension). Most of the studies have used Stimulus-Response paradigm (Holland, 2008) that implies using cognitive processes as the independent variable (stimulus) and the resulting behaviour as the dependent variable (response) – this paradigm does not allow a thorough examination of phenomena as complex as the conflicts of interests. Therefore, the integration of social cognitive theory and the throughput model has offered an appropriate approach for achieving the aim and objectives of this research.

The theoretical framework of this study has also contributed towards overcoming the weaknesses in social cognitive theory and those in the throughput model. Particularly, the social cognitive theory regards behaviour as an outcome of mainly the deliberative efforts and it largely ignores the impact of unconscious thought processes (Fishbein and Cappella, 2006; Fishbein, 2008; Conner, 2010). Furthermore, social cognitive models are meant to predict behaviour, but they leave much of the variance in the behaviour unexplained (Sutton, 1998). Throughput model can arguably overcome the said limitations due to its ability to explain the possibility of not only the intentional but also the unintentional biases in the decision-making process. The throughput model emphasises the central role of perceptions in various pathways to decision-making, but do not provide specific perceptual constructs. Social cognitive theory overcomes this limitation by providing the specific constructs (Bandura, 2008) representing the perceptions that are of predominant importance in decision-making behaviour. Therefore, the combination of throughput model and the social cognitive theory, as in this study, offers advantages in terms of better predictive and explanatory power of the resultant models. Nonetheless, the application of social cognitive theory and the throughput model to the professional accounting context is yet another contribution.

Following the insights revealed by this research, the behavioural framework has been developed that proposes various interventions against different stages in the management of conflict of interests. The intention is to encourage the accounting professionals' *independence in fact*, so as to facilitate effective management of conflict of interests. Importantly, the ability

to move beyond the traditional focus on *independence in appearance* to the *independence in fact* can be regarded as one of the hallmarks of this study's theoretical model, in general and of the proposed behavioural framework, in specific. Therefore, this study has added to the extant research, a new horizon for addressing the longstanding problem of accounting professionals' deviant decision-making behaviour due to the conflict of interests.

7.5.2 Contribution to Methodology Application

Unlike most of the previous studies that have utilised archival approaches to address the behavioural concerns surrounding conflict of interests, this study has adopted a quasi-experimental methodology. Owing to the novel nature of this study, the said experiment has been specially designed for the study. The final version of the experiment was settled following two rigorous pilot studies conducted with the accounting professionals and the professional accounting students. The main concerns were to ensure the possibility of data collection through web-based experiment, the content of experimental vignettes, manipulation checks and the clarity of instructions and questions included in the research instrument. Since quasi-experiments incorporate features from both the experimental and non-experimental designs (in that both the manipulated and measured variables can be brought in), these tend to maximise the internal and external validity.

Due to the inherent difficulty in converting behavioural concepts into measurable constructs, the operationalisation of this study's variables is yet another achievement. In this regard, a large number of studies were reviewed from different disciplines and the researcher ensured that the operationalised definitions reflect the intended purpose of the variables included in experimental vignettes. The model assessment procedures, as detailed in the data analysis chapter, confirmed the suitability of the so operationalised variables. The existing accounting literature lacks in the operationalisation of behavioural constructs and because of which most of the researchers prefer adopting the archival approaches.

Thus, the quasi-experiment developed and adopted in this study is quite robust and has added to the existing literature that lacks in experimental scenarios to, specifically, address the conflict of interests. This study, therefore, contributes to the application of quasi-experimental methodology to examine ethical issues in the professional accounting environment. The study's experimental vignettes can, conveniently, be used by other researchers in the field.

7.5.3 Empirical Contribution

The professionals from the Big Four accounting firms in the UK have been chosen for the empirical part of the study. Since the Big Four represent the largest international services network and offer a wide range of audit and non-audit services to the vast majority of companies, this study's findings reflect an overall picture in the professional accounting world. Most of the studies regarding conflict of interests have been conducted in the US and there is a lack of empirical evidence regarding the impact of conflict of interests on accounting professionals' decision-making within the UK firms. When most of the studies have employed accounting firms as the units of analysis, this study's attempt to use the individual professional accountants as units of analysis is yet another contribution.

Perhaps, empirical evidence for the process through which conflict of interests affects decision-making behaviour in the events of conflict of interests is unique to this study. Particularly, this study provides empirical evidence for the direct relationship of conflict of interests with the professionals' deviant decision-making behaviour and also for the indirect relationship through three types of cognitive processes, i.e. positive outcome expectancy, perceived difficulty and ethical judgement. Application of the Stimulus-Organism-Response paradigm (Holt et al., 2015) offers a fresh perspective to address these behavioural concerns – it allows examination of the cognitive processes as intervening variables (the organism dimension), between the situations involving conflict of interests as the independent variable (the stimulus dimension) and the behaviour as the dependent variable (the response dimension). Nonetheless, this study is a significant addition to the lack of studies addressing the professionals' *independence in fact*.

