The influence of task conflict on the relationship between contextual ambidextrous learning and practice group performance

Master of Science thesis by:

S.K. Harteveld

261689

Thesis supervisor: Associate Professor Dr Frank Wijen

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Executive summary

Ambidexterity research studies within organizations the simultaneous pursuance of incompatible objectives, the related trade-off(s) and the organizational tensions that as a consequence emerge. This thesis has researched contextual ambidextrous learning within practice groups of professional service firms. Contextual ambidextrous learning concerns the ability of a practice group to both use and refine existing knowledge while also simultaneously creating new knowledge to overcome knowledge deficiencies or absences identified within the execution of the work. This thesis has considered exploratory -and exploitative learning as the trade-off of interest.

An ambidextrous organization mitigates the tensions that result out of the learning trade-off by striking a balance between exploratory -and exploitative learning. Literature suggests that organizations that learn in a contextual ambidextrous manner outperform organizations that predominantly focus on exploitative or explorative learning. This thesis examines whether this relationship holds as well for practice groups that operate within a professional service firm business context. Additionally, this thesis researches task conflict which is defined as a conflict of ideas in a group and disagreement about the content and issues of the task and includes differences in viewpoints, ideas, and opinions. Prior research has been inconsistent as both beneficial and detrimental direct effects of task conflict on organizational performance have been theorized. This thesis studies, alternatively, the moderating effect of task conflict on the relationship between contextual ambidextrous learning and practice group performance. In view of the inconsistent prior research results, this study proposes two hypotheses; one proposing that task conflict strengthens the relationship between contextual ambidextrous learning and practice group performance and one arguing that task conflict weakens the relationship. The hypotheses have been tested by performing a quantitative research.

The results suggest that a positive relationship exist between contextual ambidextrous learning and practice group performance. Despite expectations, this thesis has not been able to distill a significant moderating effect of task conflict on the relationship between contextual ambidextrous learning and practice group performance.

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Chapter 1 Introduction

Nowadays the pace of change within industries is accelerating every year. Even those industries that in the previous century were labelled as "old economy", and not rapidly changing, are experiencing significant changes in their environments. This phenomenon applies as well to professional service firms (PSF's) such as law firms. For instance, a "2017" law firm industry report argues that the pace of change of the law profession is accelerating, competition increases as other types of legal service providers enter the market, commoditization of legal work is a permanent trend going forward, and clients are increasingly insourcing legal services instead of making use traditional law firms (Clay et al., 2017).

Gibson & Birkinshaw (2004) argue that the long term existence of an organization is subject to the ability to adapt and align to changing environments. In order to adapt to these changing conditions extant literature has proposed two views: the punctuated equilibrium view and the ambidextrous view. Both views acknowledge the importance of, and distinguish between, exploitation of the existing business versus exploration to new business. However, the views differ with respect to when to exploit and when to explore. The punctuated equilibrium theory argues that organizations should sequentially exploit and explore whereas the ambidextrous view reasons that organizations should simultaneously engage in both exploitation and exploration (Gupta et al., 2006). This thesis studies the ambidextrous view, also referred to as ambidexterity.

Ambidexterity, generically speaking, refers to the ability to do two different things at the same time. With respect to companies, it concerns the organizational capacity to address simultaneously two organizationally incompatible objectives equally well (Birkinshaw & Gupta, 2013). However, the simultaneous pursuance of incompatible objectives will create trade-offs within organizations. Several trade-offs have been proposed within the ambidexterity literature such as for instance initiation vs implementation (Duncan, 1976), incremental vs discontinuous innovation (Tushman & O'Reilly, 1996), alignment & adaptation (Gibson & Birkinshaw, 2004), exploration & exploitation (Jansen et al., 2005).

Ambidexterity has been studied in a wide variety of literatures, such as technological innovation, organizational adaptation, strategic management, and organizational design, and organizational learning (Raisch & Birkinshaw, 2008). As ambidexterity is essentially is about existing knowledge (exploitation) and new knowledge (exploration) (Gupta et al., 2006), facilitating knowledge creation and innovation (He et al., 2004), this research approaches ambidexterity from an organizational learning perspective and follows March (1991) who argues that learning is fundamental to ambidexterity. From this perspective, ambidextrous learning is defined as the ability to both use and refine existing knowledge while also simultaneously creating new knowledge to overcome knowledge deficiencies or absences identified within the execution of the work (Turner et al., 2013).

This thesis addresses the trade-off between exploratory learning and exploitative learning. Exploratory learning concerns consciously moving away from current operational processes, routines and knowledge and obtaining new knowledge and information. As such, it enables companies to go beyond current product-market knowledge and facilitates experimentation (March, 1991). Exploitative learning is defined as a learning activity that utilizes existing knowledge (Lee et al., 2012). An exploitative learning activity takes place within the neighbourhood of the current product-market knowledge base and facilitates refinement and extension of existing competencies, technologies, and paradigms (Wei, 2013).

March (1991) argues that exploitative learning and explorative learning concern activities that are fundamentally incompatible which, as a consequence, create organizational tensions. Failure to manage these tensions effectively will cause for an imbalance between exploitative learning and explorative learning. Organizations that are able to balance explorative -and exploitative learning will outperform organizations that trade off one activity for the other. Hence, an appropriate balance between exploitation and exploration must be found to gain superior performance and to become ambidextrous (March, 1991; Cao et al. 2009).

Extant research argues that the organizational tension related to the imbalance can be mitigated by two approaches: the structural approach (Tushman & O'Reilly, 1996), or

the contextual approach (Gibson & Birkinshaw, 2004). The former arguing that exploitative learning and explorative learning should be structurally separated from each other within an organisation, whereas the latter approach reasons that within organizations a context should be created that enables a single operational unit to learn in an ambidextrous manner. This thesis links to contextual ambidexterity research and studies ambidextrous learning within a single organizational unit, which in this thesis is referred to as "contextual ambidextrous learning". As such this thesis builds on past research that addressed contextual ambidexterity.

Ambidexterity research has studied the antecedents, consequences and moderators of ambidexterity (Lavie et al., 2010). This thesis is, firstly, concerned with studying the relationship between contextual ambidextrous learning and organizational performance. Although prior research has studied this relationship in several business contexts (e.g. technology development, product innovation or senior-management teams), and found positive relationships (see for instance the meta-analysis performed by Junni et al., 2013), it surprisingly disregarded to great extend the business context on which this research is focussed on, namely on professional service firms. A professional service firm (PSF) is defined as an organization comprising primarily of professionals that facilitate economic and commercial exchange by providing advice to businesses (Greenwood et al., 2006). Furthermore, ambidexterity has been studied at various levels of analysis generating research at the individual, group, organizational, inter-organizational and industry levels (Lavie et al., 2010). This thesis, within a PSF context, researches ambidextrous learning at law firm practice group level.

Law firm practice groups are for several reasons interesting and appropriate for ambidexterity research. Firstly, law firms commercialize knowledge. As such, this thesis assumes learning to be imperative for performance and future organizational existence. Secondly, law firm practice groups tend to be predominantly focussed on their current business (Clay et al., 2017); hence focussed on exploitative learning. Thirdly, law firm practice groups are organizational units that are responsible for maintaining existing business and obtaining new business and, therefore, should be engaged to both exploratory -and exploitative learning. In view of these arguments, this thesis addresses

the performance implications of contextual ambidextrous learning within law firm practice groups and hence questions if ambidextrous law firm practice groups outperform those that are either focused on exploiting the existing business or exploring for new business (Raisch et al., 2009).

Secondly, this thesis addresses the call of Junni et al. (2013) whom invite scholars to explore contingencies that influence the relationship between ambidexterity and firm performance. In response to their call, this thesis examines the moderating influence of task conflict on the relationship between contextual ambidextrous learning and practice group performance. Task conflict pertains to the conflict of ideas in a group and disagreement about the content and issues of the task and includes differences in viewpoints, ideas, and opinions (Jehn, 1994). The relationship between task conflict and innovation has received significant academic attention. Extant literature has proposed several arguments why task conflict should enhance innovation. For instance, task conflict should stimulate the exploration for alternatives and learning (O'Neill et al., 2013). Furthermore, it has been expected to foster divergent thinking (Fahr et al, 2010) and should encourage to question underlying assumptions (De Dreu & West, 2001). Additionally, task conflict should facilitate the development of highly creative insights that are needed for innovation (Fahr et al., 2010).

Despite the above stated compelling arguments, empirical results are not unanimously confirming the existence of a positive relationship between task conflict and innovation performance. For instance, in contrast to positive relationship observed by Jehn (1995), the empirical results of De Dreu (2003) suggest that task conflict is detrimental to innovation performance. In 2006 De Dreu extended the latter finding by arguing that a moderate level of task conflict relates positively to innovation, whereas low and high levels of task conflict detriment innovation. However, contrary to the findings of De Dreu (2003 & 2006), De Clerqc et al. (2009) researched the moderating influence of task conflict on the relationship between innovation strategy and firm performance and found that high levels of task conflict more positively influenced the relationship than low levels of task conflict. Understanding the nature of task conflict was further complicated by the results of a meta-analysis performed by O'Neill et al. (2013) who

did not find any correlation between task conflict and innovation. Hence, with regards to organizational performance, the academic findings on the effects of task conflict are varying from detrimental to beneficial. Considering the variance of academic findings, this research examines task conflict. Prior research on task conflict has been predominantly focussed on the direct effects of task conflict. Alternatively, and in view of the inconclusive past empirical results, this research studies the moderating effect of task conflict.

To the best knowledge, there has not been empirical research to date on the effects of contextual ambidextrous learning on practice group performance within a PSF business context. In addition, extant ambidexterity literature lacks understanding on the existence of moderating effects such as task conflict. Lastly, prior research studied predominantly the direct effects of task conflict and disregarded a possible moderating influence.

This thesis aims to address the above identified gabs and adds to the literature in two important ways. First, by proposing and empirically confirming that practice groups that learn in a contextual ambidextrous manner outperform other practice groups that predominantly focus on exploitative –or explorative learning. Although ambidexterity research is burgeoning, current understanding of contextual ambidextrous at the level of a practice group is very limited. The practice group level perspective, thus, extends the learning based argument of contextual ambidextrous learning from the level of an organization to the level of a practice group. Secondly, this study contributes to an emerging body of literature on the moderators of ambidexterity. Specifically, this thesis examines if task conflict relates to both contextual ambidextrous learning and practice group performance. Hence, this research extends the academic understanding on task conflict. The conceptual model stated on the next page depicts the identified research gab

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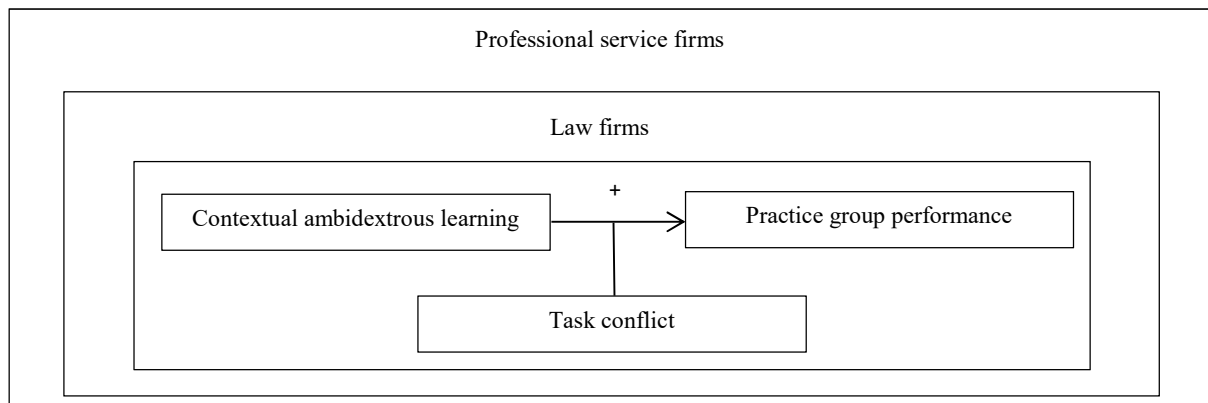
This research addresses this gab by the studying the following main research question and two related sub questions:

Main research question

- o To what extent does task conflict effect the relationship between contextual ambidextrous learning and performance of practices groups within professional service firms?

Sub-questions

- o What is the impact of contextual ambidextrous learning on the performance of practice groups in professional service firms?
- o To what extent does task conflict effect the relationship between contextual ambidextrous learning and performance of practice groups in professional service firms?

This thesis is structured as follows. In the next chapter a literature review of ambidexterity and task conflict is be presented. This chapter includes as well a section which is concerned with theory development and hypothesis. Chapter III details the research methodology of this thesis. The fourth chapter presents the research findings. Finally, the last chapter will outline the discussion, limitations, conclusions and recommendations.

Chapter 2   Theoretical background

The main research constructs of this thesis are contextual ambidextrous learning, task conflict and performance of practice groups within professional service firms (PSF's). This chapter provides a literature overview of these constructs and is structured as follows. First a general introduction of ambidexterity will be provided. The next paragraph outlines contextual ambidextrous learning. The following paragraph provides an overview of existing scholarly works on task conflict. This chapter will be concluded by two paragraphs that derive research hypothesis out of existing literature related to ambidexterity and task conflict.

2.1   Ambidexterity

Ambidexterity, generically speaking, refers to the ability to do two things at the same time. With respect to organizations, it refers to the performance of two incompatible activities simultaneously (Birkinshaw & Gupta, 2013) and enables to efficiently take advantage of existing market opportunities while creating and innovating to meet the challenges of the future markets (Gibson & Birkinshaw, 2004).

The long term existence of an organization is subject to the ability to adapt and align to changing environments (Gibson & Birkinshaw, 2004). Ambidexterity has been adopted by academics as an alternative view to the punctuated equilibrium theory. The punctuated equilibrium theory argues that firms should sequentially align and adapt its organization to, respectively, the current and changing environment. As such, a long cycle of exploitation driven activities is followed by short burst of exploration. In contrast, ambidexterity involves engaging simultaneously in both exploitation and exploration (Gupta et al., 2006). In relation to the contrasting natures a debate among scholars exist concerning the question if the punctuated equilibrium or ambidexterity is the more preferred perspective towards adaptation and alignment and enduring success of an organization (Gupta et al., 2008). The appropriateness may be function of environmental dynamics, suggesting that the punctuated equilibrium theory is the viable option when environmental dynamism and pace of change are low (Gupta et al., 2008). Moreover, research performed by Jansen and colleagues (2006) has brought forward that ambidexterity becomes more viable when environmental dynamism increases. This

finding becomes even more prevalent while considering that the relatively stable economic environments which have been experienced during the previous century are nowadays less applicable as organizations are increasingly experiencing environmental dynamism caused by globalized markets, rapid technological change, shortening product life cycles and increasing aggressiveness of competitors (Volberda, 1996). Taking these arguments into account, ambidexterity has gained credibility as an alternative to punctuated equilibrium theory.

An ambidextrous organization is attempting to perform activities simultaneously that are related to incompatible dualities. Examples of such dualities are initiation and implementation, incremental and discontinuous innovation alignment and adaptation, efficiency and duality, integration and responsiveness and exploitation and exploration (Birkinshaw et al. 2013). The most researched trade off concerns the competing constructs exploitation and exploration (Simsek et al., 2009). Exploitation pertains to the refinement & extension of existing knowledge, competencies, technologies and paradigms (March, 1991) and is associated with implementing incremental change (Tushman et al., 1996), exploitation of existing competencies (Lubatkin et al., 2006), efficiency, control, and mature technologies and markets (O'Reilly et. al, 2013). Exploration involves the discovery and search for new knowledge, opportunities and alternatives (March, 1991; Cao et al., 2009) and is related to revolutionary change & radical innovation (Tushman et al., 1996), flexibility, autonomy, and experimentation, and new technologies and markets (O'Reilly et. al, 2013).

Exploitation and exploration activities have been researched in various contexts such as technological innovation, organizational adaptation, strategic management, and organizational design, and organizational learning (Raisch & Birkinshaw, 2008). Technological innovation, in relation to ambidexterity, refers to the distinction between incremental innovation and radical innovation and the organizational tensions that are associated with the simultaneous performance of the two innovation types. Organizational adaptation relates to the assumption that the long term success of an organization depends on the right balance between continuity and change where successful companies not only emphasize exploitation and alignment during periods of

evolutionary change but also embrace radical organizational transformation and exploration in periods of revolutionary change. Ambidexterity approached from a strategic management perspective, views ambidexterity as two distinct strategic actions that either relate to the current strategy or to strategic activities that are performed outside the current strategy and are undertaken to explore for new strategic options. This thesis approaches ambidexterity from an organizational learning perspective which is referred to as ambidextrous learning. Ambidextrous learning can be considered as a prerequisite for the realization of some sort of ambidexterity as it relates to the core of ambidexterity. As such, it fundaments other ambidexterity research related to technological innovation, organizational adaptation, and strategic management domains. In the next paragraph a review of extant literature related to ambidextrous learning will be presented which will be referred to as contextual ambidextrous learning.

2.2   Contextual ambidextrous learning

Ambidexterity, within the organizational learning research domain, is referred to as ambidextrous learning. Ambidextrous learning is known as two-sided learning or learning in two different ways (Kang et al., 2009). It considers exploitative -and exploratory learning as the incompatible duality. Turner and colleagues (2013) define ambidextrous learning as the ability to both use and refine existing knowledge (exploitative learning) while also simultaneously creating new knowledge (explorative learning) to overcome knowledge deficiencies or absences identified within the execution of the work. Explorative and exploitative learning are aligned to other well-known organizational learning modes such as, respectively, double-loop versus single-loop learning (Argyris & Schön, 1978), generative versus adaptive learning (Senge, 1990), local search versus long jump (Levinthal, 1997), and product innovation versus production-oriented learning (McKee, 1992). Considering these associated dualities, exploration and exploitation are organizational learning routines which pull in opposite directions (Benner and Tushman (2002); Smith and Tushman (2005)).

March (1991) argues that exploitative -and exploratory learning are two fundamentally different learning activities. Exploratory learning concerns consciously moving away from current operational processes, routines and product market knowledge and

facilitates search, risk taking, discovery which in turn create the conditions for obtaining of new knowledge, information and innovation (March, 1991). It induces the pursuit of learning outside a firm's current knowledge domains (Swart et al., 2007). This type of learning is gained through processes of concerted variation, planned experimentation and play (Baum et al., 2000). According to Auh et al. (2005), organizations involved in exploratory learning are able to absorb, integrate and process new knowledge. As such, it may deepen the understanding of future trends of technology, market competition, and potential demand (Cao et al., 2009) potentially resulting in new technical skills, market expertise, or external relationships (Lavie & Rosenkopf, 2006; Smith & Tushman, 2005).

Exploitative learning is defined as a learning activity that utilizes existing knowledge (Lee et al., 2012). It refers to learning obtained via local search, experimental refinement, and reconsideration of existing routines (Baum et al., 2000). An exploitative learning activity takes places within the neighborhood of the current product-market knowledge base and facilitates refinement, deepening and extension of existing knowledge competencies, technologies, and paradigms (Wei, 2013; Swart et al., 2007) and results in efficiency, increasing productivity, control, certainty, and variance reduction (O'Reilly & Tushman, 2008).

Ambiguity, with respect to ambidextrous learning, exists within the ambidexterity research domain. Central to this ambiguity concerns the question whether exploitation and exploration should be distinguished by the differences in the type of learning or by the absence of learning (Raisch & Birkinshaw, 2008). There exists consensus among scholars that exploration is by nature a learning construct. The ambiguity is reflected in conceptual differences related to exploitation. Is exploitation a learning construct or is exploitation characterized by the absence of learning and the mere use of existing knowledge without any incremental change while used? Gupta et al. (2006) argue that it is more logical to differentiate between exploitation and exploration by focusing on the type of learning rather than on absence or presence of learning. Following the reasoning of Lavie and colleagues (2010), exploitation is associated with building on the organization's existing knowledge base whereas exploration shifts away from its

current knowledge. Concurring with both views, this thesis assumes that ambidexterity concerns the simultaneous refinement and creation of respectively existing knowledge and new knowledge. As such, organizations need to renew their existing knowledge base by exploitative learning and simultaneously exploring new knowledge basis through explorative learning (He et al., 2004).

