

MASTER THESIS

An exploratory study examining the role of personality traits on individual ambidexterity



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An exploratory study examining the role of personality traits on individual ambidexterity

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Executive Summary

Janus, the Roman god, had two pairs of eyes, one focused on what lay behind him and the other on what lay ahead of him. Corporate employers and business leaders must be able to relate to it. They also should continuously look behind, responding to previous products and procedures, while simultaneously moving forward, anticipating upcoming developments. Adapting to the market's rapidly evolving environment presents obstacles that businesses must complete in order to both thrive in the long term and also achieve short-term objectives. Companies that have focused solely on the past instead of just the future, or conversely, have frequently struggled or dissolved. Several people have concluded ambidexterity as a fix to such problems. Ambidexterity exists at different levels such as organization, team, top management and individual level. The subject of organizational ambidexterity has received a lot of attention, but the field of individual ambidexterity has gotten a lot less attention. For a company to attain organizational ambidexterity, the employees are the building blocks who need to balance between exploration and exploitation tasks. Ambidexterity at individual level is regarded to be essential for the organization to succeed in a constantly changing environment.

Therefore, the purpose of this study is to provide a better understanding and add to the existing knowledge base on individual ambidexterity. To do so, it raises a broad question, *Is there such a concept as an ambidextrous individual? What does such an ambidextrous individual appear to be like?* As the area of individual ambidexterity is still comparatively new, limited study has been undertaken on the internal factors that determine an individual's ambidextrous behaviour. Individual ambidexterity is a behaviour that includes exploring long term organizational processes, experimenting and innovating while also using their existing expertise, implementing, enhancing, and expanding existing competencies. There is still no clearer picture why certain people are more ambidextrous than others. To address the research gap, a trait based approach is adopted. Personality traits are significant antecedents influencing ambidextrous behavior of an individual. Among the big five personality traits, openness, conscientiousness and extraversion are analysed as they are consistent personality predictors of performance and are closely linked to various characteristics of learning behaviour. There is not much study on agreeableness and neuroticism influencing ambidextrous behaviour of an individual.

To answer the research question, a mixed method approach is adopted, with semi-structured interviews and a survey. The research is carried out in a coffee company in the Netherlands. There is a lot of competition in the coffee sector, to stand out they work collaboratively with the stakeholders to address the priority issues in the supply chain. They make every effort to tackle the waste challenge and provide consumers with responsibly packaged products. They are committed to climate action that lessens the environmental impact across their value chain. Three semi-structured interviews are conducted for the qualitative study and for the quantitative study, a survey is conducted with a sample of 116 employees. The research examined the mediating roles of self efficacy, team player, and affective commitment, on the relationship between personality traits and individual ambidexterity. Furthermore, there is a lot of uncertainty in the literature on how to conceptualize ambidexterity. There are various theories explaining ambidexterity, making it unclear to what extent top management should be involved in deciding whether to make a trade off between exploration and exploitation or try to maximize both at the same time. Because of the difference in how ambidexterity is defined, it is hard to differentiate outcomes among research. In this study, the combined dimension of ambidexterity is used as it is the most common measurement for individual ambidexterity across literature so far, thus making it easier to compare the results with previous studies.

Results of the study allows us to conclude that individual ambidexterity is a behaviour of an individual to cognitively combine exploitation and exploration, also known as paradoxical thinking ability. The ability to participate in paradoxical thinking indicates that an individual is capable of not just recognizing, but also accepting conflicts rather than rejecting them. It provides an answer to the broad question that indeed there exists ambidextrous individuals and personality traits help to estimate the ability of an individual to act in an ambidextrous manner. Openness to new experiences, conscientiousness and extraversion positively relate to individual ambidexterity, and as a result, revealing that internal factors can be used to determine individual ambidexterity. Next to these findings, self efficacy mediates the relationship between conscientiousness and individual ambidexterity, and team player mediates the relationship between extraversion and individual ambidexterity. Contrary to our expectations, affective commitment did not mediate the relationship between openness to experience and individual ambidexterity.

The findings show that not only the top management but also other employees can act in an ambidextrous way. Since top management looks for ambidextrous employees, human resources may put this research into effect by recruiting and choosing employees with strong traits of openness, conscientiousness and extraversion. To foster ambidexterity in the organization, senior leadership must prioritize the development of something that enables an open way of thinking for people who are open to experience. One such instance is workforce diversity, trying to work in different domains of the organization and learn new ways. Help conscientious employees by motivating them and valuing their viewpoints and accomplishments thereby enhancing their self efficacy. As a result, employees may see the results of their actions and contribute to the overall performance. Foster group discussion and have brainstorming sessions so people interact with others to stimulate new ideas.