7.6 Practical Implications

Broadly speaking, this research has implications for existing practice since the main addressees of this research can use the new knowledge to make better decisions and to improve their policies. Since the Big Four firms are considered trendsetters in the professional accounting world and their policies also have an impact on non-Big Fours, this study's findings and the new knowledge it has generated are of concern to all the professional accounting firms alike.

The behavioural framework developed on the basis of this study's insights offers practical contributions at different levels. The broad practical contribution is its ability to complement

the existing procedures that are implemented by the firms for managing the conflict of interests.

7.6.1 General Implications for Practice

This study argued that the root causes underlying all the conflict of interests are; (i) the misaligned incentives with roots in temptation for gain, (ii) the misaligned incentives with roots in fear of loss and (iii) the workplace pressures with roots in fear of loss. Various combinations of the said root causes were considered when categorising the conflict of interests. This approach is of practical significance because the accounting professionals experience diverse categories of conflict of interests in their working environment. Most importantly, the results against different categories of conflict of interests converged to the same insights and conclusions which evidences that, in principle, all the categories of conflict of interests affect decision-making in the same way and are governed in a similar manner. Therefore, the findings of this study can be generalised across all the various categories of conflict of interests. In this regard, the immediate practical implication is that the proposed behavioural framework (its interventions) is applicable to all the conflict of interests, irrespective of their sources.

Notably, the current professional accounting practice adopts the threats and safeguards approach to address the ethical issues including that of conflict of interests. Since this research has also adopted the same approach, the practical usefulness of its findings becomes more relevant.

7.6.2 Implications for Professional Accounting Firms

The behavioural framework developed on the basis of this study's insights will enable the accounting firms to incorporate proposed behavioural interventions into the procedures they apply to manage conflict of interests. Since various interventions are proposed at the stages of the establishment of context, assessment, treatment and the control and monitoring regarding conflict of interests, the accounting firms have many factors at their disposal to work around. For instance, interventions can be integrated into different contextual factors, in an attempt to encourage the high positive outcome expectancy of compliant decision-making (POE), the low perceived difficulty in making compliant decisions (PD) and the high ethical judgements about the compliant decision choices (EJ). The said contextual factors include, but are not limited to, the procedures adopted by professional accountancy bodies, quality control reviews and inspections, codes of conduct ethics and compliance programs and the organisational culture.

By encouraging the high POE, low PD and high EJ in the work environment, the accounting firms have an opportunity to concentrate their efforts towards aligning the contextual factors with the primary interest of the profession.

Similarly, the established relationships between this study's variables must be taken into account during the assessment and treatment of conflict of interests. This is useful because the said relationships are of relevance to the identification of the sources and causes of the conflict of interests, their likely impact and of their consequences. Furthermore, decisions about the treatment of conflict of interests should be informed by this study's finding that the professionals' intentional and unintentional biases threaten compliant behaviour. Moreover, specialised training can be used as an effective behavioural intervention at the control stage, to educate the accounting professionals about how the conflict of interests interferes with their decision-making behaviour.

7.6.3 Implications for Accounting Professionals

Since professional accountants experience conflict of interests, the findings and insights of this research could also help them in various ways. For instance, as emphasised in the proposed behavioural framework, the implementation of the process thinking approach (Rodgers and Gago, 2001; 2006) can work as a useful control measure. This approach can potentially provide the professionals up with a constructive way of formulating the biases into a successful strategy. The process thinking (that is about the interaction of information, perceptions, judgements and the decision choices) alerts them of the pathway they use to arrive at a decision and also increases their awareness of the obstacles and shortcuts they encounter during decision-making.

The findings that low (high) POE, high (low) PD, less (high) EJ and high (low) PMD are the psycho-cognitive barriers (facilitators) to compliant decision-making behaviour, have important practical implications for the professionals. For instance, the conscious awareness that they have a higher positive outcome expectancy, in the event of a conflict of interests, can possibly help them reflect on their likely behaviour and to make the required adjustments accordingly.