Considering the simultaneous pursuit of exploitation and exploration, March (1991) argues that organizations should sufficiently engage to exploitative learning to ensure its current viability and, at the same time, devote enough energy to explorative learning to ensure its future viability. However, as a consequence, organizations are confronted with tradeoffs that result in tensions within an organization. These tensions are caused by resource allocation constraints, organizational inertia and multiple opposing desirable organizational outcomes (Lavie et al., 2010). For instance, organizations have to decide on how to allocate scarce resources to support their exploitation and exploration activities (Lavie et al., 2010). By allocation of resources short term gains may be obtained by exploitation, yet this may sacrifice long term performance if the organization fails to explore and adapt to the changing requirements of the market (Turner et al., 2013). Furthermore, in view of a different time horizon, the tradeoff also implicates choosing between stability and certainty or adaptability and uncertainty which respectively relate to exploitation and exploration (Lavie et al., 2010). Consequentially, organizations have a bias against explorative learning in favor for exploitative learning (Piao et al., 2015) and therefore support leveraging currently available knowledge to address immediate needs (March, 1991).

With respect to the relationship between explorative and exploitative learning two conflicting conceptualizations are posited within extant literature; the combined view and the balanced view. At the heart of the distinct conceptualizations lies the question whether explorative and exploitative learning are mutually complementary or antithetical; albeit orthogonal or continuously related (Gupta et al., 2006)? The combined view suggests that ambidexterity can be conceptualized as a construct that consist out of two orthogonal (independent) activities. This view suggests that companies can simultaneously engage in high levels of both exploitation and

exploration driven activities where exploitation does not limit exploration (or vice versa) (Gupta et al, 2006). In contrast to the combined view, the balance view considers the relationship between exploitation and exploration as continuous by nature and is subject to a fundamental assumption that both exploitation and exploration compete in a zero-sum game for organizational resources (March, 1991). As such, they should be viewed as two ends of a single continuum (Gupta et al., 2006) where trade-offs between exploitation and exploration exist and therefore must be managed accordingly (March, 1991; Cao et al., 2009).

The combined and balanced views can be both appropriate conceptualizations of ambidexterity. The choice for adopting either the combined or balanced view, however, is depending on the organizational context (Cao et al., 2009). The combined view is preferred when abundant resources are available that allow for an extensive and simultaneous focus on both exploitative -and exploratory learning. In line with this finding, Gupta et al. (2006) conclude that the combined view is more applicable to bigger sized companies. The balance view is more appropriate when a limited amount of resources are available. Under these kinds of scarce circumstances, exploitative -and exploratory learning are mutually exclusive and interact as two communicating vessels. Moreover, the balance view is desirable when it concerns ambidexterity of an individual, business unit or small company. This thesis adopts the balanced view and assumes that the balance view is especially prevalent as PSF practice groups are discrete small sized organizational units that operate within a bigger organizational context where explorative and exploitative learning are performed within the same practice group and time is most dominant and limiting scarce resource.

As stated earlier ambidexterity concerns the management of inherent tradeoffs. Failure to manage these tradeoffs effectively will cause an imbalance which in turn results in either a success or a failure trap (Levinthal et al., 1993). A success trap concerns too much exploitative learning at the expense explorative learning. Organizations that focus too much on exploitative learning run the risk to become obsolete (Levinthal et al., 1993). This trap is caused by the fact that the returns of exploitative learning are more certain, closer in time and in place than the returns obtained explorative learning.

Especially if exploitative learning is profitable, companies are motivated to continue with, and expand, these types of activities which in turn drive out explorative learning activities, however at the expense of organizational inertia (Lavie and Rosenkopf, 2006). Hence, the success trap tends to drive out explorative learning (O'Reilly & Tushman, 2013). A failure trap is defined as too much explorative learning at the expense of exploitation driven learning activities. Organizations that solely focus on explorative learning tend to neglect improvement and adaptation of existing routines (March, 1991) and limit themselves to benefit from economies of scale (Guttel et al., 2009). The failure trap is caused by endless cycle of failure related to experimentation, change, and innovation; failure that leads to search and change which leads to failure which leads to more search, and so on. As a consequence, explorative learning drives out exploitative learning and results reduced efficiency (Levinthal et al., 1993). March (1991) stresses, considering the eventual undesired emergence of success or failure traps, the necessity for a balance between exploitative -and exploratory learning. This will enable an organization to become ambidextrous (March, 1991; Cao et al. 2009). Hence, the central quest of becoming an ambidextrous company is to determine how to overcome the inevitable organizational tensions that are caused by simultaneously engaging in exploitative learning and explorative learning.

Scholars have proposed several ways to mitigate these tensions of which two are most frequently referred to in academic publications: the structural approach (Tushman & O'Reilly, 1996), or the contextual approach (Gibson & Birkinshaw, 2004). The structural approach prescribes that the incompatible activities "explorative learning and exploitative learning" can be effectively carried out in a simultaneous manner if the two learning types are structurally separated from one another within the organization (Tushman et al., 1996). As such, structural ambidexterity involves autonomous / monodextrous units (e.g. two companies within a holding or two divisions within a company) focused either on explorative or exploitative learning activities where in each monodextrous unit different competencies, systems, incentives, processes, and cultures are created that are required for the performance of either explorative learning or exploitative learning. The distinct and separated units are loosely coupled, held together by a common strategic intent and guided by an overarching set of values (O'Reilly et

al., 2013). Although the structural approach offers a plausible solution to the balancing problem for certain organizational levels, it remains suboptimal proposition as the balancing act moves up within the organization and eventually arrives at an hierarchal organizational level where within a single organizational unit the balancing act must be performed (Lavie et al., 2010). The contextual approach addresses this shortcoming.

Contextual ambidexterity is defined as the behavioral capacity to simultaneously demonstrate alignment and adaptability across an entire business unit. It concerns the ability to simultaneously pursue explorative and exploitative learning which can be achieved by building a set of processes or systems that enable and encourage individuals to make their own judgments about how to divide their time between conflicting demands of alignment and adaptability (Gibson & Birkinshaw, 2004). In turn, new knowledge is obtained, new combinatory mechanisms are configured and value-creating ideas are streamlined (Gibson et al., 2004; Kang et al., 2009).

The contextual ambidexterity approach is quite different from the structural approach as, instead of implementing dual structures, ambidextrous learning is derived out of the establishment of the wright organizational context referred to as a contextual organizational context. A contextual organizational context originates out certain organizational features that are characterized by performance (stretch and discipline) and social attributes (support and trust). This approach stipulates that both exploitation and exploration driven learning activities are performed within a single organizational unit or individual (Gibson et al., 2004). Performing these contradicting learning activities within a single organizational unit simultaneously will cause for task inconsistencies which eventually will result in goal conflicts & organization tensions (Lavie et al., 2010) such as internal competition for resources, conflicts, contradictions and inconsistencies (Simsek et al., 2009). Gibson and colleagues (2004) argue that the contextual approach facilitates the management of these tensions. As such, the contextual approach helps organizations to avoid potential coordination problems or costs when pursuing exploitation and exploration simultaneously (Kang et al., 2009).

In sum, considering the fact that organizations are increasingly experiencing environmental change, ambidexterity is viewed as a viable alternative to the punctuated

equilibrium theory. The long term existence of an organization is subject to the ability to adapt and align to changing environments. This organizational ability is known as ambidexterity. An ambidextrous organization performs simultaneously incompatible dualities. The most researched duality concerns exploitation and exploration. Exploitation refers to the refinement & extension of existing knowledge while exploration involves the discovery and search for new knowledge, opportunities and alternatives. From an organization learning perspective, exploitative -and exploratory learning are considered to be the distinct and incompatible learning activities. An organization that is able to perform both learning types simultaneously is considered ambidextrous. However, prior to becoming ambidextrous, organizations have to balance its focus on both learning types and manage the tensions that will originate out of this dual focus. Failure to manage these tensions will result in a success trap (too much focus on exploitative learning) or a failure trap (too much focus on explorative learning) which are self-reinforcing mechanisms. This thesis adopts the balanced view on ambidexterity as (1) the unit of analysis (practice groups within PSF's) are discrete small sized organizational units where practice groups are expected to be engaged to both exploitative –and explorative learning and (2) time is most dominant and limiting scarce resource. Hence, considering that explorative and exploitative learning are assumed to be performed within the same single organizational unit, this thesis adopts the contextual approach on ambidextrous learning.

2.3 Task conflict

Conflict is broadly defined as perceived incompatibilities (Boulding, 1963) or perceptions by the parties involved that they hold discrepant views or have interpersonal incompatibilities (Jehn, 1996; De Dreu & Gelfand, 2008). As such, conflict concerns a process in which one party perceives that its interest are being opposed or negatively affected by another party (Wall & Callister, 1995).

Although within the academic world the fundamental discussions whether conflict within organizations impacts performance are ceased for decades and consensus among scholars exist, the direction of the relationship between conflict and performance remains subject of academic debate.

Initially conflict was generally considered stressful, disruptive, negative and something to be expelled out of organizations. However, after decades of conflict research, more and more academic findings suggested that conflict carries as well the potential to create positive effects on organizational performance. These positive findings resulted in a shift of central paradigm during the 1980s. From that point on, the academic perspective changed and scholars adopted a more optimistic view on conflict, though still acknowledging the possible negative effects of conflict as well.

Conflict became a two faced academic phenomenon; conflict was considered to create both negative and positive effects on organizational performance. Wall and Nolan (1986) argued, positively, that conflict may result in better decisions as it encourages the airing of different ideas and stimulates examining alternative solutions that otherwise might be too quickly accepted or rejected. On contrary, Schweiger et al. (1986) argued, negatively, that conflict may weaken the ability of a group to work together which in turn limits or even detriments decision quality. Furthermore, Schweiger et al. (1986) claim that if conflict escalates to the point that alternatives are no longer socially accepted, conflict can reduce decision outcome quality significantly. Hence, conflict can on the one hand be functional and beneficial to organizations. However, on the other hand, it can also cause for counterproductive and dysfunctional effects.

These contradicting pieces of empirical evidence raised the interest of academics who wanted to understand when positive or negative effects would result out of conflict. Initially organizational conflict was considered to be a one dimensional research construct. However, in view of extant research findings, which indicate the presence of both positive and negative consequences of conflict, scholars concluded that as long as conflict remained conceptualized as one dimensional construct, it would be impossible to thoroughly understand and explain what causes for these positive and negative effects. They claimed that this conundrum is directly attributable to an inadequate conceptualization of conflict and therefore proposed that conflict had to be conceptualized as a multidimensional construct (Amason & Schweiger, 1994; Jehn, 1994).

Nowadays academics view conflict as a multidimensional concept that consists of three dimensions: (1) the relationship conflict dimension, (2) the process conflict dimension, and (3) the task conflict dimension (Jehn, 1995). Relationship conflict involves disagreements among group members about interpersonal issues, such as personality differences or differences in norms and values (De Wit et al., 2012). Process conflict concerns disputes over how a task will be divided among team members (Jehn et al., 2001). Scholars agree that both relationship and process conflict are detrimental to organizational performance (Jehn, 1995).

A task conflict pertains to the conflict of ideas in the group and disagreement about the content, issues, and outcomes of the task being performed and includes differences in viewpoints, ideas, and opinions (Jehn, 1994). This type of conflict is related to the distribution of resources, procedures and policies, and judgments and interpretation of facts (De Dreu, 2006). As such, and in contrast to process and relationship conflicts, task conflicts are conflicts directly related to the task at hand and are therefore much less associated with negative emotions than process and relationship conflicts and include fewer personal connotations (Greer & Jehn, 2007). Consequently task conflicts tend to be less negative, or even positive, to performance (De Wit et al., 2012).

Extant literature has theorized that task conflict stimulates idea generation for a number of reasons. Firstly, differences of opinion stimulate to explore alternatives and brings new information to light (O'Neill et al., 2013). It fosters divergent thinking (Fahr et al, 2010) and increases the individual ability to see contrasting perspectives on an issue. In turn it helps to challenge long-held assumptions (Amason & Schweiger, 1994) and prevents a premature movement to consensus (De Dreu & West, 2001). Secondly, task conflict diminishes the likelihood that employees exchange redundant information when discussing problems related to, for instance, the organization (Hollenbeck, Colquitt, Ilgen, LePine & Hedlund, 1998). Thirdly, task conflict motivates employees to discover acceptable new solutions to problems (De Dreu, 2006). In turn, task conflict instills the willingness of individuals to scrutinize issues related to tasks and evaluate deeply task relevant information (Jehn, 1995). In view of these positive consequences, the relationship between task conflict and innovation has received significant academic

attention. Task conflict has been expected to support the development of highly creative insights that are needed for innovation (De Dreu, 2006) and to spur innovation performance (Fahr et al., 2010). As such, scholars theorized that task conflict positively relates to innovation.

Despite the above mentioned positive theorized traits of task conflict, academic empirical findings did not result into consensus with regards to the relationship between task conflict and performance. For instance, task conflict is viewed as positive and performance enhancing (e.g. Jehn, 1995) whereas others argue that task conflict is detrimental to performance (e.g. De Dreu et al., 2003). Furthermore, understanding the nature of task conflict has been further complicated when considering two recent meta-analytical studies that could not find any significant statistical correlation between task conflict and innovation (Hülsheger et al., 2009; O'Neill et al., 2013). Additionally, in contrast to the meta-analytical results of De Dreu et al. (2003), De Wit et al. (2012) performed the most extensive meta-analysis and did not find a strong negative association between task conflict and performance. In view of these inconclusive research results, extant research has proposed two alternative perspectives that could explain the inconsistent findings on the relationship between task conflict and performance: the information processing perspective and the contingency perspective (De Dreu et al., 2003; De Wit et al., 2012).

The information processing perspective is defined as the degree to which information, ideas, or cognitive processes are being shared among the group members (Hinsz, Tindale & Vollrath, 1997). The information processing perspective considers task conflict to be exclusively detrimental to performance. This negative relationship can be explained by means of the interrelated concepts cognitive load and the spillover effect. Cognitive load is considered a central aspect of the information processing perspective. The performance, and fulfillment, of any task requires cognitive processing of information. The cognitive load is the amount of cognitive information processing capacity a task requires (Bradley et al., 2015). Carnevale & Probst (1998) explain this relationship by arguing that as task conflict intensifies and arousal increases, cognitive load increases, which interferes with cognitive flexibility and creative thinking. Hence,

when conflict intensifies, the cognitive system does not operate effectively anymore, information processing is restrained and performance is expected to suffer (Dreu & Weingart, 2003). The spillover effect occurs when task conflict escalates to point that it transforms into a relationship conflict. When this happens the emotionality increases within a group which in turn distracts members from the task at hand (Jehn & Bendersky, 2003) which even further increases cognitive loads. Extant research confirms that task conflict and relationship conflict are associated. For instance, Simons & Peterson (2000) have reviewed several performed studies and argue that most studies report high correlations between task conflict and relational conflict. In relation to the spillover effect, they claim that behavior connected task conflict often is misattributed and interpreted as if it is related to relationship conflict. Furthermore, during task conflict, conflicting parties can apply emotional laden tactics to convince the other of their preferred perspective.

The contingency perspective argues that the complex nature of task conflict can only be understood by considering the context in which it emerges (O'Neill et al., 2013). The same has been argued by De Wit and colleagues (2012) who conclude that the degree to which task conflict contributes to, or detracts from, performance depends on the presence of other contextual factors. Scholars have researched several contingencies that have been found to positively impact the relationship between task conflict and performance.

The moderating influence of relationship conflict on the relation between task conflict and performance has received extended scholarly attention. Extant research findings have portrayed relationship conflict as a very decisive contingency. If task conflict is accompanied by relational conflict, then negative implications of relational conflict may prevent the emergence of any positive effects of task conflict (Amason & Sapienza, 1997). The meta-analytical results of De Wit et al. (2012) indicate that those teams which do experience task conflict but do not experience the relationship conflict are performing better than those teams that experience both task –and relationship conflict. Shaw et al. (2011) found that, if low relationship conflict is present within a group, the relationship between task conflict and performance functions as an inverted U

suggesting that performance is maximized at levels of moderate task conflict. However, in line the expectation of Amason & Sapienza (1997), if there is a lot of relationship conflict, then the relationship between task conflicts and performance is negative and linear.

The complexity contingency entails task conflicts that are caused by the complexity related to the task at hand. This contingency captures the extent that successful task accomplishment requires the performance of several steps and if the steps are clearly defined. Hence, a complex task requires the performance of several steps that are not clearly defined (Bradley et al., 2015). The assumption underlying the complexity contingency states that task conflict is beneficial for the successful completion of complex tasks because teams must engage in rigorous debate and critical analysis in order to generate ideas to solve difficult problems (Dreu & Weingart, 2003). Task complexity has been operationalized by scholars in several ways. For instance, Jehn (1995) distinguished non routine task from routine tasks representing respectively complex and less complex tasks. De Wit et al. (2012) research task types as a contingency and have made a distinction between, on the one hand, creative & decision making tasks (to be considered complex task types) and on the other hand to production & project tasks (to be considered less complex task types). O'Neill et al. (2013) singularize complex decision making tasks from less complex decision making tasks. The findings of these three studies have shown that task conflict emerging within a complexity context impacts performance positively. Hence, the task type determines the inherent complexity which in turn determines the potential positive effect of task conflict on performance.

Two interrelated contingencies, which are closely tight to task complexity as well, are task importance and the hierarchical position of organizational teams. Research related to these contingencies has indicated that task conflict within a high stakes context impacts performance positively. The reasoning explaining the complexity contingency can also be applied in order to understand the task importance contingency. Bradley et al. (2015) argue that the more important a task, the more likely team decision-making processes will be detailed, difficult, and ambiguous, similar to complex tasks. Task

importance is often connected to the hierarchical position of organizational teams. This contingency reasons that as the hierarchical position of a team increases, the importance of a task execution also increases, which consequently should impact performance positively when task conflicts are emerging. Previous research findings indicate that task conflict within top management teams (De Wit et al., 2012), top management teams of family firms (Ensley, 2006), and board of directors (Minichilli, Zattoni & Zona, 2009) enhances performance.

In sum, conflict as an organizational phenomenon carries the potential to create both positive and negative effects on organizational performance. In order to explain the inconsistent relationship between conflict and organizational performance, scholars concluded that conflict should be conceptualized multi-dimensionally and proposed to capture conflict by introducing three dimensions: the relationship, process and task conflict dimension. Scholars agree that relationship and process conflicts detriment organizational performance. Task conflict pertains to the conflict of ideas in the group and disagreement about the content, issues, and outcomes of the task being performed and includes differences in viewpoints, ideas, and opinions. In comparison with process and relationship conflict, task conflict tends to be less negative or even positive to performance. Task conflict stimulates idea generation and, as such, has been expected to positively relate to innovation. Despite the positive traits of task conflict, the nature of task conflict appears to be complex and not straight forward as extant research has reported both positive and negative relationships between this conflict type and performance. In view of these inconclusive research results, extant research has proposed two alternative perspectives that could explain the inconsistent findings: the information processing perspective and the contingency perspective. The information processing perspective argues that cognitive load required for task performance is positively related to task conflict and negatively related to performance. The contingency perspective states that task conflict is able to enhance performance if it emerges within a certain organizational context. Researched contingencies include the presence of relationship conflict, task complexity, task importance, and the hierarchical organizational layer in which task conflict emerges.

2.4 Contextual ambidextrous learning and organizational performance

Ambidextrous learning is a conceptualization within the research domain of ambidexterity and concerns the ability to both use and refine existing knowledge while simultaneously creating new knowledge to overcome knowledge deficiencies or absences identified within the execution of the work (Turner et al., 2013).