Study comes with limitations but it does also provide opportunities for further investigation. Employees evaluate their own exploration and exploitation tasks which may introduce subjectivity issues, observational research in the future might add greater objectivity. The next limitation is the environment in which the data is gathered, the contextual factors were not considered. The study can be replicated by measuring ambidexterity in different contexts. Further, there seems to be no consistent technique of evaluating individual ambidexterity, which is a disadvantage and a recommendation for further investigation. Finally, future research can be done exploring more personality characteristics and mediators that could influence individual ambidexterity in order to answer why few people tend to behave more ambidextrously.

Keywords: Individual ambidexterity, openness to experience, conscientiousness, extraversion, affective commitment, self efficacy, team player, exploration, exploitation, mixed-methods.

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List of Abbreviations

CD : Combined Dimension of ambidexterity

BD: Balance Dimension of ambidexterity

FFM : Five-Factor Model

GSE : Generalized self-efficacy

MRQ: Main Research Question

SRQ: Sub Research Question

Chapter 1: Introduction

1.1 Introduction

In today's increasingly competitive and extremely unpredictable world, flexibility and adaptation are required. Due to the technological downfall, political uncertainty, and ongoing financial crises in the past decade, companies have begun to pay greater priority towards the necessity of adaptability. Adaptability is a critical attribute that brings agility to profitable companies, allowing them to move rapidly toward new possibilities and respond to changing environments (Andriopoulos & Lewis, 2009). Adaptability, on the other hand, isn't sufficient to ensure complete success. Businesses and organizations must also be dynamic and innovative. According to a growing trend in strategic management and organizational research, effective organizations must be ambidextrous, concentrating on consistently balancing exploratory and exploitative growth; such businesses should pursue both new possibilities and exploit old ones in order to stay in accordance with the dynamic environment (Keller & Weibler, 2014). This balance between exploration and exploitation is known as organizational ambidexterity and has been a significant study topic in recent years (Tushman & O'Reilly, 1996). These activities may occur at various levels of analysis such as individual, managerial, team and organizational level (He & Wong, 2004). Although there are many studies on the need for organizational ambidexterity, there are few studies on how ambidexterity is achieved.

To survive the competition and to stay in the game for the long run, the firm needs to adapt and align by performing incremental and radical change (Tushman & O'Reilly, 1996). He and Wong (2004) discovered that having a high ambidexterity score had a beneficial impact on a company's success. Numerous research sources contributed to the search for answers on how organizations might become ambidextrous, including organizational learning, structural, contextual and technological innovation (Raisch, 2009; Birkinshaw & Tushman, 2009). New literature findings have been focusing on the importance of determining the consequences of ambidexterity at the individual level, because ambidextrous people encourage ambidexterity at all organizational levels such as team, top management and so on. In addition, they play a crucial role in a company's long term survival (Benner & Tushman, 2001).

Two good examples of this lack of organizational ambidexterity are Kodak and Boeing, both previously powerful leading companies who failed to respond to market changes. Despite being the market leader in analogue photography, Kodak was unable to adapt to the rapidly growing digital market. Boeing was having trouble competing with Airbus' creative techniques in the defense market. Both businesses have now lost their dominance in their respective industries. The roadmap of the companies are shown in figure 1.1 and figure 1.2.

To demonstrate how businesses may build a winning organization through organizational ambidexterity, consider Apple. It is effective at achieving short-term objectives while also developing constant innovation capabilities. Apple has a history of successfully utilizing new technologies, adapting them, utilizing feedback from the customer to support the customer base by constantly improving products with latest features through constant enhancements. Apple is masters of exploitation, they also turn that exploitation into new ideas that revolutionize the present market and mindsets. With its supply chain and tailored offerings at Apple Stores, they perform a good job of exploiting their position in the app store. They are good at interaction, collecting and holding all touch points with the customer base. By launching new goods from the iPod, iPhone, iPad, and I-watch, they prove as accomplished explorers. It is very exploratory in nature, as they introduced advanced competing areas and categories. Apple is both excellent exploiters and true explorers, as they search for new and innovative ways to employ innovation, design, and functionality to shape the industry. They concentrate not only on expanding their customer base and attracting new consumers, but also to retain existing customer base. The new generation smartphones are a continuation of existing, we are witnessing more of exploitation right now; more exploitation implies less exploratory findings. Apple, on the other hand, has the potential to combine the two. The roadmap of Apple is shown in figure 1.3.