7.6.4 Implications for Policy Makers

Despite the increase in accounting regulations, especially in response to the numerous

corporate scandals in the last two decades, the instances of deviant behaviour due to conflict of interests are still prevalent. The main possible reasons for this, as argued in the literature, are the focus on *independence in appearance* than on that *in fact* and the lack of consideration to decision-makers' intentional and unintentional biases. Accordingly, increasing the regulations to strengthen the professionals' *independence in appearance* does not guarantee the elimination of conflict of interests (Cain, Loewenstein and Moore, 2005; Moore, Tetlock, Tanlu and Bazerman, 2006; Clements, Neill and Stovall, 2012).

As a response to the above-mentioned limitations in existing regulations, the findings of this study invite the attention of the regulators and policy makers who might consider revisions to their existing policies, by taking into consideration the much-needed behavioural insights. The proposed behavioural framework can be used as a guide to understanding the nature of the interventions that are particularly useful in addressing the professionals' *independence in fact*. The regulators and policy makers may propose similar frameworks to facilitate effective management of conflict of interests, or might even enforce the adoption of behavioural risk management frameworks to address the conflict of interests in professional accounting firms.

7.6.5 Implications for other Professions

Other professions that are known to face the ramifications of conflict of interests (such as law, engineering, medicine and architecture) can also avail the advantages of this study's insights. Specifically, the proposed behavioural framework can be considered as a guiding tool to address the issues surrounding conflict of interests.

Overall, it is expected that the adoption of behavioural interventions proposed in the study's behavioural framework will facilitate effective management of conflict of interests, due to its likely usefulness towards addressing the accounting professionals' *independence in fact*.

7.7 Limitations and Directions for Future Research

In addition to the contributions of this study, there are some limitations that need to be addressed in future research. Because this study is the work of a single researcher, it was constrained by the limited time and financial resources. The specific limitations and the corresponding opportunities for future research are as follows;

7.7.1 Limitations and Directions Regarding Theoretical Model

This study's theoretical model draws on the combination of social cognitive theory (Bandura, 1986) and the throughput model of decision-making (Rodgers, 1997). This integration provides conceptual enrichment to the model, suitable enough to serve this study's aim in relation to filling the research gap. However, despite its robustness, there still is a margin to incorporate some more variables, including the *attitude* and *situational propensity to morally disengage*. Future research might attempt to examine the moderating impact of the said variables. Moreover, there also is an opportunity to, empirically, examine how the situational cognitive processes (i.e. positive outcome expectancy, perceived difficulty and ethical judgement) are affected by the environmental factors other than the conflict of interests itself.

Furthermore, this study categorised conflict of interests in terms of the threats that serve as its possible sources. The root causes, as argued in this study, underlying all the conflict of interests are either the misaligned incentives with roots in temptation for gain and/or fear of loss and the workplace pressures with roots in fear of loss. Various combinations of the said root causes were considered when categorising conflict of interests on the basis of specific threats to compliant decision-making. The results against different categories of conflict of interests converged to the same insights and conclusions, which evidenced that, in principle, all the categories of conflict of interests affect decision-making in the same way and are governed in a similar manner – however, there still is a need for more empirical evidence regarding the diverse categories of conflict of interests. In this regard, the conflict of interests might be categorised considering one particular threat and also the different combinations of threats.

7.7.2 Limitations and Directions Regarding Demographics

Due to the reluctance of accounting professionals to participate in the studies related to ethical dilemmas, this study adopted convenience sampling technique. Because all the accounting professionals are involved, directly or indirectly, in making the decisions that demand professionals to act in the best interest of the public, ideally the participants in my research should have been diverse in terms of their rank, experience, age and gender. This study's 105 participants, however, are limited in terms of the diversity in demographic characteristics. For instance, 79% are the partners, which implies higher rank in their respective firm; 79% have more than 20 years of work experience, which implies higher work experience; 82% of the participants are more than 40 years old and the 81% are male. Various steps were taken to address these limitations. For instance, statistical multi-group analysis for this study's empirical data evidenced that the hypothesised relationships (predicted signs) do not differ

significantly across the male and female participants.

Kish-Gephart, Harrison and Trevino (2010) conducted meta-analytic evidence about the sources of unethical decisions and found that when examining unethical behaviour, demographic variables become inconsequential once the other situational cognitive factors are accounted for. This study's theoretical model also accounts for situational cognitive factors and it can be argued that their effect dominates. Moreover, since the majority of this study's hypotheses have been supported, it can be further argued that the demographics did not have an impact, significant enough, to disprove the literature-enriched hypothesised relationships. However, generalisations of this study's findings must still be made with caution. Nonetheless, future studies are needed to replicate this study with a diverse sample.