Lubatkin et al. (2006) argue that exploitative -and exploratory learning are contradictory knowledge processes that underpin the attainment of ambidexterity. As such, ambidextrous learning distinguishes the simultaneous performance of two opposite forms of learning: explorative and exploitative learning. Exploratory learning involves the creation of new knowledge outside current operational processes, routines and product market knowledge by means of concerted variation, planned experimentation, play (Baum et al., 2000), and divergent thinking (Jansen et al., 2006). This type of learning induces organizational behaviors related to search, risk taking and discovery. Literature has suggested that these kinds of behaviors are mandatory requirements for obtaining of new knowledge, information and innovation (March, 1991). As such, it may facilitate the in-depth understanding of emerging market trends (Cao et al., 2009) and possibly results in new skills, market expertise or external relationships (Lavie & Rosenkopf, 2006; Smith & Tushman, 2005). In contrast to explorative learning, exploitative learning is a learning type that obtains incremental knowledge by utilizing existing knowledge within current operational processes, routines and product market knowledge by means of local search, experimental refinement, and reconsideration of existing routines (Baum et al., 2000). This type of learning facilitates refinement, deepening and extension of existing knowledge competencies, technologies, and paradigms (Wei, 2013; Swart et al., 2007) and results in efficiency, increasing productivity, control, certainty, and variance reduction (O'Reilly & Tushman, 2008).

Firms, in order to remain competitive on the short and long run, need to renew their available knowledge base by exploitative learning and simultaneously exploring new knowledge basis through explorative learning (He et al., 2004; March, 1991). However, as stated earlier, explorative and exploitative learning are opposite constructs. Exploitative learning activities are geared toward improving performance in the short

term whereas exploratory learning is geared toward improving performance in the long term (Gibson et al., 2004). As a consequence of the opposing nature, tradeoffs related to resource-allocation constraints, organizational inertia, and desirable organizational outcomes emerge (Lavie, et al., 2010). In turn, explorative and exploitative learning compete in a zero-sum over scarce resources (March, 1991). If a practice group focuses on one learning type at the expense of the other, problems and tensions will inevitably arise. These problems and tensions will eventually result in success -or failure traps which in turn detriments performance on, respectively, the long or the short term (Auh & Menguc, 2005). In view of these traps, practice groups need to strike a balance between exploratory -and exploitative learning.

Scholars theorized a positive relationship between balanced ambidextrous learning and organizational performance (March, 1991; O'Reilly & Tushman, 1996). This relationship has been empirically tested and validated by scholars. He & Wong (2004) presented evidence consistent with this hypothesis by proving that a balance between explorative and exploitative learning is positively related to sales growth whereas a relative imbalance, caused by either a success trap or failure trap, detriments performance. Additionally, Sarkees & Hulland (2009) found that organizations that strike a balance between efficiency and innovation – related to respectively exploitative -and exploratory learning – outperform other organizations that are exclusively focused on either efficiency or innovation. They found a positive relationship between an ambidextrous balance and performance parameters such as revenue, profit, customer satisfaction and new product introductions. Furthermore, the research results of Lee & Huang (2012) indicate that superior performance of organizations is dependent on the ability to balance between exploratory -and exploitative learning. Lastly, Kim et al. (2011) researched innovation performance in terms of innovation rates (number of patents) and impact (number of citations relative to number of patents). They argue that if a company wants to enhance innovative performance then it should strike a balance between exploitative learning and explorative learning.

The relationship between obtaining an ambidextrous balance and performance has been studied in relation to different organizational sizes. This research angle has been of

interest of scholars as, on the one hand, organizational inertia increases with size, leading to productivity along existing trajectories while restricting search for new opportunities (Hannan & Freeman, 1984). However, on the other hand, larger organizations are expected to have access to more slack resources which in turn facilitates the simultaneous performance of exploitation and exploration driven activities (Jansen et al., 2006). Practice groups within PSF's, with respect to organizational size and resource constraints, bear resemblance with small & medium sized enterprises (SME's), business units and teams. Lubatkin et al. (2006) studied ambidexterity within SME's by means of adopting a learning perspective. Their main research question concerns the question if ambidextrous learning within SME's positively relates to organizational performance. Their findings indicate that ambidextrous SME's show higher levels of performance. Cao et al. (2009) extended the findings of Lubatkin and colleagues (2006) by indicating that a close balance between exploration and exploitation is positively impacting the performance of SME's. The same has been found by Mei, Laursen and Atuahene-Gima (2013) who studied ambidextrous learning and researched the effect of an appropriate balance between exploratory -and exploitative learning. They found that obtaining an appropriate balance positively affects performance related to radical innovation.

Extant research has proposed that balanced ambidextrous learning can be achieved by a structural or contextual approach. The former is often related to bigger sized companies with enough resources to separate organizational units that either perform activities related to exploitative learning or exploratory learning (Tushman & O'Reilly, 1996). In contrast to the structural approach, the contextual approach prescribes that balanced ambidextrous learning is achieved on SME, business unit or team level. The contextual approach enables to simultaneously perform activities related to exploitative -and exploratory learning within a single organizational unit. In relation to resource availability, this approach argues that, irrespectively of the lack or abundance of available resources, a SME, business unit, or team should be able to perform both learning types simultaneously if the appropriate organizational context is created. Hence, this approach provides small sized organizational units means to become ambidextrous and thus to engage to ambidextrous learning.

In view of the small organizational size of a practice group, and the assumption that practice groups experience resource constraints, this thesis adopts the contextual approach to ambidextrous learning, referred to as contextual ambidextrous learning. Gibson et al. (2004) coined the construct "contextual ambidexterity". They argue that simultaneously performing exploratory -and exploitative learning across an entire single unit is best achieved by creating a context that encourages individuals to make their own judgments as to how best to divide their time between the conflicting. Their results indicate that contextual ambidexterity positively impact business unit performance. Adler and colleagues (1999) performed a qualitative research on contextual ambidexterity and found that workers of Toyota were able to perform simultaneously exploration and exploitation driven activities which in turn impacted flexibility and efficiency positively. Furthermore, Hill & Birkinshaw (2006) found that organizational units that were capable of simultaneously building new capabilities and using existing capabilities have shown higher strategic performance. Lastly, research has pointed out that an ambidextrous context within SME's positively impacts customer capital (Cegarra-Navarro & Dewhurst, 2007). In addition to contextual ambidexterity studies performed on business unit & SME's organizational level, the relationship between ambidexterity and performance has also been studied on team level. Scholars have hypothesized and found a positive relationship between ambidexterity and team performance. For instance, research conducted by Kwaku Atuahene Gima & Murray (2007) has shown that top management teams that were able to strike a balance between exploratory -and exploitative learning enhanced performance related to new product development. Additionally, Kostopoulos et al. (2011) researched innovation project teams and concluded that both exploratory -and exploitative learning are positively related to team performance.

In sum, ambidextrous learning concerns the ability to both use and refine existing knowledge while also simultaneously creating new knowledge to overcome knowledge deficiencies or absences identified within the execution of the work. Thus, ambidextrous learning consists of exploratory -and exploitative learning. These learning modes are contradictory knowledge processes that underpin the attainment of ambidexterity. As a consequence of the opposing nature, tradeoffs related to resource-allocation constraints,

organizational inertia, and desirable organizational outcomes emerge. Explorative and exploitative learning, due to these tradeoffs, compete in a zero-sum game over scarce resources which eventually could result in a success -or failure traps which detriments, respectively, long term or short term performance. Therefore, in order to remain competitive on the short and long run, firms need to renew their available knowledge base by exploitative learning and simultaneously exploring new knowledge basis through explorative learning. In view of a success -or failure trap, and its associated effects on the long and short term, firms need to strike a balance between exploratory - and exploitative learning. Extant research has demonstrated that balanced ambidextrous learning result in higher performance levels. These findings have been observed by scholars on several organizational levels that bear resemblance with practice groups, such as SME, business unit and team level. Ambidextrous learning can be achieved by contextual ambidexterity. This perspective on ambidexterity, which is referred to as contextual ambidextrous learning, argues that both exploratory -and exploitative learning can be performed simultaneously within a single organizational unit. Considering prior research findings, this perspective enables small organizational units to become ambidextrous and thus to engage to contextual ambidextrous ambidextrous learning. In view of previous research findings related to the positive effects of balanced ambidextrous learning within single organizational units such as SME, business units, and teams, this thesis expects to find the same positive effects on practice group level and therefore proposes:

Hypothesis 1: Contextual ambidextrous learning has a positive effect on practice group performance.

2.5   The moderating influence of task conflict

Task conflict are conflicts within groups that concern conflict of ideas and disagreement about the content, issues, and outcomes of the task being performed and includes differences in viewpoints, ideas, and opinions (Jehn, 1994). Task conflict can be related to for instance distribution of resources, procedures and policies, and judgments and interpretation of facts (De Dreu et al., 2003).

Task conflict, unlike other conflict types, has been found to impact performance positively (e.g. Jehn, 1995) and negatively (e.g. De Dreu et al., 2003). Hence, previous research has not been able to validate a consistent direct positive or negative relationship between task conflict and performance.

In view of the above mentioned inconsistent research findings, this thesis proposes that task conflict does not influence performance directly but it moderates relationships such as the relationship between contextual ambidextrous learning and performance. The direction of the moderating influence, while considering the detrimental and positive effects of task conflict on performance, can be either positive of negative. As such, in paragraphs 2.5.1 and 2.5.2 two hypothesis related to the moderating influence of task conflict on ambidextrous learning will be proposed.

2.5.1 The positive moderating effect of task conflict

Task conflict, as an organizational contingency, is considered to have several performance enhancing effects. In consideration of these effects, this thesis argues that task conflict might positively moderate the relationship between contextual ambidextrous learning and practice group performance. The following paragraphs present two arguments that fundament this proposition. Firstly, this thesis argues that the presence of task conflict within practice groups could contribute to an organizational context that induces contextual ambidextrous learning. Secondly, this thesis views task conflict as a contributor to the ability of a practice group to obtain, maintain, and restore an ambidextrous learning balance.

As stated in the previous chapter contextual ambidextrous learning concerns the ability to simultaneously pursue explorative and exploitative learning within a single organizational unit. The simultaneous performance of these opposite learning modes are resulting out of an ambidextrous organization learning context. In consideration of previous research, and its theorized enhancing effects of task conflict, task conflict is expected to aid to an ambidextrous learning context as the presence of task conflict fosters divergent thinking (Fahr et al, 2010) and stimulates idea generation (De Dreu, 2006) within a practice group. In turn task-related conflict may contribute to an organizational context that embraces innovativeness and stimulates critical thinking (De

Wit et al., 2012) which is required for the emergence of ambidextrous learning within a practice group.

Furthermore, task conflict is argued to be conceptually and empirically related to minority dissent theory (Hülsheger et al., 2009). Considering the similarities between the two constructs, prior research on the effects of minority dissent might be particularly informative for researching task conflict. The presence of a task conflict is a prerequisite for the emergence of minority dissent. As a result of minority dissent a team context emerges where team members think about task related conflicts from multiple perspectives (Nemeth, 1995). It increases individual courage to resist group pressures to conformity (Nemeth & Chiles, 1988) and stimulates the majority members of a work group to become more creative in their thinking when confronted with minority dissent (Van Dyne & Saavedra, 1996). Majority members, rather than seeking verification and justification of the minority position, seek to understand the minority point of view in order to more effectively reject their perspective (Nemeth, 1995). Minority dissent within teams creates a team atmosphere that reduces conformity and consensus-seeking among group members (De Dreu & West, 2001). In view of the similarities between minority dissent and task conflict, this thesis expects that the presence of task conflict within practice groups facilitates the emergence of an ambidextrous learning context through the same levers as minority dissent.

Thirdly, Badke-Schaub et al. (2010) found that teams that have incorporated within their team a team atmosphere that is characterized by internal team competition dynamics are more creative than teams where a mere positive team climate is present. These team competition dynamics include task conflict. They argue that creative performance within teams is achieved by a team context of cognitive confrontation where task disagreements are expressed. Considering that creativity and ambidextrous learning are related constructs (O'Reilly & Tushman, 2004), and the findings of Badke-Schaub et al. (2010), task conflict might help to establish an ambidextrous learning context within practice groups. All in all, this thesis argues that task conflict contributes to the emergence of an ambidextrous learning context.

In addition to contributing to an ambidextrous learning context within practice groups, task conflict supports achieving and maintaining the ambidextrous balance between exploratory -and exploitative learning. As stated in the previous chapter, balance between the two learning modes might be disturbed by either the success trap (overemphasis on exploitative learning at the expense of exploratory learning) or the failure trap (overemphasis on exploratory learning at the expense of exploitative learning). A success trap is found to benefit the short term and detriments the long term. Vice versa, a failure trap is found to benefit the long term and detriments the short term. As such, falling in one of the two traps will have detrimental effects.

In view of an ambidextrous organizational context, task conflict creates an organizational atmosphere that stimulates to search for alternatives among colleagues (O'Neill et al., 2013). This organizational atmosphere could restore the balance between exploratory -and exploitative learning when a practice group has fallen victim to a success or failure trap. Secondly, if a practice groups has fallen into a success or failure trap, than task conflict motivates the practice group members to engage respectively in either exploratory or exploitative learning enabling the practice group to discover acceptable new solutions to problems (De Dreu, 2006).

Furthermore, task conflict contributes to achieving the appropriate balance between exploratory -and exploitative learning as it helps practice group members to challenge long-held assumptions that are related to either a success or failure trap (Amason & Schweiger, 1994). Task conflict protects practice group members from confirmatory biases (Schulz-Hardt, Jochims, & Frey, 2002). This thesis expects that this confirmatory bias includes as well the avoidance of an overemphasis on either exploratory learning or exploitative learning. Finally, task conflict prevents practice groups from a premature movement to consensus (De Dreu & West, 2001) which as well contributes to avoiding falling into a success or failure trap and in turn aids maintaining a contextual ambidextrous learning balance.

In view of the above presented arguments related to the interaction between task conflict and, on the one hand, an ambidextrous organizational learning context and, on the other hand, appropriately balancing exploratory -and exploitative learning, this thesis argues

that task conflict enhances the beneficial effects of ambidextrous learning on practice group performance and therefore proposes:

Hypothesis 2a: Task conflict within practice groups will moderate the relationship of contextual ambidextrous learning with practice group performance, such that the relationship will be stronger under higher levels of task conflict.

2.5.2 The negative moderating effect of task conflict

Previous research has reported, besides positive effects, also negative effects of task conflict. As such, the academic world remains inconclusive. In this paragraph the negative effects of task conflict are presented which fundaments the proposition that task conflict negatively moderate the relationship between contextual ambidextrous learning and performance. The following paragraphs present three interrelated arguments that fundament this proposition. Firstly, this thesis argues, in view of the information processing theory, that the presence of task conflicts within practice groups deteriorates the positive effects of ambidextrous learning on the performance of practice groups. Secondly, while considering the self-verification theory, the presence of task conflicts might make the members of the practice group dissatisfied when confronted with an opposing view. This may cause people to ruminate and experience stress. Consequently task conflict, through the dynamics of self-verification, might reduce the positive effects of ambidextrous learning. Thirdly, task conflict could hamper the positive relationship between ambidextrous learning and practice group performance as task conflict might be accompanied with relationship conflict or could transform into a relationship conflict.

The information processing perspective entails a perspective related to a group's capacity to process information and is defined as the degree to which information, ideas, or cognitive processes are shared among the group members and how this sharing of information affect group-level outcomes" (Hinsz, Tindale & Vollrath, 1997). Central to this perspective is cognitive load. Cognitive load refers to the amount of cognitive information processing a task requires (Carnevale & Probst, 1998). The rational of this perspective is straight forward: the more complex a task, the higher the cognitive load. Each practice group has a limited collective information processing capacity. The

presence of task conflict increases stress and tension (Shaw, Zhu, Duffy & Scott, 2010) among group members. This results in an increased cognitive load (Bradley et al., 2015) which decreases group members' cognitive flexibility and creative thinking, especially when group members experience a competitive and hostile environment caused by task conflict (De Dreu & Weingart, 2003). Task conflicts are distractions and require resources that cannot be directly invested into a task performance (De Wit et al, 2012). It even may result in narrow black –and white thinking (De Dreu et al., 2008) causing for practice group to firm their emphasis on either exploitative or exploratory learning which consequently tightens, respectively, the success or failure trap even further and hence obstructing contextual ambidextrous learning within practice groups.

Swann (2004) coined the self-verification theory which proposes that group members prefer others to see them as they see themselves. Group members seek self-verification because self-verifying evaluations make the world seem coherent and predictable. This theory argues that arousal within a group increases when individual perspectives are challenged by another group member. A task conflict within a practice group can be seen as a challenged perspective which in turn obstructs self-verification. The self-verification theory suggests that in such cases individual dissatisfaction increases when the task conflict is interpreted as a negative assessment of their own abilities and competencies (De Wit et al., 2012). When this happens, due to task conflict, this thesis expects that the positive effects of contextual ambidextrous learning on performance are impeded.

Lastly, several meta-analyses have been performed on the relationship between relationship conflict and group performance (De Dreu & Weingart, 2003; De Wit et al., 2012; O'Neill et al., 2013). The results have been consistently negative indicating that the presence of relationship conflict detriments performance. In relation to the information processing perspective and the self-verification perspective, extant research has found that task conflict can transform into, or be accompanied with, relationship conflict. For instance, Simons and Peterson (2000) found that task conflict could escalate into relationship conflict due to the exchange among group members of inappropriate emotional and behavioral reactions. In their study they observe that task

conflict was interpreted as a personal attack which gave rise to animosity and finally resulted in relationship conflict. Furthermore, exchanging ideas related to the performance of task may trigger group members to respond, unintentionally or intentionally, in a harsh and aggressive manner which gives rise to a relationship conflict as well (Jimmieson, Tucker & Campbell, 2017). As such, task conflict, via relationship, conflict obstructs self-verification and limits the information processing ability of a group because group members are focusing on other group members rather than on spending their time and energy on other tasks (De Dreu & Weingart, 2003) such as learning from task performance. Under these circumstances an organizational context can emerge where the information processing of group members is impaired as group members become more rigid in their beliefs (De Wit, Jehn, & Scheepers, 2013). Consequently, this thesis argues that practice group members might become more rigid in holding onto their initial learning mode which could further distort the balance between exploratory -and exploitative learning. Hence, as task conflict can transform into, or accompany, relationship conflict, it might create an organizational context that is counterproductive for contextual ambidextrous learning and could distort the ambidextrous balance between exploratory -and exploitative learning.

In sum, task conflict, approached from an information perspective, could increase cognitive loads within a practice group which detriments their cognitive information processing capability. Consequently the ambidextrous learning capability might be impeded as practice group members firm their focus on either exploratory –or exploitative learning. Furthermore task conflict obstructs self-verification within practice groups which creates arousal within practice groups and in turn detriment the emergence of an ambidextrous learning context. Lastly, task conflict might be accompanied with, or transform into, a relationship conflict. In view of the negative implications of the relationship conflict, it might be that task conflict hampers the relationship between ambidextrous learning and practice group performance. In view of these three arguments this thesis proposes:

Hypothesis 2b: Task conflict within practice groups will moderate the relationship of contextual ambidextrous learning with practice group performance, such that the relationship will be weaker under higher levels of task conflict.

Chapter 3 Research methodology

3.1 Sample & data collection

The empirical research was conducted at practice groups of the leading Dutch law firms. A law firm is considered to be a professional service firm. Learning is considered as a common and mandatory practice within this particular industry. It enables law firms to keep up with, and fulfill the current and future legal needs of their clients.

The sample group covers lawyers working for law firm practice groups that, according to www.advocatie.nl, belong to the top 50 law firms of the Netherlands. Out of the top 50 law firms 28 law firms have been targeted; the full top 10 law firms and 18 international law firms with significant presence in The Netherlands. This research selected those law firms as they are considered to be innovation oriented. As such, this thesis assumes that these law firms are consciously engaged to learning.

Each selected law firm is known by the industry as a multi-service firm. This category of law firms offer the full range of legal corporate services that encompass services related to the following legal segments: (1) corporate / M&A, (2) banking & finance, (3) tax, (4) notary, (5) litigation & dispute resolution, (6) IP, data privacy & protection, and (7) regulatory. In general, each practice group offers services that belong one of these segments.

Data was collected using an online survey method and was gathered by posting it on the website: https://skharteveld.wixsite.com/onderzoekadvocatuur. This website was specifically created to inform possible respondents on the contents of research. Additionally this website gave participants access to the online survey. Potential respondents were approached via LinkedIn. A general "link" invitation was sent to lawyers. This invitation included a brief introduction of the research. The lawyers who accepted the "link" invitation were in turn officially invited to respond to the survey. For a detailed review of the used survey see appendix I.