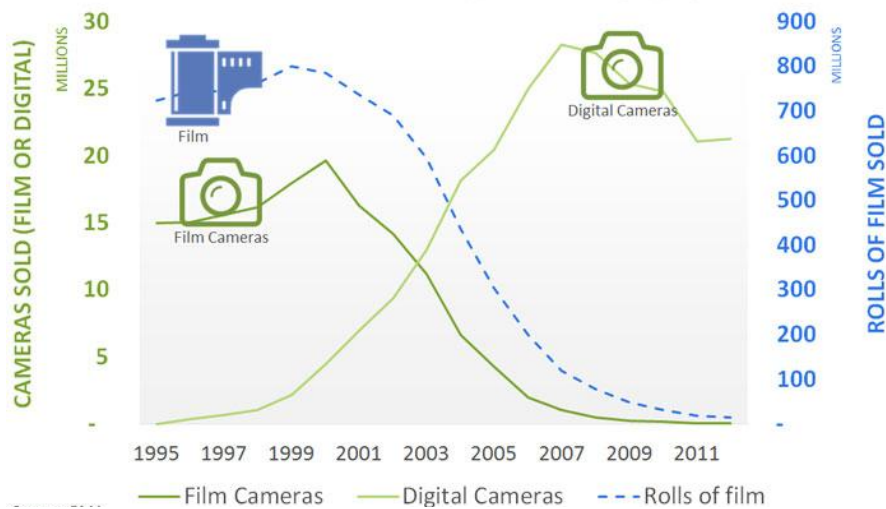


Figure 1.1: Kodak roadmap(Nielson, 2018)

Airbus and Boeing net order share: 1995-2013



Figure 1.2: Boeing and Airbus roadmap (CAPA - Centre for Aviation, 2014)

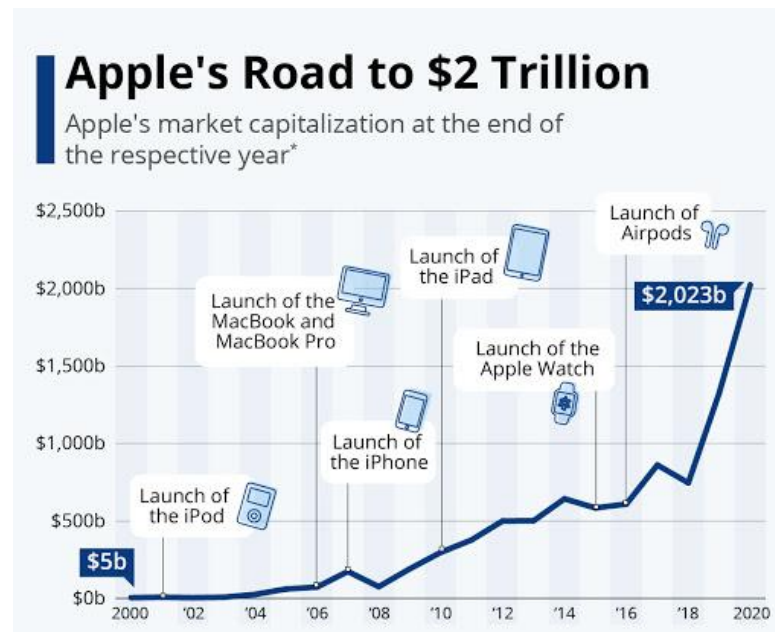


Figure 1.3: Apple Roadmap(Richter, 2020)

For the company to engage in exploratory and exploitative activities, employees are the ones who create new information and achieve short term goals. The employees need to balance between the tasks and handle the pressure. Therefore companies try to find employees who excel in both exploration and exploitation activities and adapt to the dynamic requirements of the organizations. Ambidexterity at the employee level or micro level is termed “individual ambidexterity” (Mom et al., 2009). The goal of this research is to investigate and have a deeper understanding of ambidexterity at an individual level, which raises a question: *Is there such a concept as an ambidextrous employee? What does such an ambidextrous employee appear to be like?*