7.7.3 Limitations and Directions Regarding Methodology

Although this study is methodologically innovative, it still has some limitations that need to be addressed in future research. The study's variables representing cognitive processes and behaviour have been measured as the self-reported perceptions and intentions. Likert items and scales have been used to record the data. The practice of self-reported measures of constructs is fairly justified and acceptable in the behaviour related studies – it must, however, be remembered that since there is a difference between reality and perception of reality, self-reported data cannot be substituted for absolute truth (Churchland, 1979). The philosophical paradigm underlying this study is the postpositivism which supports using self-reported measures of data and believes that only imperfect evidence can be established, such that the knowledge so gained will be conjectural. Quite possibly, due to the behavioural nature of this study, *social desirability bias* might have induced the respondents to answer the questions in a manner that is viewed favourably by the researcher (such as over-reporting on good behaviour or under-reporting on undesirable behaviour). This tendency might have affected the validity of some of the data.

In order to tackle the above-mentioned possible limitations, dispositional cognitive processes (i.e. occupational self-efficacy and propensity to morally disengage) were measured using the already existing scales with adequate psychometric properties. These scales demonstrate excellent goodness-of-fit indexes and acceptable scale reliability, convergent validity and discriminant validity. The situational cognitive processes (i.e. positive outcome expectancy, perceived difficulty and ethical judgement), the deviant and the compliant decision-making

behaviours were measured using single Likert items that were informed by the literature from different disciplines. Since the questions were presented as inviting the participants' perceptions, expectations and the likelihood of adopting the behaviour, it can be argued that social desirability bias was not much of an issue in the case of this study. Despite the efforts to minimise the influence of social bias, future researchers might repeat this study in the same context. Nevertheless, positivists should attempt replicating this study using more direct measures of data.

Moreover, all the four vignettes in this study experiment are based on the hypothetical situations. The said vignettes have been derived from *Ethical Dilemmas Case Studies* developed by the *UK and Ireland's Consultative Committee of Accountancy Bodies*. Importantly, all the case studies are followed by clear guidance on the compliant versus deviant decision in given dilemma situations and the same have been included in this study's vignettes. Thus, the decision on what constitutes compliant or deviant behaviour in any given situation is not susceptible to researcher's bias. However, some might not agree with the employment of hypothetical situations. While it is highly doubtful if this study can be replicated in real settings of the accounting professionals, future research should explore this possibility.

This study has collected empirical data using the web-based experiments which invite criticism that they have weaker experimental controls than traditional laboratory ones. For instance, the participants might not take the experiment seriously and that they might make wrong claims about their demographics. However, some researchers (Reips, 1996; Hartshome, 2007) disregard such criticisms and assert that the laboratory experiments can also be affected by the same problems. Schoeffler et al. (2013) compared laboratory and web-based results of a particular experiment and did not find any significant differences between the results. The robustness of this study's experiment and the professionalism of the research participants is expected to overcome many limitations associated with web-based experiments. Future research might, however, repeat this study in laboratory settings to assess if the results differ any significantly.

7.7.4 Limitations and Directions Regarding PLS Path Modelling

This study has, justifiably, adopted PLS path analysis which should not be mistaken for the more advanced and full-fledged PLS path modelling. Recently, debate on the usefulness and application of PLS path modelling/structural equation modelling has gained considerable hype.

A small number of researchers (Goodhue, Thompson and Lewis, 2013; McIntosh, Edwards and Antonakis, 2014; Rönkkö et al., 2016) has been critical of PLS. In response, Sarstedt et al. (2016), Hair et al. (2017) and Nitzl and Chin (2017) have refuted many arguments the critics have made. While the extent to which the criticisms on path modelling are readily applicable to path analysis is not completely clear, it is necessary to be considerate of the current debate because both the techniques share same PLS algorithm. Accordingly, although this research has justified the choice of path analysis, it must be borne in mind that limitations regarding PLS-based techniques might emerge as the very debate on path modelling progresses. Future researchers need to be mindful of the two main concerns, i.e. the main distinction between path analysis and path modelling and the current debate on PLS path modelling. Their choice for adoption of the PLS-based techniques, be it path analysis or path modelling, must be informed by the recent critical debate. Particularly, the choice of PLS adoption should move beyond the traditional claims and be informed by the more plausible recent claims such as the suitability of PLS-based techniques for estimating only the composite models.

Future researchers have an opportunity to add to the ongoing debate on PLS path modelling, perhaps through conducting rigorous simulation studies. Further comparison studies about the application of variance-based PLS and covariance-based SEM to the composite versus common factor models are required. Moreover, future research might want to focus on providing more analytical support for the claim that the estimation of both the measurement and structural models, using PLS-based techniques, is consistent and unbiased. The need to address these concerns is duly supported by the proponents of PLS path modelling (e.g., Sarstedt et al., 2016 and Hair et al., 2017).