The survey consists of several existing surveys that originally have been designed in English and are based on several previous performed studies on ambidextrous learning, organizational performance and task conflict. These existing surveys have been merged

into one survey. The respondents were asked to communicate their perception on the contextual conditions of the practice group they work for related to (1) contextual ambidextrous learning, (2) practice group performance, and (3) the presence of task conflict within their practice group.

The surveys have been translated into the Dutch language for the ease of use of respondents. To make sure that the survey was understandable for the sample group, an interview with a lawyer working for a top 50 law firm was conducted. Minor changes have been implemented in order to increase comprehensibility and to ensure content validity. In total 618 lawyers accepted the link request and were in turn invited to participate into the research. The online survey was completed by 248 respondents; a response rate of approximately 40,1%.

Typically a law firm practice group consists of the following hierarchical positions / layers: junior associate, associate, senior associate, counsel, and partner. To deal with potential problems associated with sampling & response bias this research did not rule out any type of lawyer. Hence, all types of lawyers were invited to participate. Furthermore, as already stipulated above, lawyers working for 28 law firms out of top 50 Dutch law firms have participated. Lastly, the survey results reveal that all practice group segments are represented in the data. Although precautions have been made to avoid sampling or response bias, still some presence of these types of biases cannot be ruled out as respondents participated on an anonymous basis. As such, exact participation demographics cannot be provided. Nevertheless, considering the LinkedIn (email) replies that have been received, it appears that all types of respondents, working for all invited law firms, have participated.

3.2   Measures

This thesis has empirically investigated whether contextual ambidextrous learning positively relates to practice group performance. Furthermore this study has explored if task conflict, either positively or negatively, moderates the relationship between contextual ambidextrous learning and practice group performance.

Three research measures are included in the research model: (1) contextual ambidextrous learning, which is operationalized by the constructs exploratory –and exploitative learning measures, (2) organizational performance measure and (3) task conflict measure. All items were answered on a 5-point Likert scale. See appendix I for the survey.

In order to rule out common method biases a Harman's single factor test (exploratory factor analysis without rotation) has been performed. Common method bias is present if the design of the questionnaire is introducing the variance instead of the actual response of participants. As a rule of thumb, indications of common method bias are observed if one single factor explains more than 50% of the total variance (Hair et al., 1992). The results of the Harman's single factor test show that one single factor explains approximately 32, 4% of the total variance. Hence, the obtained data is not affected by common method bias. See appendix II for the results of the Harman's single factor test.

<u>Independent variable – Contextual ambidextrous learning</u>

Contextual ambidextrous learning is known as two-sided learning or learning in two different ways (Kang et al., 2009) within a single organizational unit (Gibson & Birkinshaw, 2004). It considers exploitative -and exploratory learning as the incompatible duality. Turner and colleagues (2013) define ambidextrous learning as the ability to both use and refine existing knowledge (exploitative learning) while also simultaneously creating new knowledge (explorative learning) to overcome knowledge deficiencies or absences identified within the execution of the work. Kang, Snell & Swart (2012) designed measurement scales in order to capture exploitative -and exploratory learning constructs within a legal service context. Exploitative learning is related to the extent a practice group expands existing services, improves established customer relationships and refines existing transaction techniques and procedures. In contrast, exploratory learning is related to the extent to which a practice group offers new services, creates new markets or customers, and develops new transactions techniques and procedures. See appendix III for the specific survey items related to exploitative –and explorative learning.

Previous research has operationalized ambidextrous learning in several ways. For instance, He & Wong applied the multiplicative method to calculate the ambidexterity score. Their method argues that ambidextrous learning is achieved when a practice group engages simultaneously into both exploitative -and exploratory learning. Lubatkin et al. (2006) calculated the ambidexterity score by means of the absolute difference method. If this method is selected, then ambidextrous learning is viewed a balancing act between exploitative -and exploratory learning. However, solely considering balance as a way of operationalizing does not take into account that practice groups differ in the level of exploratory -and exploitative learning. As such it does not distinguish practice groups scoring low on contextual ambidextrous learning from practice groups scoring high on contextual ambidextrous learning. Therefore, this study has operationalized contextual ambidextrous learning by using the subtraction method and the multiplicative method. As such, this study assumes that an ambidextrous practice group is (1) able to maintain a balance between the two learning modes while as well (2) engaging into high levels of exploitative -and exploratory learning. With regards to these two assumptions, this study extends the operationalization method of Chandrasekaran et al. (2012). They define ambidextrous learning as (1) the multiplicative outcome of a practice group's exploitative -and exploratory learning (score exploitative learning X score explorative learning) corrected by (2) the absolute difference between the two scores (score exploitative learning – score explorative learning). However, their method did not account for the fact that the influence of the multiplicative term in their formula severely outweighs the influence of the absolute difference on the final ambidextrous learning score. In view of the latter observation, this research has extended the operationalization of Chandrasekaran et al. (2012) by granting equal weights to both terms in the operationalization formula. By means of this formula extension this thesis argues that the balance component is more appropriate reflected in the applied operationalization of contextual ambidextrous learning.

Contextual ambidextrous leaning =

0,5 (absolute difference score contextual ambidextrous leaning) X 0,5 (multiplicative score contextual ambidextrous leaning)

Absolute difference score contextual ambidextrous learning =

[4 - (score exploitative learning - score explorative learning)] / 4

Multiplicative score contextual ambidextrous leaning =

(score exploitative learning X score explorative learning) / 25

Hence, a practice group will have a high ambidextrous learning competence if it scores high on the multiplicative measure (5 x 5 = 25) and low on the absolute difference measure (5 – 5 = 0). Respondents were invited to reply on statements by answering on a 5-point scale (1 = totally disagree, to 5 = totally agree).

The moderating variable – task conflict

Task conflict was measured by using the four-item scale developed by Jehn (1995). This scale captures the extent of which task conflicts exists within law firm practice groups. In this regard task conflict is defined as the conflict of ideas that exist within single practice groups and concern disagreement about the content, issues, and outcomes of the task being performed and includes differences in viewpoints, ideas, and opinions (Jehn, 1994). Respondents were invited to reply on statements by answering on a 5-point scale (1 = none / very rarely, to 5 = very often). See appendix III for the specific survey items related to task conflict.

Dependent variable – practice group performance

In absence of objective data this thesis has operationalized practice group performance by means of an existing perceptual performance measurement scale designed by Gibson & Birkinshaw (2004). This scale measures the perception of business unit members towards the performance of the entire business unit they work for. The scale of Gibson & Birkinshaw (2004) has been adapted to the context of law firm practice groups. Respondents were invited to reply on statements by answering on a 5-point scale (1 =

totally disagree, to 5 = totally agree). See appendix III for the specific survey items related to practice group performance.

<u>Control variables</u>

This thesis has performed a multiple regression analysis. In order to obtain an unbiased estimate of a causal effect in multiple regression, it must be ensured that the coefficient on the causal variable of interest does not suffer from omitted variable bias. The following control variables are added to the regression model in order to detect any omitted variable bias:

- o Number of practice groups = the number of different practice groups within a single law firm

- o Practice group size = the number of attorneys

- o Practice group age = the number of years the practice group exists

- o Years of experience = the total number of cumulated years of working experience that are present within the practice group

See appendix III for the specific survey items related to the control variables.

3.3 Reliability & validity

Reliability refers to the extent which a variable or a set of variables is consistent in what it is intended to measure. It differs from validity as it only relates to how it is measured; and hence relates to the consistency of the measures. Validity refers to the extent to which a measure or set of measures correctly represents the concept of the study. As such, validity is concerned with how well the concept is defined by the measures (Hair et al., 1992).

In order to assess the reliability of the measures this research has considered three reliability diagnostics: (1) Cronbach's alpha, (2) item-to-total correlation, and (3) inter-item correlation (Hair et al., 1992). Cronbach's alpha is known as a reliability coefficient which assesses the consistency of an entire scale. In general, as a rule of thumb, if the Cronbach's alpha exceeds 0,7 than the scale is considered reliable. The item-to-total

correlation and the inter-item correlation concern two reliability coefficients that relate to the individual items of a scale. The item-to-total correlation involves the correlation of an item to the summated scale score. The inter-item correlation concerns the correlations among the scale items. Rules of thumb suggest that item-to-total correlation should exceed 0,5 and the inter-item correlation should exceed 0,3 (Hair et al., 1992).

The exploratory learning scale has proven to be reliable. The Cronbach's alpha is 0,87. All inter-item correlations are above 0,3. Lastly, the item–two–total correlations all exceed 0,5. Furthermore, none of the included items would severely improve the Cronbach's alpha if the item would be deleted out of the scale. Hence, this scale is reliable and, as such, it is consistent in what it intends to measure.

The exploitative learning scale has found to be reliable. Nevertheless, some clarifications on a particular scale items must be provided. The Cronbach's alpha is 0,774. With respect to the inter-item correlations, 12 of 15 correlations exceed the 0,3 threshold value. 1 item correlates weakly to the other items causing for 3 correlations to be lower than 0,3 (0,165; 0,241; 0,299). This particular item reveals item-total correlation of 0,381 which is lower than 0,5 threshold value. Despite a too low item-total correlation, this thesis has not deleted this item as a deletion would not improve the Cronbach's alpha. Hence, the exploitative learning scale is found to be adequately reliable.

The task conflict scale has proven to be reliable. The Cronbach's alpha is 0,731. 5 out of 6 inter-item correlations exceed 0,3. Only 1 correlation is slightly under the 0,3 threshold value (0,282). The same item is not confirming to the threshold statistic related to the item-to-total correlation (> 0,5). This item correlates with a value of 0,42. Despite a too low item-total correlation, this thesis has not deleted this item as a deletion would lower the Cronbach's alpha. Hence, the exploitative learning scale is found to be adequate reliable.

The practice group performance scale has proven to be reliable. The Cronbach's alpha is 0,795. All inter-item correlations are above 0,3. Lastly, the item–two–total correlations all exceed 0,5. Furthermore, none of the included items improves the

Cronbach's alpha if the item would be deleted out of the scale. Hence, this scale is reliable and, as such, it is consistent in what it intends to measure.

In order to assess the validity of the exploratory and exploitative measures this research has analyzed convergent validity and discriminant validity. Convergent validity is defined as the extent to which a set of measured variables actually represents the theoretical latent construct those variables are designed to measure. Discriminant validity refers to the extent to which a construct is truly distinct from other constructs (Hair et al., 1992).

In order to determine whether the measures are satisfying the requirements of convergent and discriminant validity, this thesis has applied three validity diagnostics: (1) the correlation matrix approach (2) principal component analysis method rotated with Varimax on the independent variables and (3) average variance extraction method (Hair et al., 1992).

The correlation matrix approach prescribes that validity is ensured when the scale items, belonging to the same construct, are strongly correlating whereas they are not strongly correlating to scale items that belong on other constructs. The correlations of exploratory learning, exploitative learning, and task conflict are all revealing convergence and are significant. As such, convergent validity is ensured.

Secondly, principal component analysis method rotated with Varimax calculates the factor loadings. This thesis has selected the Varimax method as the variables are considered orthogonal. In case of high convergent validity, high loadings on a factor would indicate that they converge on a latent construct. Secondly, the loadings should be significant and should have a loading of at least 0,5. Ideally the item loadings exceed 0,7. The analysis clearly replicated the intended three-factor structure with each item loading on their intended factor with loading exceeding 0,5. As such, the component analysis derived three factors with an eigenvalue greater than one. Hence the peformed principal component analyses confirms discriminant and convergent validity.

Thirdly, the average variance extracted method has been calculated out of the data which resulted out of the principal component analysis. As a rule of thumb the average variance

extracted (AVE) should exceed 0,5 in order to confirm convergent validity. From this perspective, two of three predictor variables complied to this threshold value. The AVE's of exploratory learning and task conflict are respectively 0,58 and 0,52 indicating strong convergence. The AVE of exploitative learning equals 0,41. This AVE is slightly below the threshold and therefore raising some concerns related to convergent validity of exploitative learning. See appendix IV for the reliability and validity statistics.

3.4   Statistical analysis

This thesis has, in order to quantitatively test the hypotheses as presented in the prior chapter, performed multiple hierarchical regression analysis. The stepwise regression method has been selected. This method concerns a regression procedure that includes single additional independent variables in a stepwise fashion. The independent variables have been included by means of the forward selection approach. This approach starts with no included variables in the model and adds a single independent variable to the regression model. The effects of the inclusion of each additional variable have been analyzed by means of evaluating the change of the significance and explained variance of each created model. The order of inclusion of independent variables has been: (1) control variables, (2) contextual ambidextrous learning, (3) moderating variable task conflict (=task conflict X contextual ambidextrous learning). The forward selection approach has yielded in total 3 models. Prior to performing these analyses, an extensive data inspection has been performed in order to determine if all assumptions related to a valid performance of multiple regression analysis have been complied with.

The data inspection and statistical analysis have been performed by using the statistical software program IBM statistics SPSS 23. In order to verify robustness of the findings that are related to this selected operationalization formula, this thesis has also applied alternative operationalizations of conceptual ambidextrous learning. Additionally, a post hoc "split-mean regression analysis" has been performed in order to determine if different results are obtained when the sample group is divided in two. The results of these analysis are outlined in Chapter 4 and appendix XII and XIII. The next paragraph describes the performed data inspection which has been performed in order to determine if the assumptions of regression are met.

3.5   Data inspection

This thesis has performed a multiple hierarchical regression analysis. Prior to performing this analysis, the obtained data has been inspected for the following: (1) missing data, (2) outliers & normality, (3) linearity, (4) homoscedasticity and (5) multicollinearity.

3.5.1 Missing data

As described in paragraph 3.1, 248 respondents participated in the research. 12 respondents were deleted out of the dataset as either the respondents indicated not be a lawyer or they did not reply to any survey statement. Additionally, 25 respondents did not complete the full survey. They did not reply to 1 or 2 survey statements. This thesis decided to include the respondents as after evaluation the missing data appeared to be random. The item means have been included in order to address these data gabs. The data of 248 respondents has been used in order to perform the multiple regression analysis. See appendix V for the missing data statistics.

3.5.2 Outliers and normality

In order to detect outliers, box plots have been made for each variable. Outliers are detected when a value is smaller than 1,5 times the distance between Q3 & Q1. The independent variable contextual ambidextrous learning and the dependent variable practice group performance do not have any outlier data. The boxplot of moderating variable task conflict reveals 4 possible outliers. The stem-and-leaf plot shows that the outliers corresponded to values ranging between 4 and 4,25. These possible outliers have been evaluated. Although the values are high in comparison with the average value of 2,39, it has been decided not to exclude the data out of the dataset as these data was found to be true and valid.

An important assumption of regression analysis is normality. Normality of the data has been analyzed by means of evaluation of the skewness & kurtosis values, visual inspection of histograms, normal Q-Q plots, and detrended normal Q-Q plots.

Skewness is a statistical measure of the symmetry of a distribution and is compared to a normal distribution. A Skewness value can range between -1 and 1. If the skewness

value equals 0, than the data is considered to be symmetrically distributed. Kurtosis concerns a measure of peakedness or flatness of a distribution when compared to a normal distribution (Hair et al., 1992). The data of the variables practice group performance, contextual ambidextrous learning and task conflict are low to moderately skewed. The skewness values are respectively -0,43, -0,096 and 0,55. The distribution of the data of contextual ambidextrous learning is slightly flat as the Kurtosis value equals -0,502. The distribution of the data of practice group performance and task conflict are, with the respect to Kurtosis, almost mirroring a normally distribution as their values are -0,157 and 0,040. See appendix IV for the Kurtosis and Skewedness statistics.

Data is considered normally distributed if the respective histograms are bell shaped. The histograms of practice group performance, contextual ambidextrous learning, and task conflict comply to this criterion. Secondly, the normal Q-Q plots reveal normal distribution of the data if the data is plotted on a straight line. Lastly, the detrended Q-Q plots provide additional indication that the data of the variables is normally distributed. After visual inspection it was concluded that the data was confirming to the normality criterion. See appendix VI for the outlier and normality statistics.

3.5.3 Linearity

Complying to the linearity assumption is mandatory when performing a valid regression analysis. The linearity assumption prescribes that a linear relationship should exist between the dependent and independent variable. If so, than regression analysis can rightfully be performed. Compliance to this assumption has been checked by means of a visual inspection of a scatterplot that depicts the correlations of dependent and independent variable and its linear relationship. Secondly, there exists a proper model fit. The output of a regression analysis indicated that the model, which incorporated the dependent and independent variable, explains approximate 16,1% of the variance ($R^2=16,1\%$). Hence, both the visual inspection of the scatter plot and model fit confirms compliance to the linearity assumption. See appendix VII for the linearity data statistics.

3.5.4 Homoscedasticity

Prior to performing a regression analysis, the data is required to be inspected for compliance to homoscedasticity assumption. Data is homoscedastic if the variance of the error terms appear constant over a range of predictor variables (Hair et al., 1992). After visual examination of a scatterplot that depicts the residuals, the data has been found homoscedastic and hence the homoscedasticity assumption has not been violated. See appendix VIII for the homoscedasticity diagnostics.

3.5.5 Multicollinearity

The determination of any presence of multicollinearity is the final step prior to performing a regression analysis. Multicollinearity occurs when any single independent variable is highly correlated with a set of other independent variables (Hair et al., 1992). Multicollinearity is expected to exist if correlations between independent variables exceed 0,9 (De Vocht, 2015).The correlations of all the variables, including the control variables, have been checked and no high correlations have been observed. The inspection for multicollinearity has been solely focused on the correlation among the variables and did not inspect multicollinearity created by the interaction between the variables "task conflict x contextual ambidextrous" and contextual ambidextrous learning.

A second method to detect multicollinearity is to determine the variance inflation factor (VIF). A VIF concerns an indicator of the effect that the other independent variables have on the standard error of a regression coefficient. Large VIF values (>10) indicate a high degree of multi collinearity among the independent variables (Hair et al., 1992). The VIF of the independent variables contextual ambidextrous learning and task conflict equaled 1,030 which suggest the absence of multicollinearity. See appendix IX for the multicollinearity statistics.

Chapter 4   Empirical results

4.1   Multiple hierarchical regression analysis and results

A multiple linear hierarchical regression has been performed to predict practice group performance based on contextual ambidextrous learning, the moderating influence of task conflict and several control variables.

In order to determine the presence of a moderating effect of task conflict, an additional "interaction" variable was created (task conflict X contextual ambidextrous learning). Prior to running a regression analysis, presence of multicollinearity between this interaction variable and the independent variable contextual ambidextrous learning was checked (the multicollinearity results as described in the previous chapter do not include this interaction variable). After evaluating of the variance inflation factors and correlations between these predictor variables indications of high multicollinearity were observed. The VIF's were respectively 13,43 and 26,38. The correlation was 0,558. In order to prevent the observed multicollinearity, which would invalidate the intended regression analysis, this thesis followed the suggestion of Aiken & West (1991) to mean-center the independent and moderating variable prior to performing the multiple regression analysis. After these variables have been mean-centered the values of the variance inflation factors were well below the threshold value of 10 (Hair et al. 1992).

The regression analysis has been performed in a stepwise fashion (forward selection method) and created three models. Model 1 contains solely the control variables. Model 2 introduces the contextual ambidextrous learning ability of a practice group into the regression model. Model 3 examines the moderating effect of task conflict within practice groups on practice groups performance. Appendix XI details the full performed stepwise regression analysis. Table 1 below summarizes the reported regression results.

Model 1 is not significant. Model 2 was calculated to predict practice group performance based on contextual ambidextrous learning. A significant regression equation was found ($F_{(5, 242)} = 9,877$, $p < 0,000$), with a R^2 of 0,169. Model 3 predicts practice group performance based on contextual ambidextrous learning and the inclusion of the moderating effect of the interaction variable task conflict. A significant regression

equation was found (F(7, 247) = 16,873 p < 0,000), with a R^2 of 0,33. See table 1 for the regression results.

Hypothesis 1 proposes that contextual ambidextrous learning has a positive effect on practice group performance. Hypothesis 1 is captured by model 2 which shows that the coefficient for contextual ambidextrous learning is positive and significant (*β* = 0,403, p < 0,001). As such, hypothesis 1 is supported.

Extant research provides theoretical arguments that justify to hypothesize a positive and a negative moderating effect of task conflict on the relationship between contextual ambidextrous learning and practice group performance. This thesis has proposed a positive (hypothesis 2a) and negative (hypothesis 2b) moderating effect of task conflict on the aforementioned relationship which are captured by model 3. Hence, in model 3 the moderating effect of task conflict has been included. The moderating effect of task conflict is positive, however not significant (*β* = 0,033, p > 0,05). Hence, hypotheses 2a and 2b are not supported.

Although not formally hypothesized model 3 indicates that task conflict had a significant direct negative effect on practice group performance (*β* = -0404, p < 0,001). See appendix XI for the full details of the performed multiple linear (stepwise) regression analysis and appendix XII for the related descriptive statistics & correlations.

Table 1. The results of the Regression analysis (n = 248) — Practice group performance

Variables	Model 1	Model 2	Model 3
Control variables			
Number of practice groups	0,001	-0,004	-0,024
Number of lawyers within practice group	-0,026	-0,049	-0,026
Number of years of existence of practice group	0,085	0,083	0,115
Cumulated working experience within practice group	0,011	0,033	0,011
Independent variables			
Contextual ambidextrous learning		0,403**	0,333**
Task conflict			-0,404**

Moderating variable			
Contextual ambidextrous learning x task conflict			0,033
R^2	0,007	0,169	0,33
Adjusted R^2	-0,009	0,152	0,31
ΔR^2	0,007	0,162	0,161
F-value	0,457	9,877**	16,872**

All coefficients are standardized β weights, $**P < 0,001$

4.2 Robustness analyses

In order to ensure robustness of the research results, this thesis performed 2 post-hoc analyses. These post-hoc analyses concerned (1) regression analyses of three alternative operationalizations of contextual ambidextrous learning and (2) a median split-half regression analyses.

In relation to the first post hoc analysis, this thesis compared the findings resulting out of the main operationalization method (see paragraph 3.2 for the applied operationalization formula) with the regression results related to alternative operationalizations being: (1) the multiplicative method (e.g. Gibson & Birkinshaw, 2004), (2) the additive method (e.g. Jansen, 2016) and (3) the subtraction method (e.g. He & Wong, 2004).

The multiplicative method operationalizes contextual ambidextrous learning as the product of exploratory learning and exploitative learning. The additive method prescribes that the scores on exploratory learning and exploitative learning should be summed. The subtraction method argues that, in terms of learning, balance among exploratory -and exploitative learning enables a practice group to be contextually ambidextrous.

The regression results of the multiplicative measure and the additive measures confirm the same findings (see appendix XIII for regression details). Both alternative operationalization methods yield 2 significant models (models 2 & 3) where the inclusion of the task conflict as a moderator variable is insignificant (see the coefficient in model 3). Hence, both operationalizations of contextual ambidextrous learning support hypothesis 1 and reject hypothesis 2a & 2b. Noteworthy to mention is that both

alternative operationalization methods are, with respect to model 2 (inclusion of contextual ambidextrous learning), explaining more variance than the applied operationalization method (multiplicative method: $R^2= 33,1$ %; additive method: $R^2= 35,7\%$).

The regression results of the subtraction method are inconclusive. Models 1 and 2 are insignificant. Although Model 3 as a whole is significant, the coefficient of the moderator task conflict is not. Furthermore, when applying the subtraction method, a direct positive relationship between contextual ambidextrous learning and practice group performance cannot be distilled out of the data. Hence, from a balance perspective to contextual ambidextrous learning, hypothesis 1, 2a & 2b are rejected.

With respect to the second post hoc analysis, this thesis performed a median split-half regression analysis. See appendix IVX for the regression results. This alternative regression analysis has distinguished between respondents who experienced low levels of task conflict (scores below median) within the practice group they work and respondents who experienced high levels of task conflict (scores above median) within their practice group.

The regression results related to the groups "low task conflict" and "high task conflict" are confirming the same findings as are calculated in the main regression analysis (described in the previous paragraph). Similarly, models 2 & 3 are significant. Models 2 capture the relationship between contextual ambidextrous learning and practice group performance. These models suggests a positive relationship which supports hypothesis 1 as well. Hence, contextual ambidextrous learning positively impacts practice group performance under conditions of low task –or high task conflict perception. Models 3, which included the moderation effects of task conflict, were significant. However, similar to model 3 of the main regression analysis, the moderation effect was not found to be significant under both levels of task conflict. As such, hypothesis 2a & 2b cannot be supported under conditions of low –or high task conflict perception.

Hence, in view of the above stated post-hoc regression results, the regression results of the main regression analysis, as presented in the previous paragraph, appear to be robust

since the regression results related to (1) alternative operationalizations of contextual ambidextrous learning and (2) median split-half analysis are yielding the same results.

Chapter 5   Discussion and conclusions

5.1   Discussion

The research on organizational ambidexterity has been burgeoning the last two decades, yet the academic understanding on the performance implications of organizational ambidexterity on certain organization units and configurations have been overlooked by scholars and therefore the research on organizational ambidexterity remains rather incomplete. The findings of this research contribute to the literature on a number of ways. This thesis has empirically validated the positive relationship between contextual ambidextrous learning and organizational performance. While adopting a learning perspective on ambidexterity, the relationship has been tested on practice groups within professional service firms where both exploitative -and exploratory learning are assumed to be performed within a single practice group. As such this present study contributes to literature on contextual ambidexterity. Furthermore, this thesis has been the first research to apply an alternative operationalization method. Finally, this thesis adds to the academic understanding on contingencies that potentially influence the relationship between contextual ambidextrous learning and organizational performance. As such, this thesis has examined the moderating effect of task conflict.

Within the academic world their exist consensus that ambidexterity positively relates to performance of organizations. This relationship has been tested on several units of analyses such as for instance, multinationals, small & medium sized firms, business units, individuals. These studies have been performed within research areas such as strategic management (e.g. Jansen et al., 2008), innovation and technology management (e.g. He & Wong, 2004), organizational learning (e.g. Levinthal et al., 1993), organizational theory and behavior (Gibson & Birkinshaw, 2004), and operations management (Adler et al., 2009). This thesis has studied the effects of ambidexterity within a single organizational unit that closely mirrors a business unit: namely practice groups within professional service firms. Extant research refers to this kind of ambidexterity as contextual ambidexterity (Gibson & Birkinshaw, 2004). As this thesis adopted an organizational learning perspective, ambidexterity has been conceptualized as conceptual ambidextrous learning.

This thesis contributes to prior research by examining whether the positive relationship between contextual ambidextrous learning and performance also holds for practice groups within professional service firms. To the best of my knowledge, this is the first research that specifically studies this relationship within this particular business context. The empirical findings demonstrate, as hypothesized, that practice groups whom are learning in a contextual ambidextrous manner outperform those that predominantly focus on either explorative or exploitative learning. As such, this study complements previous research on contextual ambidexterity within business units (Gibson & Birkinshaw, 2004) in that it suggests that the tension between exploratory learning and exploitative learning may be resolved within practice groups of professional service firms. Furthermore, the empirical results of the present study are resembling as well prior research findings related contextual ambidexterity within a context of SME's (e.g. Lubatkin et al., 2006; Cao et al., 2009; Mei et al., 2013) and teams (e.g. Kwaku Atuahene Gima et al., 2013; Kostopoulos et al., 2011).

The tension between exploitative learning and explorative learning involved learning associated with (1) the expansion of existing services *versus* creating new legal services, (2) improving established client relationships in existing markets *versus* acquiring new customers in new markets and (3) refining existing legal transaction techniques and procedures *versus* developing new legal transactions techniques and procedures. Kang, Snell & Swart (2012) created these conceptualizations of exploratory -and exploitative learning. Their research studied the antecedents of these contradicting learning types, however did not consider the ambidextrous interaction between exploratory -and exploitative learning and its performance implications. This research builds on, and extends, their work by (1) adopting their measurement scales related to the exploratory -and exploitative learning, (2) using those scales to operationalize contextual ambidextrous learning, and (3) empirically validating the existence of a positive relationship exists between contextual ambidextrous learning and practice group performance. More specifically, by means of their measurement scales, this thesis suggests that practice groups, who learn in a contextual ambidextrous manner, avoid falling into the success or failure trap and hence operate in such a way that they obtain and maintain balance between exploratory -and exploitative learning.

There does not exist consensus among ambidexterity researchers how to operationalize ambidexterity. This thesis has synthesized known operationalizations methods, namely the multiplicative and the subtraction operationalization method. The former argues that an ambidextrous organizational unit is able to engage into high levels of both exploratory -and exploitative learning whereas the subtraction method argues that ambidexterity results out of the ability of an organizational to strike a balance between exploratory -and exploitative learning. This thesis has argued that a practice group is contextually ambidextrous if it scores low on the subtraction method and high on the multiplicative method. Furthermore, this study has extended the operationalization method of Chandrasekaran et al. (2012) by adding two weighted factors to the operationalization formula which indicate the importance of the multiplicative and subtraction method (see chapter 3 methodology for detailed explanation of the operationalization formula). While giving both methods equal importance, this thesis has proven that contextual ambidextrous learning is positively related to practice group performance.

Furthermore, post hoc analysis have been performed in order to check the robustness of the selected operationalization method. Three alternative operationalizations of ambidexterity, namely the multiplicative, additive and subtraction method, have been have been empirically tested. The results of the multiplicative and additive method both confirm the positive relationship between contextual ambidextrous learning and practice group performance. However, in contrast to prior research (e.g. Cao et al. 2009; Lee & Huang (2012)), the subtraction method did not support the existence of this relationship as the results were insignificant. This result supports that the choice of this thesis to synthesize the multiplicative operationalization method with the subtraction method. As theorized in chapter 3, a possible explanation for the observed insignificance could be that solely subtracting explorative learning scores from exploitative learning scores (or vice versa) does not sufficiently distinguish between balanced practice groups that engage extensively to contextual ambidextrous learning and balanced practice groups that are not extensively learning in a contextual ambidextrous manner.

This research included task conflict as a contingency in the conceptual model. Prior research findings have been inconclusive, as on the one hand, certain scholars claim that task conflict should positively relate to organizational performance (e.g. Jehn,, 1995) whereas others argue that task conflict is solely detrimental (e.g. De Dreu et al., 2003). Extant research predominantly has been focused on the direct effect of task conflict on performance. Alternatively, this thesis has researched the moderating influence of task conflict and presented arguments theorizing such an effect on the relationship between contextual ambidextrous learning and practice group performance.

A positive moderating effect was proposed as the presence of task conflict contributes to the emergence of a contextual ambidextrous learning context. Furthermore, task conflicts within practice groups were expected to contribute to obtaining, maintaining and restoring balance between exploratory -and exploitative learning. Arguments in favor of proposing a negative moderating effect of task conflict have been presented as well. These arguments reasoned that, firstly, task conflict impedes the information processing capacity of practice groups. Secondly, through the dynamics of self-verification, dissatisfaction within a practice group might emerge as practice group members are confronted with an imposing view. This may cause practice group members to ruminate and increases stress and tension within the practice group. Thirdly, task conflict might, through the levers of information processing and self-verification, transform into relationship conflict. In view of the presented arguments this thesis reasoned that task conflict either strengthens or weakens the relationship between contextual ambidextrous learning and practice group performance.

Despite the theorized expectations, no significant moderating relationship has been distilled. A possible explanation could be that, in view of negative connotation of task conflict, respondents have replied in a socially desirable manner which resulted in an insignificant positive moderating relationship. Furthermore, and disregarding the observed insignificance and assuming the existence of a moderating relationship, the regression results suggest that the moderation strength is so weak that, in the event task conflict within a practice group would be present, it is expected to have no real impact on the relationship between contextual ambidextrous learning and practice group

performance. As such the proposed arguments, which reason that task conflict aids to the emergence of a contextual ambidextrous organizational context and obtaining, maintaining and restoring the ambidextrous balance within a practice group, appear to be, at best, very weakly applicable. Moreover, and considering that the insignificant moderation effect was close to zero, this empirical result even calls into question if a moderation effect is existing at all.

Despite that a significant moderating effect of task conflict was not found, the statistical results of this thesis did reveal (not hypothesized) direct effects. These results suggest that, firstly, task conflict relates negatively to practice group performance. This relationship is in line with other studies that have found that the presence of task conflict deteriorates organizational performance (e.g. De Dreu et al., 2003; De Wit et al., 2012; O'Neill et al., 2013). Secondly, the correlation has brought forward that task conflict negatively associates with ambidextrous learning. In view of the latter findings, this thesis contributes to the academic understanding that task conflict is not stimulating learning of practice groups nor is it enhancing organizational performance. Moreover, while approaching task conflict from a contextual ambidexterity perspective, this thesis was not able to determine if task induces an organizational context that strengthens or weakens the relationship between contextual ambidextrous learning and organizational performance. Hence, in view of the negative effects of task conflict on performance and the negative association between task conflict and contextual ambidextrous learning, this study contributes to the ongoing debate whether task conflict could have positive traits.

5.2 Limitations of the research

Despite some modest contributions to the literature, this research has some limitations. Firstly, the results of this thesis are limited to the Dutch top tier law firm practice groups and therefore should be viewed cautiously when generalized to other contexts. Secondly, the statistical analyses have been carried out on perceptual data as more objective data was not readily available such as for instance profit & loss statements of practice groups. As perceptual data have been used, one could reason that it is not for granted that the same results would be obtained when more objective data would have been used.

Thirdly, respondents participated anonymously. As such, this thesis cannot fully guarantee the representativeness of the sample group. Lastly, due to time constraints, this research has not been able to perform a longitudinal study. The obtained data reflect a moment in time. Thus, this study cannot state with certainty that the conclusions of this research will hold over time.

5.3   Conclusion

The present study has researched ambidexterity while adopting an organizational learning perspective where ambidexterity is assumed to emerge within a single organizational unit and is conceptualized by distinguishing between exploratory -and exploitative learning. Within this research framework this thesis has been concerned with addressing the following research question: to what extent does task conflict effect the relationship between contextual ambidextrous learning and performance of practices groups within professional service firms?

The research question has been answered by considering two sub-questions. The first sub-question relates to the impact of contextual ambidextrous learning on the performance of practice groups in professional service firms. Extant research argues that contextual ambidextrous learning concerns striking a balance between the opposite learning modes exploratory –and exploitative learning modes. Obtaining and maintaining this balance is a mandatory requirement for avoiding falling into a success trap (too much emphasis on exploitative learning at the expense of explorative learning) or failure trap (too much emphasis on exploratory learning at the expense of exploitative learning) which in turn detriment organizational performance. Prior research has suggested that striking such a balance within a single organizational unit positive relates to organizational performance. This relationship has been empirically validated within contexts such as a SME, business unit, and team. In view of these prior research findings and the resemblance of a practice group with these previously studied unit of analyses, this thesis argued that contextual ambidextrous learning is positively related to practice group performance. This hypothesis has been tested by means of performing a statistical (regression) analysis and was found to be valid. Hence, contextual ambidextrous

learning positively impacts performance of practice groups of professional service firms.

The second sub-question elaborates on the extent that task conflict effects the relationship between contextual ambidextrous learning and performance of practice groups in professional service firms. Prior research has been inconclusive with regards to the direction of the direct effects of task conflict on organizational performance. Both positive and negative significant effects have been suggested by scholars. In view of these inconsistent research findings, this study has proposed two hypothesis; one hypothesis arguing that task conflict strengthens the relationship between contextual ambidextrous learning and practice group performance whereas the other hypothesis states that task conflict weakens the aforementioned relationship. In view of the positive traits of task conflict this thesis has presented two arguments which justify theorizing a positive moderating influence of task conflict. The first argument reasons that the presence of task conflict within practice groups contribute to the emergence of an contextual ambidextrous context whereas the second argument entails that task conflict supports obtaining, maintaining and restoring the balance between exploratory -and exploitative learning. Contrary to the existence of a positive moderating influence, arguments founding a negative moderating relationship have also been proposed in this research. These arguments propose that task conflict is creating an imbalance between exploratory -and exploitive learning and lowering organizational performance by asserting that (1) task conflict increases cognitive load which impedes the information processing capacity of a practice group, (2) by means of self-verification which creates dissatisfaction among practice group members, and (3) task conflict can transform into relationship conflict. The statistical regression analysis have not been able to distill a significant moderating effect out of the obtained data. As such, this thesis has not been able to answer the second sub-question. Nevertheless, the statistical results did reveal a direct negative relationship between task conflict and practice group performance. Furthermore, task conflict negatively associates with contextual ambidextrous learning.

In sum, this thesis has found a significant positive relationship between contextual ambidextrous learning and performance. The results suggest that a practice group of

professional service firms that learns in a contextual ambidextrous manner outperforms practice groups that emphasize either exploitative or explorative learning. However, in view of the observed insignificance related to second sub-question, this thesis has not been able to uncover a moderating influence of task conflict on the relationship between contextual ambidextrous learning and practice group performance. Consequently, the empirical results of this thesis do not shed light on the extend on which task conflict effects the relationship between contextual ambidextrous learning and performance of practices groups within professional service firms. Hence, this thesis has not been able to answer the main research question.

5.4   Suggestions for further research

This thesis proposes suggestions for further research. The legal service industry creates added value for clients by means of providing knowledge. Maintaining and obtaining knowledge is great importance. From this knowledge perspective this industry remains interesting for further research, in particular when future research concerns contextual ambidextrous learning. The unit of analysis of this research concerns practice groups. Future research could study alternative unit of analyses within the legal service industry such as for instance the lawyer, partner, or partner groups. A research angle could be whether the contextual ambidextrous learning ability of a lawyer, partner, or partnergroup also positively relates to individual performance, most preferably performed with more objective data.

Secondly, this thesis did not research how ambidextrous practice groups are able to engage in high levels of both exploratory -and exploitative learning. A research direction could be why certain practice groups are able to learn in a contextual ambidextrous manner? It would be useful to examine the role of different resource allocation methods on the balance between exploratory – and exploitative learning.

Lastly, as stated earlier, the moderating influence of task conflict on the relationship between contextual ambidextrous learning and practice group performance has been found not to be significant. In view of the positive effect of contextual ambidextrous learning on performance it would be useful for scholars to examine the existence of other moderating influences with a law firm practice group environment. A possible

moderator worthwhile to study could be "self-leadership" within practice groups: the extent that lawyers exert influence over themselves to achieve the self-motivation and self-direction needed to behave in a contextual ambidextrous desirable manner (Manz, 1992). Self-leadership could turn out to be an allocation mechanism which enables practice group to strike an appropriate balance between exploratory –and exploitative learning.

5.5   Recommendations for practice

This study also provides recommendations for practice that are potentially important for professional service firm such as law firms. Foremost, partners of professional service firms, who are each managing their practice groups, should stimulate contextual ambidextrous learning. As such, they need to stimulate practice group members to engage into both explorative and exploitative learning. For instance, exploratory learning will, as it addresses the long term (Gibson & Birkinshaw, 2004), deepen the practice groups understanding of future demand (Cao et al., 2009) and will result in new skills (Lavie & Rosenkopf, 2006). Exploitative learning will strengthen existing knowledge and will result in more operational efficiency (O'Reilly & Tushman, 2008) on the short term (Gibson& Birkinshaw, 2004). In turn, practice groups should be able to efficiently take advantage of existing market opportunities while creating and innovating to meet the challenges of the future market they operate in (Gibson & Birkinshaw, 2004).

The results of this research suggest that being a contextual ambidextrous practice group has a positive effect on practice group performance. However, engaging into both learning types will pose some challenges. Exploratory -and exploitative learning activities require fundamentally different routines (Benner and Tushman (2002); Smith and Tushman (2005)). Explorative and exploitative learning, as a consequence of these different learning routines, pull in opposite directions which in turn may create confusion within among practice group members. Especially it should be noted by practice group partners that the objectives related to both learning types differ; exploitative learning is related to short term objectives whereas exploratory learning is expected to yield results on the long term (Adler et al., 2009). Practice group partners

should acknowledge, and act upon these differences. Partners could consider to implement two incentive schemes; one that is related achieving exploratory learning objectives and one that is related to the achievement of exploitative learning objectives.