7.7.5 Limitations and Directions Regarding Research Context

The Big Four professional accounting firms (i.e. Deloitte, Ernst & Young, KPMG and PricewaterhouseCoopers) in the UK have been chosen for the empirical part of the study. While there are many compelling reasons that make the Big Four in the UK an appropriate research context, the findings might be readily applicable only to other similar contexts. Perhaps, there is an excellent opportunity for future researchers to conduct the same study in the contexts that differ from the UK in terms of cultural background, the size of the firms and the regulatory environment. A comparative study with a developing country sounds a good research opportunity to pursue. It is expected that while the results in different contexts may not vary, there might be some countervailing factors in other contexts that tend to affect the evidenced

relationships between the variables considered in this study.

7.7.6 Opportunity to Improve the Proposed Behavioural Framework

Having discussed that the behavioural framework developed on the basis of this study's insights will enable professional accounting firms to incorporate some behavioural interventions into the methods they use to manage conflict of interests, there are several opportunities for future research in this regard.

Various interventions are proposed at the stages of the establishment of context, assessment (i.e. identification, analysis and evaluation), treatment and the control and monitoring regarding conflict of interests. Future research should attempt to suggest more interventions. Similarly, future research is needed to determine how exactly the firms can practically make use of the proposed behavioural interventions. For instance, all the stages towards managing conflict of interests should focus on making adjustments to other environmental factors and existing practices such that high POE, low PD, high EJ and low PMD is encouraged – how exactly to do this is a question mark and this concern needs to be empirically investigated in future research. In this regard, the prospective researchers might want to focus on one stage, towards managing the conflict of interests, at a time.

7.8 Epilogue

This study provided empirical evidence for the process through which conflict of interests affects the accounting professionals' decision-making behaviour. The main findings were that the relationship between the conflict of interests and the accounting professionals' likelihood of deviant and compliant decision-making behaviour is, in part, governed by the agency of the professionals' situational cognitive processes (i.e. their positive outcome expectancy of compliant decision-making, their perceived difficulty in making compliant decisions and their judgements about the ethicality of compliant decision choices). Moreover, the said situational cognitive processes were found to affect decision-making behaviour directly and also indirectly through the significant interrelationships among these. Furthermore, the professionals' propensity to morally disengage (i.e. a dispositional cognitive process) was also evidenced to affect their likelihood of decision-making behaviour. Additionally, decision-making in the face of conflict of interests is prone to the perceptual biases that interfere with decision-making through different pathways.

Since all the insights revealed by this study's empirical results are directly relevant to the professionals' state of mind and is about their actual objectivity in the events of conflict of interests, the behavioural framework developed on the basis of these insights will help strengthen the accounting professionals' *independence in fact*. Arguably (e.g., Moore, Tanlu and Bazerman, 2010; Bazerman and Gino, 2012; Williford and Small, 2013), the enhancement of *independence in fact* will facilitate effective management of conflict of interests in the professional accounting firms.

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Appendix 1: Interview Questions

Q1. Could you please describe the audit engagement process followed in your firm?

- What factors are considered when accepting a client?
- What is the composition of audit engagement teams?
- Could you please brief me on the decision-making process during engagements?

Q2. What type of rewards and pressures/incentives and disincentives do you think auditors might receive within the environment of audit firms they are working in?

Q3. Do you think auditor's performance and decision-making can be affected in case of specific rewards which are not aligned with the primary interest of audit profession i.e. to act in the best interest of public? How? Examples.

Q4. Do you think the workplace pressures contradicting with primary interest can impact an auditor's performance and decision-making? How? Examples.

Q5. Is conflict of interests a negative phenomenon as generally presumed, or are these a natural phenomenon that needs effective management?

Q6. What regulations, measures and/or frameworks does your firm adopt to manage conflict of interests?

- External
- Internal
- How effective are those existing measures in practice?

Q7. Have you ever personally experienced or observed a situation that involved a conflict of interests? Would you mind sharing that experience?

- How do you think the conflict of interests can affect your mindset and perceptions?
Example.

Q8. What do you think could be the reason(s) that might lead a professional auditor to not do complete justice to their primary responsibility of serving in the best interest of public (i.e. provision of appropriate audit opinion), despite his/her very good intentions?

Appendix 2: Research Instrument*

INTRODUCTION

The entire study comprises of two brief phases and takes about 15 minutes to complete. You can either complete it in one go or, alternatively, do a part of the study now and return later to continue from where you last left it. Please click 'Next' to start. Happy Participation!

PHASE-1

In this phase, you will be requested to first provide information on some demographics (which will be used anonymously during data analysis) and then to respond to some measures related to behaviour.

Demographics

i. Your Rank(s) in the Firm

- ☐ Management Board
☐ Partner
☐ Director
☐ Statutory Auditor
☐ Other, please specify _____

ii. Gender ☐ Male ☐ Female

iii. Years of

Work ☐ 1 – 5 ☐ 5 – 10 ☐ 10 -15 ☐ 15 - 20 ☐ 20 – 30 ☐ 30 - 40 ☐ 40 - 50 ☐ More than 50

Experience

iv. Age (in years) ☐ 20 - 30 ☐ 30 – 40 ☐ 40 - 50 ☐ 50 - 60 ☐ More than 60

Please indicate how true is the following about you?

| Particulars | Not at all True 1 | 2 | 3 | 4 | Completely True 5 |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| OSE-1. I can remain calm when facing difficulties in my job because I can rely on my abilities | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| OSE-2. When I am confronted with a problem in my job, | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

| | | | | | |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| I can usually find several solutions | | | | | |
| OSE-3. Whatever comes my way in my job, I can usually handle it | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| OSE-4. My past experiences in my job have prepared me well for my occupational future | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| OSE-5. I meet the goals that I set for myself in my job | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| OSE-6. I feel prepared for most of the demands in my job | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Please indicate your level of agreement/disagreement with the following;

| Particulars | Strongly Disagree 1 | 2 | 3 | 4 | Strongly Agree 5 |
|--|------------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| PMD-1. It is okay to spread rumours to defend those you care about | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| PMD-2. Taking something without the owner's permission is okay as long as you're just borrowing it | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| PMD-3. Considering the ways people grossly misrepresent themselves, it's hardly a sin to inflate your own credentials a bit | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| PMD-4. People shouldn't be held accountable for doing questionable things when they were just doing what an authority | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

| | | | | | |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| figure told them to do | | | | | |
| PMD-5. People can't be blamed for doing things that are technically wrong when all their friends are doing it too | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| PMD-6. Taking personal credit for ideas that were not your own is no big deal | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| PMD-7. Some people have to be treated roughly because they lack feelings that can be hurt | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| PMD-8. People who get mistreated have usually done something to bring it on themselves | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

PHASE-2

In this phase, you will be presented with four very simple and brief vignettes comprising of different situations. You will be requested to respond to the measures included in each of these.

VIGNETTE 1

"You are a junior accountant and currently a part of a team providing audit and non-audit services to your firm's client that deals in home improvement and renovation materials. During the engagement, you told the client's controller that you are remodelling an old house. The controller likes you and had a load of needed materials delivered to your house, billing you at a 70% discount — saving you quite a lot above the normal cash discount. You are very happy to have the materials, which you otherwise would not have been able to afford on your insufficient salary. Your colleagues and seniors have always found you a very professional and vigilant employee who never ever lets personal affairs affect the work related responsibilities".

Keeping in mind the situation (scenario and role/rank assigned to you), please respond to the following by indicating your choice from the drop-down options;

| | | | | | |
|--|---|--|--------------------------------------|-----------------------------------|--|
| PD-1. Given the situation, what is the level of | <input type="radio"/> Very Difficult (5) | <input type="radio"/> Difficult (4) | <input type="radio"/> Neutral (3) | <input type="radio"/> Easy (2) | <input type="radio"/> Very Easy (1) |
|--|---|--|--------------------------------------|-----------------------------------|--|

| | | | | | |
|---|---|---|---|-------------------------------------|---|
| difficulty in refusing to accept the offered 70% discount? | | | | | |
| POE-1. Given the situation, I expect the overall positive outcomes of declining the offered 70% discount to outweigh its overall negative outcomes | <input type="radio"/> Strongly Disagree (1) | <input type="radio"/> Disagree (2) | <input type="radio"/> Neither Agree nor Disagree (3) | <input type="radio"/> Agree (4) | <input type="radio"/> Strongly Agree (5) |
| DD-1. Given the situation, I might be willing to accept the offered 70% discount | <input type="radio"/> Extremely Unlikely (1) | <input type="radio"/> Unlikely (2) | <input type="radio"/> Neutral (3) | <input type="radio"/> Likely (4) | <input type="radio"/> Extremely Likely (5) |
| CD-1. Given the situation, I will be able to decline the offered 70% discount and will avail only the normal cash discount | <input type="radio"/> Extremely Unlikely (1) | <input type="radio"/> Unlikely (2) | <input type="radio"/> Neutral (3) | <input type="radio"/> Likely (4) | <input type="radio"/> Extremely Likely (5) |
| EJ-1. Regardless of whichever decision (3 or 4 above) is more likely to take place in a given situation, which according to you is ethically more appropriate? | <input type="radio"/> Acceptance of offered 70% discount (1) | <input type="radio"/> Both can be appropriate if principles of professional ethics are not compromised (2) | <input type="radio"/> Declining the offered 70% discount (3) | | |