Time is most often seen as the scarcest resource within practice groups. Partners should be conscious on how to allocate time across various exploratory -and exploitative learning activities. In view of this scarcity, organizations tend to have a bias against exploratory learning in favor for exploitative learning (Piao, et al., 2015). Practice group partners should assess whether they have fallen victim for the same bias. As such, practice group partners should actively seek for methods to effectively allocate time between exploratory -and exploitative learning. This will enable practice groups to find an appropriate balance between exploitative -and exploratory learning and hence will avoid to emphasize too much on either exploitative learning (referred to as the success trap) or exploratory learning (referred to as the failure trap). Practice group partners who are able to obtain and maintain such balance will more effectively ensure the current and future viability of the practice group (March, 1991).

Lastly, this research suggests that task conflict can impede contextual ambidextrous learning and practice group performance. Especially partners who operate within a PSF business context should understand that task conflict often concerns different views related to judgment and interpretation of facts. Partners should be aware that the detrimental effects of task conflict emerge as a consequence certain mechanisms. As brought forward in this thesis, task conflict strains the capacity of practice group members to process information which in turn detriments cognitive flexibility and creative thinking. Furthermore, task conflict can transform into a relationship conflict. If this happens than the conflict itself becomes emotionally laden which immediately detriments performance (Jehn & Greer, 2007). As such, partners should manage task conflict appropriately and should avoid to overcomplicate matters when faced by task conflict. This will lower the cognitive load that is related to the task conflict. Additionally, partners could consider to actively manage the development of task conflict among practice group members in order to avoid the emergence of relationship conflict.

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Appendix I Survey

1. Ik ben als advocaat, kandidaat-notaris of fiscalist werkzaam binnen een advocatenkantoor dat bestaat uit meerdere praktijkgroepen.

○ ja ○ nee

2. De praktijkgroep waarvoor ik werk bereikt haar volle potentieel.

○ 1 (zeer oneens) ○ 2 (oneens) ○ 3 (neutraal) ○ 4 (eens) ○ 5 (zeer eens)

3. Mijn collega's die werkzaam zijn voor dezelfde praktijkgroep zijn tevreden over de prestaties van de praktijkgroep.

○ 1 (zeer oneens) ○ 2 (oneens) ○ 3 (neutraal) ○ 4 (eens) ○ 5 (zeer eens)

4. De praktijkgroep waarvoor ik werk is succesvol in het tevreden houden van haar cliënten.

○ 1 (zeer oneens) ○ 2 (oneens) ○ 3 (neutraal) ○ 4 (eens) ○ 5 (zeer eens)

5. De praktijkgroep waarvoor ik werk biedt mij de mogelijkheid en motiveert mij om naar maximaal vermogen te presteren.

○ 1 (zeer oneens) ○ 2 (oneens) ○ 3 (neutraal) ○ 4 (eens) ○ 5 (zeer eens)

6. De praktijkgroep waarvoor ik werk is een pionier gebleken in de ontwikkeling van nieuwe juridische benaderingswijzen, concepten of technieken welke vraagstukken van cliënten hebben opgelost.

○ 1 (zeer oneens) ○ 2 (oneens) ○ 3 (neutraal) ○ 4 (eens) ○ 5 (zeer eens)

7. De praktijkgroep waarvoor ik werk heeft, alvorens naar nieuw type cliënten te zoeken, versneld nieuwe kennis en vaardigheden opgedaan.

○ 1 (zeer oneens) ○ 2 (oneens) ○ 3 (neutraal) ○ 4 (eens) ○ 5 (zeer eens)

8. De praktijkgroep waarvoor ik werk heeft in meerdere bedrijfstakken / sectoren, waar de praktijkgroep nog geen ervaring had, haar juridische dienstverlening uitgebreid.

○ 1 (zeer oneens) ○ 2 (oneens) ○ 3 (neutraal) ○ 4 (eens) ○ 5 (zeer eens)

9. De praktijkgroep waarvoor ik werk heeft succesvol veel nieuwe juridische diensten op de markt gebracht.

○ 1 (zeer oneens) ○ 2 (oneens) ○ 3 (neutraal) ○ 4 (eens) ○ 5 (zeer eens)

10. De praktijkgroep waarvoor ik werk heeft succesvol nieuwe juridische diensten ontwikkeld welke tot stand komen door het aanwenden van geheel vernieuwde werkwijzen en technieken.

○ 1 (zeer oneens) ○ 2 (oneens) ○ 3 (neutraal) ○ 4 (eens) ○ 5 (zeer eens)

11. De praktijkgroep waarvoor ik werk heeft succesvol nieuw soortige / innoverende juridische diensten aangeboden.

○ 1 (zeer oneens) ○ 2 (oneens) ○ 3 (neutraal) ○ 4 (eens) ○ 5 (zeer eens)

12. De praktijkgroep waarvoor ik werk wendt haar ervaring binnen juridische kennisgebieden bewust aan ten einde de zorgen en problemen van cliënten diepgaand te doorgronden.

○ 1 (zeer oneens) ○ 2 (oneens) ○ 3 (neutraal) ○ 4 (eens) ○ 5 (zeer eens)

13. De praktijkgroep waarvoor ik werk richt zich op het verfijnen en versterken van de aanwezige kennisbasis.

○ 1 (zeer oneens) ○ 2 (oneens) ○ 3 (neutraal) ○ 4 (eens) ○ 5 (zeer eens)

14. De praktijkgroep waarvoor ik werk onderhoudt en verbetert langdurige cliëntrelaties.

○ 1 (zeer oneens) ○ 2 (oneens) ○ 3 (neutraal) ○ 4 (eens) ○ 5 (zeer eens)

15. De praktijkgroep waarvoor ik werk verwerft nieuwe cliënten waarop onze bestaande en goed functionerende juridische aanpak wordt toegepast.

○ 1 (zeer oneens) ○ 2 (oneens) ○ 3 (neutraal) ○ 4 (eens) ○ 5 (zeer eens)

16. De juridische diensten, welke tot drie jaar geleden zijn aangeboden, worden vandaag de dag nog steeds effectief door de praktijkgroep waarvoor ik werk toegepast.

○ 1 (zeer oneens) ○ 2 (oneens) ○ 3 (neutraal) ○ 4 (eens) ○ 5 (zeer eens)

17. De praktijkgroep waarvoor ik werk biedt haar bestaande juridische diensten efficiënt aan.

○ 1 (zeer oneens) ○ 2 (oneens) ○ 3 (neutraal) ○ 4 (eens) ○ 5 (zeer eens)

18. Hoe vaak zijn collega's, werkzaam binnen dezelfde praktijkgroep, het oneens over de aard en inhoud van het werk dat wordt uitgevoerd?

○ 1 (zeer zelden) ○ 2 (zelden) ○ 3 (neutraal) ○ 4 (regelmatig) ○ 5 (zeer regelmatig)

19. Hoeveel conflicten heeft u met uw collega's, werkzaam binnen dezelfde praktijkgroep, over de aard en inhoud van het werk dat u uitvoert?

○ 1 (geen) ○ 2 (weinig) ○ 3 (neutraal) ○ 4 (veel) ○ 5 (zeer veel)

20. Hoe vaak ontstaan er conflicten tussen collega's, werkzaam binnen dezelfde praktijkgroep, die betrekking hebben op verschillende juridische inzichten?

○ 1 (zeer zelden) ○ 2 (zelden) ○ 3 (neutraal) ○ 4 (regelmatig) ○ 5 (zeer regelmatig)

21. In welke mate bestaan er binnen uw praktijkgroep verschillen van mening?

○ 1 (geen) ○ 2 (weinig) ○ 3 (neutraal) ○ 4 (veel) ○ 5 (zeer veel)

22. Binnen welk juridisch dienstverleningssegment is de praktijkgroep waarvoor u werkzaam bent actief?

○ Corporate / M&A ○ Banking & finance ○ Tax ○ Notary ○ Litigation & dispute resolution ○ IP, data privacy & technology

○ Regulatory ○ Ander segment

23. Uit hoeveel praktijkgroepen bestaat het advocatenkantoor waarvoor u werkt in Nederland? Indien u het niet exact weet dan volstaat een schatting.

_____

24. Hoeveel advocaten zijn werkzaam binnen de praktijkgroep waarvoor u werkzaam bent?

_____

25. Hoeveel jaar bestaat de praktijkgroep waarvoor u werkzaam bent? Indien u het niet exact weet dan volstaat een schatting.

_____

26. Hoeveel jaar gecumuleerde werkervaring is er aanwezig binnen de praktijkgroep waarvoor u werkt? Indien u het niet exact weet dan volstaat een schatting.

_____

Appendix II   Detection of common method bias - Harman's single factor test

Total Variance Explained						
	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	6,482	32,412	32,412	6,482	32,412	32,412
2	2,528	12,642	45,054			
3	1,628	8,142	53,196			
4	1,089	5,445	58,640			
5	,910	4,551	63,192			
6	,816	4,078	67,270			
7	,775	3,876	71,146			
8	,687	3,433	74,579			
9	,613	3,065	77,644			
10	,570	2,851	80,495			
11	,538	2,692	83,187			
12	,522	2,612	85,799			
13	,488	2,440	88,240			
14	,440	2,202	90,441			
15	,435	2,176	92,617			
16	,388	1,938	94,556			
17	,373	1,864	96,419			
18	,301	1,506	97,926			
19	,251	1,255	99,181			
20	,164	,819	100,000			
Extraction Method: Principal Component Analysis.						

Appendix III   Survey questions

Practice group performance	De praktijkgroep waarvoor ik werk bereikt haar volle potentieel.
	Mijn collega's die werkzaam zijn voor dezelfde praktijkgroep zijn tevreden over de prestaties van de praktijkgroep.
	De praktijkgroep waarvoor ik werk is succesvol in het tevreden houden van haar cliënten.
	De praktijkgroep waarvoor ik werk biedt mij de mogelijkheid en motiveert mij om naar maximaal vermogen te presteren.
Exploratory learning	De praktijkgroep waarvoor ik werk is een pionier gebleken in de ontwikkeling van nieuwe juridische benaderingswijzen, concepten of technieken welke vraagstukken van cliënten hebben opgelost.
	De praktijkgroep waarvoor ik werk heeft, alvorens naar nieuw type cliënten te zoeken, versneld nieuwe kennis en vaardigheden opgedaan.
	De praktijkgroep waarvoor ik werk heeft in meerdere bedrijfstakken / sectoren, waar de praktijkgroep nog geen ervaring had, haar juridische dienstverlening uitgebreid.
	De praktijkgroep waarvoor ik werk heeft succesvol veel nieuwe juridische diensten op de markt gebracht.
	De praktijkgroep waarvoor ik werk heeft succesvol nieuwe juridische diensten ontwikkeld welke tot stand komen door het aanwenden van geheel vernieuwde werkwijzen en technieken.
	De praktijkgroep waarvoor ik werk heeft succesvol nieuw soortige / innoverende juridische diensten aangeboden.
Exploitative learning	De praktijkgroep waarvoor ik werk wendt haar ervaring binnen juridische kennisgebieden bewust aan ten einde de zorgen en problemen van cliënten diepgaand te doorgronden.
	De praktijkgroep waarvoor ik werk richt zich op het verfijnen en versterken van de aanwezige kennisbasis.
	De praktijkgroep waarvoor ik werk onderhoudt en verbetert langdurige cliëntrelaties.
	De praktijkgroep waarvoor ik werk verwerft nieuwe cliënten waarop onze bestaande en goed functionerende juridische aanpak wordt toegepast.
	De juridische diensten, welke tot drie jaar geleden zijn aangeboden, worden vandaag de dag nog steeds effectief door de praktijkgroep waarvoor ik werk toegepast.
	De praktijkgroep waarvoor ik werk biedt haar bestaande juridische diensten efficiënt aan.
Task conflict	Hoe vaak zijn collega's, werkzaam binnen dezelfde praktijkgroep, het oneens over de aard en inhoud van het werk dat wordt uitgevoerd?

	Hoeveel conflicten heeft u met uw collega's, werkzaam binnen dezelfde praktijkgroep, over de aard en inhoud van het werk dat u uitvoert?
	Hoe vaak ontstaan er conflicten tussen collega's, werkzaam binnen dezelfde praktijkgroep, die betrekking hebben op verschillende juridische inzichten?
	In welke mate bestaan er binnen uw praktijkgroep verschillen van mening?
Control variables	Uit hoeveel praktijkgroepen bestaat het advocatenkantoor waarvoor u werkt in Nederland? Indien u het niet exact weet dan volstaat een schatting.
	Hoeveel advocaten zijn werkzaam binnen de praktijkgroep waarvoor u werkzaam bent?
	Hoeveel jaar bestaat de praktijkgroep waarvoor u werkzaam bent? Indien u het niet exact weet dan volstaat een schatting.
	Hoeveel jaar gecumuleerde werkervaring is er aanwezig binnen de praktijkgroep waarvoor u werkt? Indien u het niet exact weet dan volstaat een schatting.

Appendix IV   Reliability & validity

<u>Item statistics</u>

		N	%
Cases	Valid	248	100,0
	Excluded[a]	0	,0
	Total	248	100,0

			Statistic	Std. Error
Practice group performance	Mean		3,7408	,03897
	95% Confidence Interval for Mean	Lower Bound	3,6641	
		Upper Bound	3,8176	
	5% Trimmed Mean		3,7578	
	Median		3,7500	
	Variance		,377	
	Std. Deviation		,61377	
	Minimum		2,00	
	Maximum		5,00	
	Range		3,00	
	Interquartile Range		1,00	
	Skewness		-,430	,155
	Kurtosis		-,157	,308
Contextual ambidextrous learning	Mean		,649793946012545	,008105266126122
	95% Confidence Interval for Mean	Lower Bound	,633829694255851	
		Upper Bound	,665758197769239	
	5% Trimmed Mean		,650121471774194	
	Median		,659444444444444	
	Variance		,016	
	Std. Deviation		,127641858596099	
	Minimum		,3388888888888889	
	Maximum		1,0000000000000000	
	Range		,6611111111111111	

	Interquartile Range		,1921229166666667	
	Skewness		-,096	,155
	Kurtosis		-,502	,308
Task conflict	Mean		2,387349	,0376253
	95% Confidence Interval for Mean	Lower Bound	2,313241	
		Upper Bound	2,461456	
	5% Trimmed Mean		2,366991	
	Median		2,250000	
	Variance		,351	
	Std. Deviation		,5925242	
	Minimum		1,0000	
	Maximum		4,2500	
	Range		3,2500	
	Interquartile Range		,7500	
	Skewness		,550	,155
	Kurtosis		,040	,308

Reliability – Cronbach's alpha

Practice group performance scale	Cronbach's Alpha Based on Standardized Items	N of Items
,783	,796	4

Exploratory learning scale	Cronbach's Alpha Based on Standardized Items	N of Items
,871	,871	6

Exploitative learning scale	Cronbach's Alpha Based on Standardized Items	N of Items
,769	,769	6

Task conflict scale	Cronbach's Alpha Based on Standardized Items	N of Items
,728	,728	4

Reliability – Inter-item correlations

Practice group performance scale	Perform1	Perform2	Perform3	Perform4
Perform1	1,000	,550	,453	,493
Perform2	,550	1,000	,468	,502
Perform3	,453	,468	1,000	,499
Perform4	,493	,502	,499	1,000

Exploratory learning scale	Explore1	Explore2	Explore3	Explore4	Explore5	Explore6
Explore1	1,000	,479	,326	,563	,604	,602
Explore2	,479	1,000	,511	,426	,455	,406
Explore3	,326	,511	1,000	,439	,413	,433
Explore4	,563	,426	,439	1,000	,753	,728
Explore5	,604	,455	,413	,753	1,000	,803
Explore6	,602	,406	,433	,728	,803	1,000

Exploitative learning scale	Exploit1	Exploit2	Exploit3	Exploit4	Exploit5	Exploit6
Exploit1	1,000	,415	,374	,325	,215	,327
Exploit2	,415	1,000	,447	,394	,210	,375
Exploit3	,374	,447	1,000	,392	,279	,459
Exploit4	,325	,394	,392	1,000	,313	,426
Exploit5	,215	,210	,279	,313	1,000	,405
Exploit6	,327	,375	,459	,426	,405	1,000

Task conflict scale	TC1	TC2	TC3	TC4
TC1	1,000	,478	,420	,305
TC2	,478	1,000	,441	,386
TC3	,420	,441	1,000	,374
TC4	,305	,386	,374	1,000

Reliability – Item-two-total correlations

Practice group performance scale	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Perform1	11,7045	3,242	,611	,386	,722
Perform2	11,2168	3,899	,628	,399	,717
Perform3	10,7700	4,267	,576	,334	,748
Perform4	11,1993	3,135	,608	,376	,728

Exploratory learning scale	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Explore1	15,7720	12,795	,651	,459	,854
Explore2	15,9492	14,308	,562	,384	,867
Explore3	15,5317	14,661	,515	,336	,874
Explore4	16,1567	13,232	,753	,627	,836
Explore5	16,3300	12,618	,790	,719	,828
Explore6	16,1849	12,670	,773	,698	,831

Exploitative learning scale	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Exploit1	19,9663	5,673	,473	,242	,747
Exploit2	19,9902	5,576	,534	,315	,730
Exploit3	19,7768	5,683	,571	,338	,722
Exploit4	20,1200	5,708	,534	,289	,730
Exploit5	20,1198	6,232	,397	,195	,763
Exploit6	20,3624	5,381	,577	,354	,718

Task conflict scale	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
TC1	7,0292	3,299	,519	,289	,667
TC2	7,5129	3,394	,574	,333	,634
TC3	7,3510	3,362	,535	,286	,656
TC4	6,7550	3,733	,445	,207	,706

Validity – the correlation-matrix approach

		Explore1	Explore2	Explore3	Explore4	Explore5	Explore6	Exploit1	Exploit2	Exploit3	Exploit4	Exploit5	Exploit6	TC1	TC2	TC3	TC4
Correlation	Explore1	1,000	,479	,326	,563	,604	,602	,241	,441	,324	,343	,101	,297	-,088	-,156	-,209	-,111
	Explore2	,479	1,000	,511	,426	,455	,406	,206	,310	,251	,354	,074	,251	,043	-,131	-,089	-,061
	Explore3	,326	,511	1,000	,439	,413	,433	,204	,297	,241	,399	,079	,163	-,063	-,140	-,214	-,054
	Explore4	,563	,426	,439	1,000	,753	,728	,242	,305	,265	,349	,047	,243	-,031	-,169	-,219	-,089
	Explore5	,604	,455	,413	,753	1,000	,803	,245	,303	,249	,335	-,007	,219	-,017	-,116	-,184	-,099
	Explore6	,602	,406	,433	,728	,803	1,000	,222	,351	,245	,339	,020	,215	-,050	-,155	-,167	-,073
	Exploit1	,241	,206	,204	,242	,245	,222	1,000	,415	,374	,325	,215	,327	-,195	-,136	-,155	-,035
	Exploit2	,441	,310	,297	,305	,303	,351	,415	1,000	,447	,394	,210	,375	-,128	-,183	-,152	-,091
	Exploit3	,324	,251	,241	,265	,249	,245	,374	,447	1,000	,392	,279	,459	-,158	-,216	-,149	,007
	Exploit4	,343	,354	,399	,349	,335	,339	,325	,394	,392	1,000	,313	,426	-,252	-,288	-,314	-,158
	Exploit5	,101	,074	,079	,047	-,007	,020	,215	,210	,279	,313	1,000	,405	-,185	-,114	-,147	-,083
	Exploit6	,297	,251	,163	,243	,219	,215	,327	,375	,459	,426	,405	1,000	-,292	-,241	-,203	-,199
	TC1	-,088	,043	-,063	-,031	-,017	-,050	-,195	-,128	-,158	-,252	-,185	-,292	1,000	,478	,420	,305
	TC2	-,156	-,131	-,140	-,169	-,116	-,155	-,136	-,183	-,216	-,288	-,114	-,241	,478	1,000	,441	,386
	TC3	-,209	-,089	-,214	-,219	-,184	-,167	-,155	-,152	-,149	-,314	-,147	-,203	,420	,441	1,000	,374
	TC4	-,111	-,061	-,054	-,089	-,099	-,073	-,035	-,091	,007	-,158	-,083	-,199	,305	,386	,374	1,000
Sig. (1-tailed)	Explore1		,000	,000	,000	,000	,000	,000	,000	,000	,000	,056	,000	,085	,007	,000	,040
	Explore2	,000		,000	,000	,000	,000	,001	,000	,000	,000	,123	,000	,251	,019	,081	,170
	Explore3	,000	,000		,000	,000	,000	,001	,000	,000	,000	,107	,005	,163	,014	,000	,199
	Explore4	,000	,000	,000		,000	,000	,000	,000	,000	,000	,230	,000	,315	,004	,000	,082
	Explore5	,000	,000	,000	,000		,000	,000	,000	,000	,000	,459	,000	,397	,034	,002	,061
	Explore6	,000	,000	,000	,000	,000		,000	,000	,000	,000	,376	,000	,215	,007	,004	,126
	Exploit1	,000	,001	,001	,000	,000	,000		,000	,000	,000	,000	,000	,001	,016	,007	,290
	Exploit2	,000	,000	,000	,000	,000	,000	,000		,000	,000	,000	,000	,022	,002	,008	,075
	Exploit3	,000	,000	,000	,000	,000	,000	,000	,000		,000	,000	,000	,006	,000	,010	,458
	Exploit4	,000	,000	,000	,000	,000	,000	,000	,000	,000		,000	,000	,000	,000	,000	,006
	Exploit5	,056	,123	,107	,230	,459	,376	,000	,000	,000	,000		,000	,002	,037	,010	,097
	Exploit6	,000	,000	,005	,000	,000	,000	,000	,000	,000	,000	,000		,000	,000	,001	,001
	TC1	,085	,251	,163	,315	,397	,215	,001	,022	,006	,000	,002	,000		,000	,000	,000
	TC2	,007	,019	,014	,004	,034	,007	,016	,002	,000	,000	,037	,000	,000		,000	,000
	TC3	,000	,081	,000	,000	,002	,004	,007	,008	,010	,000	,010	,001	,000	,000		,000
	TC4	,040	,170	,199	,082	,061	,126	,290	,075	,458	,006	,097	,001	,000	,000	,000	

Validity – principal component analysis

Rotated Component Matrixª	Component		
	1	2	3
Explore1	0,720		
Explore2	0,632		
Explore3	0,598		
Explore4	0,840		
Explore5	0,882		
Explore6	0,864		
Exploit1		0,606	
Exploit2		0,606	

		0,711	
Exploit3		0,711	
Exploit4		0,552	
Exploit5		0,652	
Exploit6		0,699	
TC1			0,715
TC2			0,749
TC3			0,734
TC4			0,708
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.[a]			
a. Rotation converged in 8 iterations.			