VIGNETTE 2

"During an assurance engagement, your immediate supervisor is on sick leave and you are due to go on parental leave in 3 days' time. Your firm is facing exceptionally challenging times and is not able to engage any other accountant on this assignment. You have been told by the top management that, before you go on leave, you must complete some complicated reconciliation work. Given the complexity of work, the deadline suggested (i.e. 2 days) appears very unrealistic. You feel that you are not sufficiently experienced to complete the work alone and that you need additional supervision to complete it to the required standard. The top management appears unable to offer the necessary support. Furthermore, neither the deadline can be extended, nor can you postpone your leave. You fear losing your own and your firm's reputation, should you refuse to perform the assigned task. You

feel very intimidated by the top management and feel pressure to do whatever you can in your firm's challenging times".

Keeping in mind the situation (scenario and role/rank assigned to you), please respond to the following by indicating your choice from the drop-down options;

| | | | | | |
|---|---|---|---|-------------------------------------|---|
| PD-2. Given the situation, what is the level of difficulty in refusing to perform the task? | <input type="radio"/> Very Difficult (5) | <input type="radio"/> Difficult (4) | <input type="radio"/> Neutral (3) | <input type="radio"/> Easy (4) | <input type="radio"/> Very Easy (1) |
| POE-2. Given the situation, I expect the overall positive outcomes of refusing to perform the task to outweigh its overall negative outcomes | <input type="radio"/> Strongly Disagree (1) | <input type="radio"/> Disagree (2) | <input type="radio"/> Neither Agree nor Disagree (3) | <input type="radio"/> Agree (4) | <input type="radio"/> Strongly Agree (5) |
| DD-2. Given the situation, I will agree to work alone and will try my level best to complete the task assigned to me | <input type="radio"/> Extremely Unlikely (1) | <input type="radio"/> Unlikely (2) | <input type="radio"/> Neutral (3) | <input type="radio"/> Likely (4) | <input type="radio"/> Extremely Likely (5) |
| CD-2. Given the situation, I will refuse to perform the task assigned to me | <input type="radio"/> Extremely Unlikely (1) | <input type="radio"/> Unlikely (2) | <input type="radio"/> Neutral (3) | <input type="radio"/> Likely (4) | <input type="radio"/> Extremely Likely (5) |
| EJ-2. Regardless of whichever decision (3 or 4 above) is more likely to take place in a given situation, which according to you is ethically more appropriate? | <input type="radio"/> Agreeing to work alone (1) | <input type="radio"/> Both can be appropriate if principles of professional ethics are not compromised (2) | <input type="radio"/> Refusing to perform the task (3) | | |

VIGNETTE 3

"You are a junior accountant charged with evaluation of internal control system of your firm's client. You evaluated and reported the system as very effective and also received bonus and appreciations for your hard work. Now during the audit of the same client, you have discovered that internal control system is not as effective as you evaluated since there are some minor weaknesses that you overlooked. You are concerned that nullifying your

previous evaluation will be discrediting and will affect your expected promotion and pay rise right after the audit. You are completely sure that no one else from the audit team is going to find out about those minor weaknesses in the internal control system of the client".

Keeping in mind the situation (scenario and role/rank assigned to you), please respond to the following by indicating your choice from the drop-down options;

| | | | | | |
|--|--|--|---|-------------------------------------|---|
| PD-3. Given the situation, what is the level of difficulty in accepting your negligence in initial evaluation of the internal control system of the client? | <input type="radio"/> Very Difficult (5) | <input type="radio"/> Difficult (4) | <input type="radio"/> Neutral (3) | <input type="radio"/> Easy (2) | <input type="radio"/> Very Easy (1) |
| POE-3. Given the situation, I expect the overall positive outcomes of disclosing my negligence in initial evaluation to outweigh its overall negative outcomes | <input type="radio"/> Strongly Disagree (1) | <input type="radio"/> Disagree (2) | <input type="radio"/> Neither Agree nor Disagree (3) | <input type="radio"/> Agree (4) | <input type="radio"/> Strongly Agree (5) |
| DD-3. Keeping in mind the bonus & appreciations received and the opportunity of promotion and pay rise, I might not be able to disclose the minor weaknesses in internal control system of the client | <input type="radio"/> Extremely Unlikely (1) | <input type="radio"/> Unlikely (2) | <input type="radio"/> Neutral (3) | <input type="radio"/> Likely (4) | <input type="radio"/> Extremely Likely (5) |
| CD-3. No matter how discrediting it is, I will admit negligence in my initial evaluation of internal control system of the client | <input type="radio"/> Extremely Unlikely (1) | <input type="radio"/> Unlikely (2) | <input type="radio"/> Neutral (3) | <input type="radio"/> Likely (4) | <input type="radio"/> Extremely Likely (5) |
| EJ-3. Regardless of whichever decision (3 or 4 above) is more likely to take place in a given situation, which | <input type="radio"/> Admitting Minor weaknesses might be ignored (1) | <input type="radio"/> Both can be appropriate if principles of professional ethics are not compromised | <input type="radio"/> Admitting negligence (3) | | |