Validity – average variance extracted (AVE)

	Exploratory learning					
	λ	λ^2	ε		n	6
	0,7201943	0,51867983	0,48132017		AVE	0,58438557
	0,63234375	0,39985862	0,60014138			
	0,59780068	0,35736565	0,64263435			
	0,83971917	0,70512829	0,29487171			
	0,88229798	0,77844973	0,22155027			
	0,86419403	0,74683132	0,25316868			
Sum	4,53654992	3,50631345	2,49368655			

	Exploitative learning					
	λ	λ^2	ε		n	6
	0,60649924	0,36784133	0,63215867		AVE	0,40983003
	0,60590069	0,36711565	0,63288435			
	0,71120503	0,5058126	0,4941874			
	0,55222597	0,30495352	0,69504648			
	0,65201306	0,42512103	0,57487897			
	0,69866733	0,48813603	0,51186397			
Sum	3,82651132	2,45898016	3,54101984			

	Task conflict					
	λ	λ^2	ε		n	4
	0,71497767	0,51119307	0,48880693		AVE	0,52815167
	0,74906301	0,5610954	0,4389046			
	0,73384194	0,53852399	0,46147601			
	0,70837435	0,50179422	0,49820578			

Sum	2,90625697	2,11260667	1,88739333			

Appendix V   Missing data

Total number of respondents	Included respondents that incomplete (2 or less questions not replied to, item mean included)	Deleted resondents due to non representativity	Deleted respondents due to full non response	Final number of included respondents
260	25	4	8	248

Appendix VI   Outliers and normality

<u>Outliers – boxplots of model variables</u>

  ➢ Practice group performance
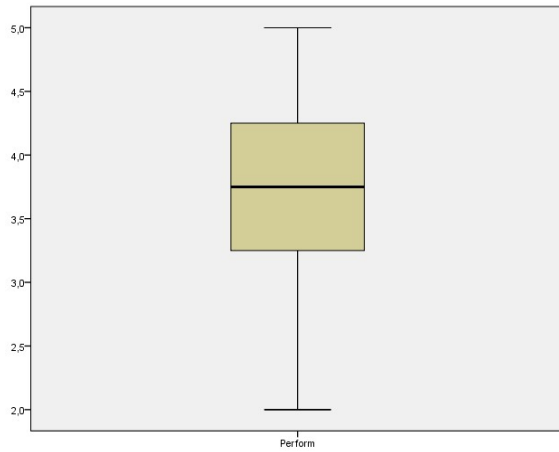
  ➢ Contextual ambidextrous learning
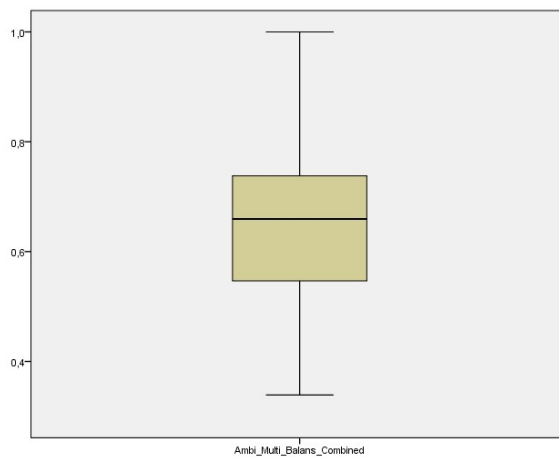
  ➢ Task conflict
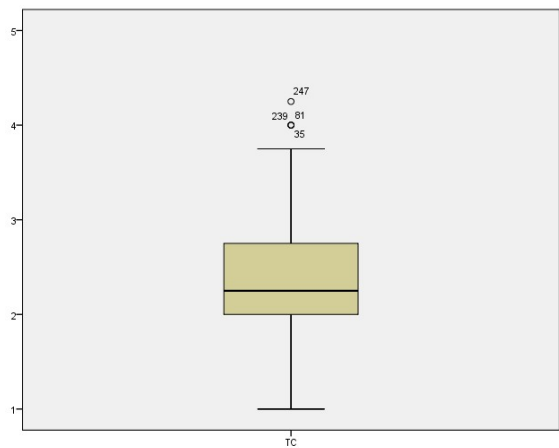
Outliers – stem-and-leaf plots

> Practice group performance

Frequency   Stem & Leaf
2,00   2,00
4,00   2,2222
5,00   2,55555
12,00   2,777777777777
,00   2
22,00   3,0000000000000000000001
21,00   3, 222222222222222222222
27,00   3,455555555555555555555555555
39,00   3,777777777777777777777777777777777777777
1,00   3,9
48,00   4, 000000000000000000000000000000000000000000000011
34,00   4,2222222222222222222222222222222222
17,00   4,55555555555555555
13,00   4,7777777777777
,00   4
3,00   5,000
Stem width: 1,00
Each leaf: 1 case(s)

> Conceptual ambidextrous learning

Frequency   Stem & Leaf
1,00   3,3
5,00   3,56779
9,00   4,133334444
24,00   4,555556667777888888999999
24,00   5,011122222333333333444444
19,00   5,5555555567888999999
36,00   6,000000000111111222222333334444444444
41,00   6,55555555555555666677777888888999999999999
31,00   7,0000111222222223333333333333444
27,00   7,555555566666677777888999999
19,00   8,0000111111122233444
8,00   8,55567779
3,00   9,033
,00   9
1,00   10,00
Stem width: ,1000000
Each leaf: 1 case(s)

➢ Task conflict

```
Frequency     Stem &  Leaf
1,00              1,0
3,00              1,222
14,00             1,55555555555555
28,00             1,7777777777777777777777777777
,00               1 .
46,00             2,0000000000000000000000000000000000000000000000
45,00             2,222222222222222222222222222222222222222222222
38,00             2,55555555555555555555555555555555555555
19,00             2,7777777777777777777
,00               2 .
23,00             3,00000000000000000000000
15,00             3,222222222222222
9,00              3,555555555
3,00              3,777
4,00          Extremes    (>=4,0)
Stem width:       1,0000
Each leaf:        1 case(s)
```

Outliers – extreme values

			Case Number	Value
Practice group performance	Highest	1	5	5,00
		2	74	5,00
		3	162	5,00
		4	3	4,75
		5	13	4,75[a]
	Lowest	1	246	2,00
		2	206	2,00
		3	248	2,25
		4	247	2,25
		5	118	2,25[b]
Contextual ambidextrous learning	Highest	1	1	1,0000000000000000
		2	3	,9355555555555557
		3	2	,9302777777777779
		4	10	,9050000000000000
		5	5	,8991666666666667
	Lowest	1	247	,3388888888888889
		2	248	,3552777777777778
		3	207	,3675000000000000
		4	246	,3708333333333334
		5	239	,3722222222222222
Task conflict	Highest	1	247	4,2500
		2	35	4,0000
		3	81	4,0000
		4	239	4,0000
		5	166	3,7500[c]
	Lowest	1	10	1,0000
		2	130	1,2500
		3	126	1,2500
		4	117	1,2500
		5	203	1,5000[d]
a. Only a partial list of cases with the value 4,75 are shown in the table of upper extremes.				
b. Only a partial list of cases with the value 2,25 are shown in the table of lower extremes.				
c. Only a partial list of cases with the value 3,7500 are shown in the table of upper extremes.				

Normality – histograms

> ### Practice group performance
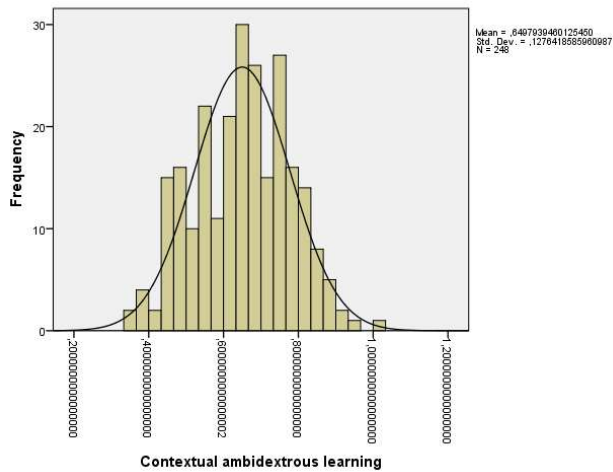
> ### Contextual ambidextrous learning
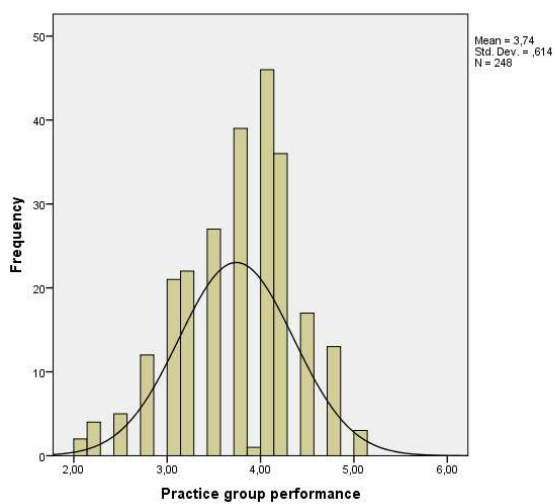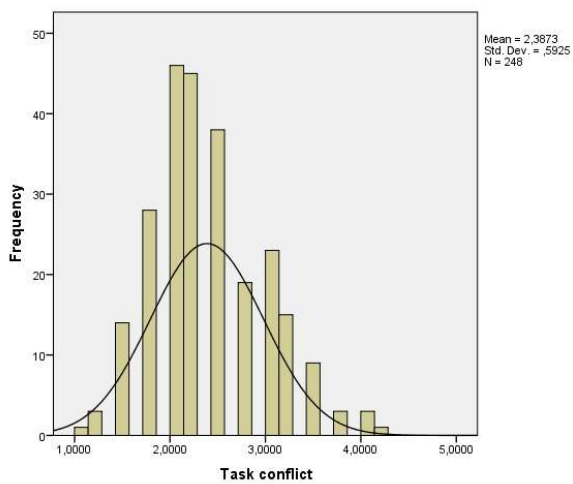
➢ Task conflict

Normality – normal QQ plots

➢ Practice group performance
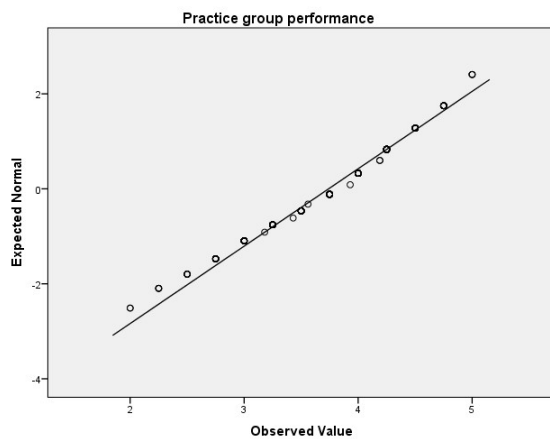
➢ Conceptual ambidextrous learning
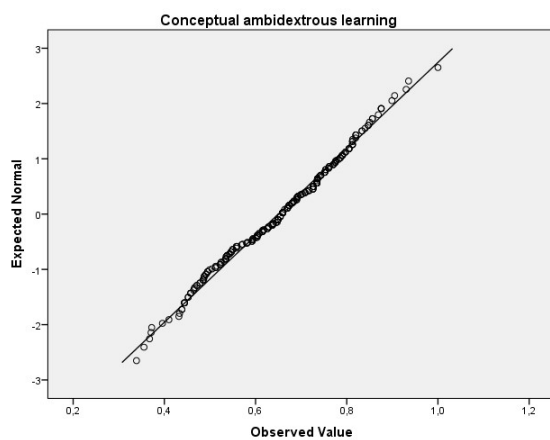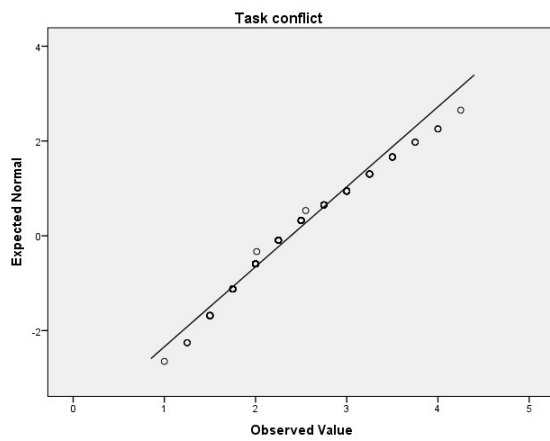
➤ Task conflict

Normaility – Detrended QQ plots

➤ Practice group performance
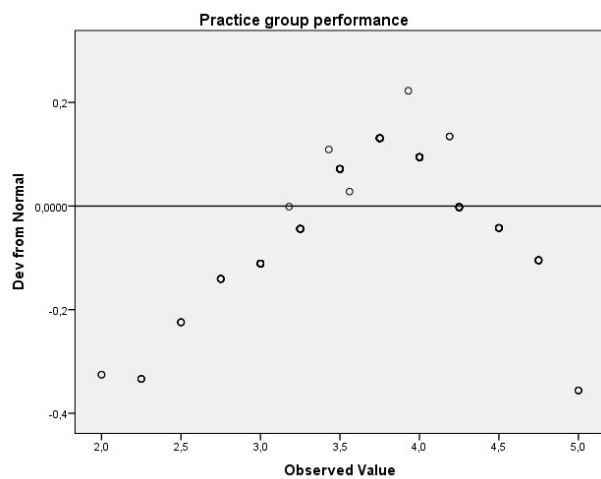
➤ Conceptual ambidextrous learning
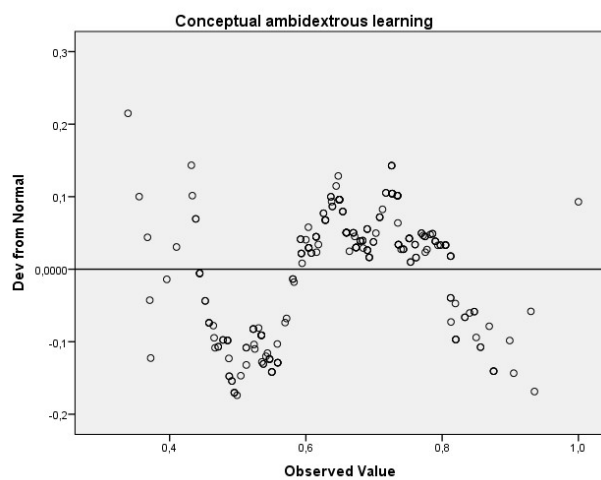
➢ Task conflict

Task conflict

Appendix VII   Linearity

Practice group perform — Contextual ambidextrous learning
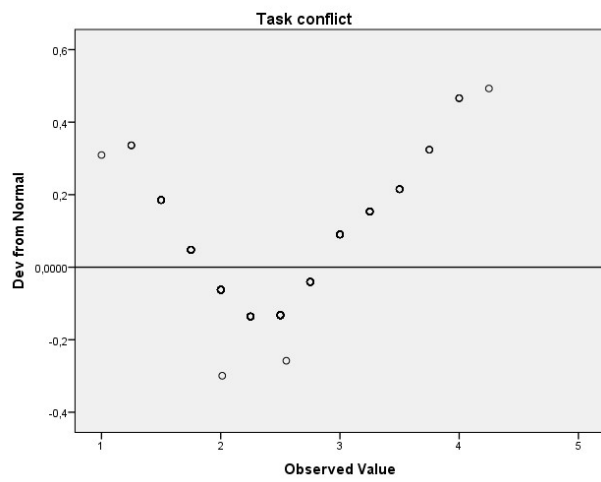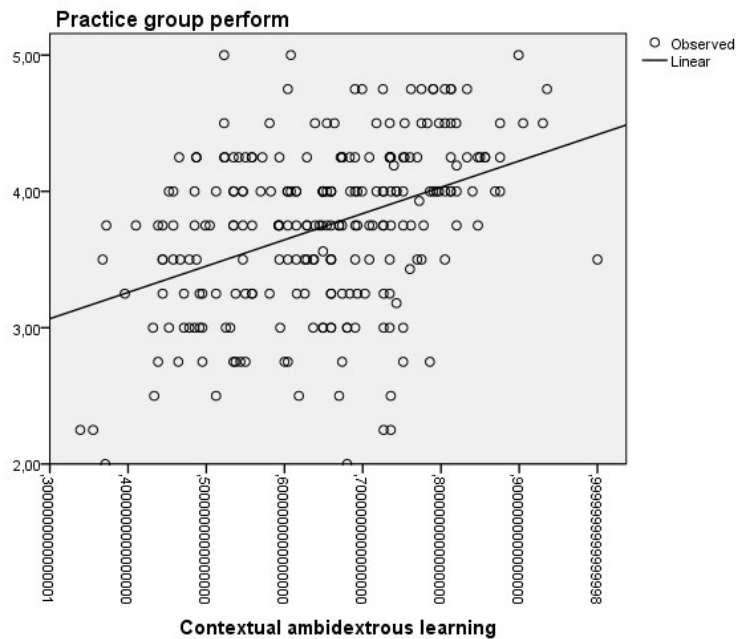
Model Summary			
R	R Square	Adjusted R Square	Std. Error of the Estimate
,401	,161	,157	,563
The independent variable is contextual ambidextrous learning			

ANOVA					
	Sum of Squares	df	Mean Square	F	Sig.
Regression	14,969	1	14,969	47,160	,000
Residual	78,081	246	,317		
Total	93,050	247			
The independent variable is contextual ambidextrous learning.					