| | | | | | |
|---|--|-----|--|--|--|
| according to you is ethically more appropriate? | | (2) | | | |
|---|--|-----|--|--|--|

VIGNETTE 4

"You are a partner in a firm of accountants engaged in preparing year end accounts and tax returns for one of your biggest, friendliest and the trustworthy client companies. During the engagement, you become aware that staff purchases of goods manufactured by the company are authorised by production managers and then processed outside the accounting system. The client company uses the proceeds from these sales to fund its Christmas party. The practice is in place since three years but your firm failed to find this in the previous years while providing same services to the client. You are concerned that omitting the income from staff sales will result in the financial statements and returns to the tax authority being misleading. The client is willing to correctly record the sales for the current year but they requested you to ignore the improper accounting in previous years as they were not aware of the proper treatment. You and the other higher authorities in your firm also believe that highlighting the mistakes from previous years will not only affect good terms with the client but will also reveal your firm's negligence in discovering the issue in earlier years which, in turn, will badly affect the firm's reputation. You are also considerate of the high proportion of fees generated through services provided to the client".

Keeping in mind the situation (scenario and role/rank assigned to you), please respond to the following by indicating your choice from the drop-down options;

| | | | | | |
|--|---|--|---|-------------------------------------|---|
| PD-4. Given the situation, what is the level of difficulty in disclosing the past undisclosed income to tax authorities? | <input type="radio"/> Very Difficult (5) | <input type="radio"/> Difficult (4) | <input type="radio"/> Neutral (3) | <input type="radio"/> Easy (2) | <input type="radio"/> Very Easy (1) |
| POE-4. Given the situation, I expect the overall positive outcomes of disclosing the past undisclosed income to tax authorities to outweigh its overall negative outcomes | <input type="radio"/> Strongly Disagree (1) | <input type="radio"/> Disagree (2) | <input type="radio"/> Neither Agree nor Disagree (3) | <input type="radio"/> Agree (4) | <input type="radio"/> Strongly Agree (5) |
| DD-4. Given the situation, I will dissociate myself from any involvement with client's financial statements but it might not be | <input type="radio"/> Extremely Unlikely (1) | <input type="radio"/> Unlikely (2) | <input type="radio"/> Neutral (3) | <input type="radio"/> Likely (4) | <input type="radio"/> Extremely Likely (5) |

| | | | | | |
|---|--|--|---|----------------------------------|--|
| practical to report the matter to tax authorities | | | | | |
| CD-4. No matter how my co-partners react, I will report the matter to tax authorities | <input type="radio"/> Extremely Unlikely (1) | <input type="radio"/> Unlikely (2) | <input type="radio"/> Neutral (3) | <input type="radio"/> Likely (4) | <input type="radio"/> Extremely Likely (5) |
| EJ-4. Regardless of whichever decision (3 or 4 above) is more likely to take place in a given situation, which according to you is ethically more appropriate? | <input type="radio"/> Not reporting to tax authority (1) | <input type="radio"/> Both can be appropriate if principles of professional ethics are not compromised (2) | <input type="radio"/> Reporting matter to tax authority (3) | | |

Comments, if any _____

DONE! Please click 'Submit the Responses' at the bottom right corner

*The layout of the original web-based research instrument is exactly as has been detailed in the methodology chapter. The original layout (web-based) is far more compact and attractive than it appears here (on paper). For the sake of clarification, the measures in experimental vignettes have been labelled (e.g. PD-1, POE-2 etc.) - the original web-based research instrument did not label any measure. Furthermore, the instrument also mentions scoring/item point against the given levels (e.g. strongly disagree, extremely unlikely etc.) to choose from – the points were not mentioned in the original web-based instrument.

Appendix 3: Screenshots of the Models Tested in SmartPLS 3 (with interaction terms included)