Coefficients					
	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
Contextual ambidextrous learning	1,929	,281	,401	6,867	,000
(Constant)	2,488	,186		13,377	,000

Appendix VIII Homoscedasticity

Scatterplot
Practice group performance
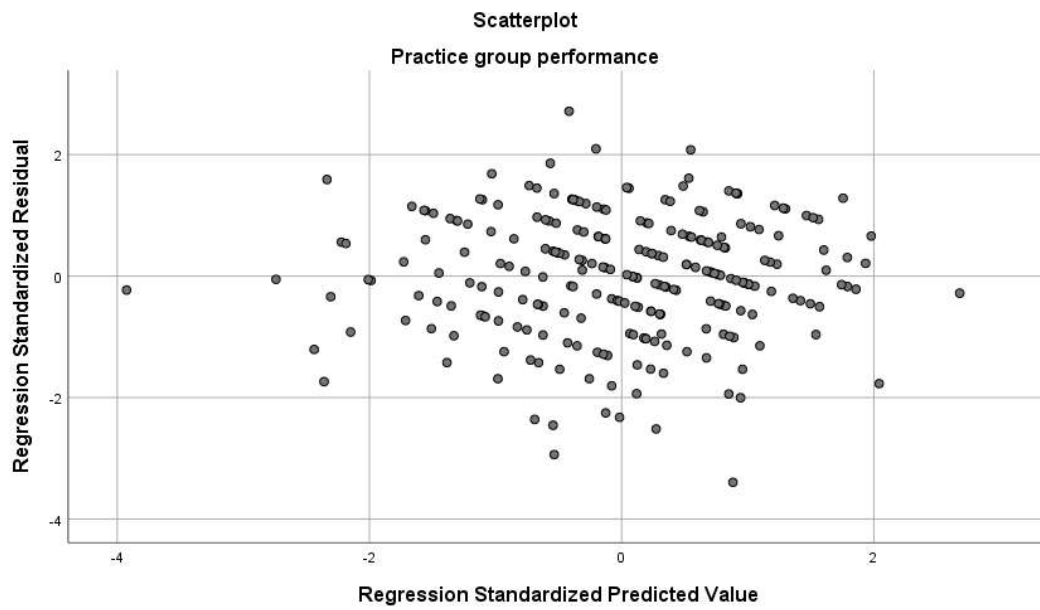
Appendix IX   Multicollinearity

Correlation matrix

Correlations

		Practice group performance	Contextual ambidextrous learning	Task conflict	Qty Practicegroups	Qty laywers Practicegroup	Years Practicegroup	Cummulated Workingexperience Practicegroup
Practice group performance	Pearson Correlation	1	,401**	-,455**	0,011	-0,003	0,083	0,024
	Sig. (2-tailed)		0	0	0,859	0,964	0,191	0,704
	N	248	248	248	246	248	248	248
Contextual ambidextrous learning	Pearson Correlation	,401**	1	-,166**	0,01	0,032	0,003	-0,023
	Sig. (2-tailed)	0		0,009	0,879	0,62	0,96	0,722
	N	248	248	248	246	248	248	248
Task conflict	Pearson Correlation	-,455**	-,166**	1	-0,039	0,04	0,066	-0,001
	Sig. (2-tailed)	0	0,009		0,538	0,532	0,301	0,991
	N	248	248	248	246	248	248	248
Qty Practicegroups	Pearson Correlation	0,011	0,01	-0,039	1	0,048	,130*	,151*
	Sig. (2-tailed)	0,859	0,879	0,538		0,457	0,041	0,018
	N	246	246	246	246	246	246	246
Qty laywers Practicegroup	Pearson Correlation	-0,003	0,032	0,04	0,048	1	,212**	,488**
	Sig. (2-tailed)	0,964	0,62	0,532	0,457		0,001	0
	N	248	248	248	246	248	248	248
Years Practicegroup	Pearson Correlation	0,083	0,003	0,066	,130*	,212**	1	,304**
	Sig. (2-tailed)	0,191	0,96	0,301	0,041	0,001		0
	N	248	248	248	246	248	248	248
Cummulated Workingexperience Practicegroup	Pearson Correlation	0,024	-0,023	-0,001	,151*	,488**	,304**	1
	Sig. (2-tailed)	0,704	0,722	0,991	0,018	0	0	
	N	248	248	248	246	248	248	248

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

Variance inflation factors (VIF)

> Practice group performance included as independent variable

		Collinearity Statistics	
Model		Tolerance	VIF
1	Contextual ambidextrous learning	,972	1,028
	Task conflct	,972	1,028

> Contextual ambidextrous learning included as independent variable

		Collinearity Statistics	
Model		Tolerance	VIF
1	TC	,793	1,261
	Perform	,793	1,261

> Task conflict included as independent variable

		Collinearity Statistics	
Model		Tolerance	VIF
1	Practice group performance	,839	1,192
	Contextual ambidextrous learning	,839	1,192

Appendix X   Multiple hierarchical regression analysis

Step 1: inclusion control variables into the model

➢ Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,086[a]	,007	-,009	,61649

➢ Analysis of variance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	,694	4	,174	,457	,768[b]
	Residual	92,356	243	,380		
	Total	93,050	247			

➢ Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	3,687	,066		55,725	,000
	Number of practice groups	0,000019	,002	,001	,010	,992
	Number of lawyers within practice group	-0,000437	,001	-,026	-,360	,719
	Number of years of existence of practice group	0,002	,002	,085	1,264	,208
	Cumulated working experience within practice group	0,000026	,000178	,011	,147	,883
a. Dependent Variable: Practice group performance						

Step 2: Inclusion independent variable contextual ambidextrous learning

➢ Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,086[a]	,007	-,009	,61649
2	,412[b]	,169	,152	,56510

➤ Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3,687	,066		55,725	,000
	Number of practice groups	0,000019	,002	,001	,010	,992
	Number of lawyers within practice group	,000437	,001	-,026	-,360	,719
	Number of years of existence of practice group	0,002	,002	,085	1,264	,208
	Cumulated working experience within practice group	0,0026	,000178	,011	,147	,883
2	(Constant)	3,691	,061		60,857	,000
	Number of practice groups	0,000123	,002	-,004	-,073	,942
	Number of lawyers within practice group	-0,001	,001	-,049	-,727	,468
	Number of years of existence of practice group	0,002	,002	,083	1,340	,182
	Cumulated working experience within practice group	0,000077	,000163	,033	,471	,638
	Contextual ambidextrous learning	1,939	,066	,403	6,871	,000
a. Dependent Variable: Practice group performance						

➤ Analysis of variance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	,694	4	,174	,457	,768[b]
	Residual	92,356	243	,380		
	Total	93,050	247			
2	Regression	15,771	5	3,154	9,877	,000[c]
	Residual	77,279	242	,319		
	Total	93,050	247			
a. Dependent Variable: Practice group performance						

Step 3: Inclusion moderating variable

➤ Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,086[a]	,007	-,009	,61649
2	,412[b]	,169	,152	,56510
3	,574[c]	,330	,310	,50974

➢ Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3,687	,066		55,725	,000
	Number of practice groups	,000019	,002	,001	,010	,992
	Number of lawyers within practice group	,000437	,001	-,026	-,360	,719
	Number of years of existence of practice group	0,002	,002	,085	1,264	,208
	Cumulated working experience within practice group	0,0026	,000178	,011	,147	,883
2	(Constant)	3,691	,061		60,857	,000
	Number of practice groups	0,000123	,002	-,004	-,073	,942
	Number of lawyers within practice group	-0,001	,001	-,049	-,727	,468
	Number of years of existence of practice group	0,002	,002	,083	1,340	,182
	Cumulated working experience within practice group	0,000077	,000163	,033	,471	,638
	Contextual ambidextrous learning	1,939	,282	,403	6,871	,000
3	(Constant)	3,676	,055		66,884	,000
	Number of practice groups	-,001	,002	-,024	-,442	,659
	Number of lawyers within practice group	,000432	,001	-,026	-,429	,668
	Number of years of existence of practice group	,003	,002	,115	2,055	,041
	Cumulated working experience within practice group	0,000026	,000148	,011	,177	,860
	Contextual ambidextrous learning	1,600	,259	,333	6,187	,000
	Task conflict	-,419	,056	-,404	-7,482	,000
	Contextual ambidextrous learning x task conflict	,231	,375	,033	,615	,539

a. Dependent Variable: Practice group performance

➢ Analysis of variance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	,694	4	,174	,457	,768[b]
	Residual	92,356	243	,380		
	Total	93,050	247			
2	Regression	15,771	5	3,154	9,877	,000[c]
	Residual	77,279	242	,319		
	Total	93,050	247			
3	Regression	30,689	7	4,384	16,873	,000[d]
	Residual	62,361	240	,260		
	Total	93,050	247			

a. Dependent Variable: Perform

Appendix XI   Descriptive statistics and correlations

	Variables (N=248)	Mean	SD	1	2	3	4	5	6	7	8
1	Practice group performance	3,72	0,62								
2	Contextual ambidextrous learning	0,65	0,13	,377**							
3	Task conflict	2,38	0,59	-,442**	-,163**						
4	Exploratory learning	3,18	0,73	,433**	,968**	-,185**					
5	Exploitative learning	4,00	0,46	,609**	,347**	-,333**	,454**				
6	Number of practice groups	11,46	21,28	0,02	0,01	-0,04	0,05	0,01			
7	Number of lawyers within practice group	28,75	36,12	0,01	0,06	0,02	0,03	-0,11	0,05		
8	Number of years of existence of practice group	26,96	23,25	0,12	0,04	0,05	0,07	0,06	,125*	,246**	
9	Cumulated working experience within practice group	210,64	276,79	0,06	0,05	-0,03	0,11	0,04	,149*	,459**	,241**

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Appendix XII   Robustness analyses – alternative operationalizations

Multiplicative operationalization

➢ Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	,086[a]	,007	-,009	,61649	,007	,457	4	243	,768
2	,582[b]	,339	,325	,50423	,331	121,255	1	242	,000
3	,667[c]	,445	,428	,46407	,106	22,848	2	240	,000

➢ Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3,687	,066		55,725	,000
	Number of practice groups	,000019	,002	,001	,010	,992
	Number of lawyers within practice group	,000	,001	-,026	-,360	,719
	Number of years of existence of practice group	,002	,002	,085	1,264	,208
	Cumulated working experience within practice group	,000026	,000178	,011	,147	,883
2	(Constant)	3,699	,054		68,350	,000
	Number of practice groups	,000	,002	-,010	-,195	,845
	Number of lawyers within practice group	,000028	,001	,002	,029	,977
	Number of years of existence of practice group	,002	,002	,059	1,070	,286
	Cumulated working experience within practice group	,000007	,000146	,003	,051	,959
	Contextual ambidextrous learning	,093	,008	,577	11,012	,000
3	(Constant)	3,692	,050		73,135	,000
	Number of practice groups	-,001	,001	-,028	-,561	,575
	Number of lawyers within practice group	,000	,001	,016	,287	,775
	Number of years of existence of practice group	,002	,001	,089	1,738	,083
	Cumulated working experience within practice group	-,000031	,000135	-,013	-,231	,818
	Contextual ambidextrous learning	,078	,008	,482	9,587	,000
	Task conflict	-,342	,052	-,330	-6,566	,000
	Contextual ambidextrous learning x task conflict	,013	,012	,054	1,090	,277
a. Dependent Variable: Practice group performance						

Analysis of variance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	,694	4	,174	,457	,768[b]
	Residual	92,356	243	,380		
	Total	93,050	247			
2	Regression	31,523	5	6,305	24,797	,000[c]
	Residual	61,527	242	,254		
	Total	93,050	247			
3	Regression	41,364	7	5,909	27,439	,000[d]
	Residual	51,686	240	,215		
	Total	93,050	247			

Additive operationalization

Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
					Change Statistics				
1	,086[a]	,007	-,009	,61649	,007	,457	4	243	,768
2	,603[b]	,364	,351	,49449	,357	135,694	1	242	,000
3	,675[c]	,456	,440	,45922	,092	20,305	2	240	,000

Coefficients

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	3,687	,066		55,725	,000
	Number of practice groups	,000019	,002	,001	,010	,992
	Number of lawyers within practice group	,000	,001	-,026	-,360	,719
	Number of years of existence of practice group	,002	,002	,085	1,264	,208
	Cumulated working experience within practice group	,000026	,000178	,011	,147	,883
2	(Constant)	3,696	,053		69,636	,000
	Number of practice groups	,000	,001	-,012	-,224	,823
	Number of lawyers within practice group	,000	,001	,024	,411	,682
	Number of years of existence of practice group	,002	,002	,061	1,133	,258
	Cumulated working experience within practice group	-,000035	,000143	-,015	-,243	,808
	Contextual ambidextrous learning	,359	,031	,599	11,649	,000
3	(Constant)	3,686	,050		73,794	,000
	Number of practice groups	-,001	,001	-,026	-,538	,591

Number of lawyers within practice group	,001	,001	,033	,598	,551
Number of years of existence of practice group	,003	,001	,089	1,768	,078
Cumulated working experience within practice group	-,000060	,000133	-,026	-,452	,651
Contextual ambidextrous learning	,300	,030	,502	9,852	,000
Task conflict	-,326	,052	-,315	-6,283	,000
Contextual ambidextrous learning x task conflict	,025	,042	,029	,593	,553
a. Dependent Variable: Practice group performance					

➢ Analysis of variance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	,694	4	,174	,457	,768[b]
	Residual	92,356	243	,380		
	Total	93,050	247			
2	Regression	33,875	5	6,775	27,706	,000[c]
	Residual	59,175	242	,245		
	Total	93,050	247			
3	Regression	42,438	7	6,063	28,749	,000[d]
	Residual	50,611	240	,211		
	Total	93,050	247			

Balanced operationalization

➢ Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	,086[a]	,007	-,009	,61649	,007	,457	4	243	,768
2	,139[b]	,019	-,001	,61409	,012	2,908	1	242	,089
3	,481[c]	,231	,208	,54607	,212	33,022	2	240	,000

➢ Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	3,687	,066		55,725	,000
	Number of practice groups	,000019	,002	,001	,010	,992
	Number of lawyers within practice group	,000	,001	-,026	-,360	,719
	Number of years of existence of practice group	,002	,002	,085	1,264	,208

	Cumulated working experience within practice group	,000026	,000178	,011	,147	,883
2	(Constant)	3,686	,066		55,933	,000
	Number of practice groups	,000013	,002	,000	,007	,994
	Number of lawyers within practice group	-,001	,001	-,043	-,588	,557
	Number of years of existence of practice group	,003	,002	,090	1,330	,185
	Cumulated working experience within practice group	,000055	,000178	,023	,309	,758
	Contextual ambidextrous learning	-,120	,070	-,110	-1,705	,089
3	(Constant)	3,667	,059		62,522	,000
	Number of practice groups	-,001	,002	-,020	-,353	,724
	Number of lawyers within practice group	,000	,001	-,020	-,303	,762
	Number of years of existence of practice group	,003	,002	,121	2,002	,046
	Cumulated working experience within practice group	,000014	,000159	,006	,085	,932
	Contextual ambidextrous learning	-,109	,062	-,100	-1,754	,081
	Task conflict	-,479	,059	-,462	-8,125	,000
	Contextual ambidextrous learning x task conflict	,050	,098	,029	,504	,614
a. Dependent Variable: Practice group performance						

➢ Analysis of variance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	,694	4	,174	,457	,768[b]
	Residual	92,356	243	,380		
	Total	93,050	247			
2	Regression	1,791	5	,358	,950	,449[c]
	Residual	91,259	242	,377		
	Total	93,050	247			
3	Regression	21,485	7	3,069	10,293	,000[d]
	Residual	71,565	240	,298		
	Total	93,050	247			

Appendix XIII Robustness analyses – Median split half regression analysis

Low task conflict – Contextual ambidextrous learning

> ➤ Model summary

					Change Statistics				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	,177[a]	,031	,003	,530472199633622	,031	1,096	4	127	,361
2	,432[b]	,186	,156	,487932584734265	,155	25,748	1	126	,000
3	,456[c]	,208	,167	,484962716605577	,022	1,829	2	124	,165

> ➤ Coefficients

		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
Model		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	3,824	,077		49,414	,000		
	Number of practice groups	-,001	,002	-,070	-,807	,421	,952	1,050
	Number of lawyers within practice group	,000	,001	-,014	-,146	,884	,759	1,318
	Number of years of existence of practice group	,004	,002	,144	1,629	,106	,911	1,098
	Cumulated working experience within practice group	,000	,000	,084	,871	,385	,761	1,313
2	(Constant)	3,838	,071		53,878	,000		
	Number of practice groups	-,001	,002	-,054	-,677	,500	,951	1,052
	Number of lawyers within practice group	-,001	,001	-,057	-,631	,529	,752	1,330
	Number of years of existence of practice group	,004	,002	,136	1,666	,098	,910	1,099
	Cumulated working experience within practice group	,000	,000	,096	1,075	,284	,761	1,314
	Contextual ambidextrous learning	1,577	,311	,396	5,074	,000	,988	1,012
3	(Constant)	3,846	,072		53,664	,000		
	Number of practice groups	-,001	,002	-,056	-,707	,481	,950	1,053
	Number of lawyers within practice group	-,001	,001	-,036	-,401	,689	,739	1,353
	Number of years of existence of practice group	,003	,002	,132	1,635	,104	,910	1,099
	Cumulated working experience within practice group	,000	,000	,062	,682	,496	,730	1,369
	Contextual ambidextrous learning	1,472	,314	,370	4,687	,000	,956	1,046
	Task conflict	-,290	,156	-,150	-1,854	,066	,904	1,106

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
	Contextual ambidextrous learning x task conflict	-,179	1,110	-,013	-,161	,872	,965	1,036
a. Dependent Variable: Practice group performance								

➢ Analysis of variance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1,233	4	,308	1,096	,361[b]
	Residual	38,271	127	,281		
	Total	39,504	131			
2	Regression	7,363	5	1,473	6,186	,000[c]
	Residual	32,141	126	,238		
	Total	39,504	131			
3	Regression	8,224	7	1,175	4,995	,000[d]
	Residual	31,280	124	,235		
	Total	39,504	131			

High task conflict – Contextual ambidextrous learning

➢ Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	,191[a]	,036	,002	,6289912	,036	1,049	4	111	,385
2	,389[b]	,152	,113	,5929068	,115	14,922	1	110	,000
3	,454[c]	,206	,155	,5787131	,055	3,731	2	108	,027

➢ Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	3,352	,099		33,843	,000		
	Number of practice groups	,002	,004	,047	,490	,625	,962	1,039
	Number of lawyers within practice group	-,001	,002	-,073	-,686	,494	,766	1,305
	Number of years of existence of practice group	,004	,002	,169	1,705	,091	,889	1,125
	Cumulated working experience within practice group	9,053E-5	,000	,043	,400	,690	,749	1,335
2	(Constant)	3,379	,094		36,090	,000		
	Number of practice groups	,001	,004	,016	,182	,856	,955	1,047

		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
	Number of lawyers within practice group	-,001	,002	-,061	-,607	,545	,766	1,306
	Number of years of existence of practice group	,004	,002	,158	1,696	,093	,888	1,126
	Cumulated working experience within practice group	3,011E-5	,000	,014	,141	,888	,745	1,342
	Contextual ambidextrous learning	1,697	,439	,342	3,863	,000	,983	1,018
3	(Constant)	3,377	,091		36,947	,000		
	Number of practice groups	,001	,004	,027	,308	,759	,949	1,053
	Number of lawyers within practice group	-,001	,002	-,062	-,631	,529	,757	1,321
	Number of years of existence of practice group	,004	,002	,171	1,817	,072	,833	1,200
	Cumulated working experience within practice group	1,255E-5	,000	,006	,060	,952	,744	1,344
	Contextual ambidextrous learning	1,419	,446	,286	3,181	,002	,908	1,101
	Task conflict	-,323	,135	-,214	-2,395	,018	,922	1,084
	Contextual ambidextrous learning x task conflict	,705	,899	,073	,785	,434	,849	1,178

a. Dependent Variable: Practice group performance

> Analysis of variance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1,661	4	,415	1,049	,385[b]
	Residual	43,915	111	,396		
	Total	45,576	115			
2	Regression	6,906	5	1,381	3,929	,003[c]
	Residual	38,669	110	,352		
	Total	45,576	115			
3	Regression	9,405	7	1,344	4,012	,001[d]
	Residual	36,170	108	,335		
	Total	45,576	115			