Individual ambidexterity is defined as ‘the individual-level cognitive ability to flexibly adapt within a dynamic context by appropriately shifting between exploration and exploitation’ (Good & Michel, 2013, p. 437). Individual ambidexterity is regarded to be essential for the organization to succeed in a constantly changing environment, because the employees have to deal with the pressure between two activities to perform better. However, in terms of dynamic situations, there is a void in ambidexterity research (Gibson & Birkinshaw, 2004). This might be because obtaining individual data in a changing environment is challenging. Individual level research lacks the significance of exploring and exploiting because they inquire regarding prior exploration or exploitation behaviour instead of measuring one's personal ability to shift between both the tasks (Benner & Tushman, 2001). The dynamic context such as time restriction, changing environment and complexity of the task, challenges individuals to act in an ambidextrous manner. Many of the studies have shown the importance of managers to enhance organizational performance (Gupta, et al., 2006; Mom, et al., 2009; Raisch & Birkinshaw, 2008). The managers have to encourage employees’ exploration and exploitation behaviour, and therefore leading to increased organizational behaviours (Zacher et al., 2016).

Empirical studies have shown that individuals are important sources to achieve organizational ambidexterity (Gibson & Birkinshaw, 2004; Mom, 2006). According to Gibson and Birkinshaw (2004), the typical strategy to achieve organizational ambidexterity is through structural and contextual ambidexterity. These methods for achieving organizational ambidexterity vary across both cases. Structural ambidexterity is an organizational structure or process that involves

distinct structural subunits for exploration and exploitation, but also distinct competencies, structures, rewards, procedures, and cultures for subunits (Benner & Tushman, 2001). On the other hand, contextual ambidexterity focuses on balancing exploration and exploitation by behavioural and social means (Gibson & Birkinshaw, 2004).

The subject of organizational ambidexterity has received a lot of attention, but the field of individual ambidexterity, in which people combine the development of new skills with the use of current skills in their professional position, has gotten a lot less attention. An explanation for nascent research at the individual level may be that the focus is more on structural and contextual ambidexterity. Another reason might be that ambidextrous behaviour is difficult to monitor at an individual level. Good and Michel (2013) and Mom, et al. (2009) highlighted that ambidextrous managers are required for a company towards becoming ambidextrous, stressing the importance of individual ambidexterity. While their results are significant for the individual ambidexterity literature, they do not yet have a clearer explanation about why certain people are more ambidextrous than others. This is backed up by Bonesso et al., (2014) who believed that one of Mom's (2009) research shortcomings was that they ignored personality traits. It is necessary to investigate employees' personal characteristics in order to understand why some individuals participate in more exploration and exploitation practices than others. Personality characteristics are key antecedents influencing people's behaviour, according to previous studies (Keller & Weibler, 2014). As a result, personality factors are significant antecedents influencing ambidextrous behavior. Personality characteristics are tendencies or preferences to participate in specific behaviors. In addition, more research is needed to further understand how personality traits influence ambidextrous behavior (Keller & Weibler, 2014).

The main interest of this thesis is to investigate *if there is such a concept as an ambidextrous employee? What does such an ambidextrous employee appear to be like?* To begin with, a trait based approach is used to get a greater in-depth understanding of personality traits that influence ambidextrous behavior of an employee. Which leads to my main research question:

‘Which personality traits influence an individual’s ambidextrous behaviour ?

In order to answer the main question, the first step is to identify the important traits that influence the individual's ability to balance between exploitation and exploration. Employees may be capable of improving their approach and possibilities to perform better if they are made aware of some of these significant traits. The Five-Factor Model (FFM), also known as the Big Five personality traits, acts as a reference point for determining personality traits (Digman, 1990). In this research three personality traits that relate to employee ambidextrous behavior are examined: openness, conscientiousness and extraversion. Openness and conscientiousness are some of the most consistent personality predictors of performance and are closely linked to various characteristics of learning behaviour (Keller & Weibler, 2014). In addition, extraversion has been found to be a strong and favorable predictor of employee work success, particularly in professions that require a high level of interpersonal contact and interaction (Ajzen, 2005). On the other hand, there was no sufficient literature available for neuroticism and agreeableness traits that could support ambidextrous behaviour. Adding on employees' ambidextrous behavior is influenced not just by their personality qualities, but also by organizational and environmental factors. According to a study by Bonesso, Gerli, and Scapola (2014), ambidextrous behavior is impacted by various attributes inside the organization, rather than just individual traits. From the perspective that individuals' ambidextrous behavior is driven by an enabling organizational setting, this research explores the mediating effect of affective commitment, self efficacy, and team player in the above links..

This research adds to the body of knowledge on individual ambidexterity literature by identifying specific personality traits that can create a significant level of ambidexterity. There is less research explaining why certain people are more capable of ambidextrous behaviour than others. The important contributions will be, first, to understand the concept of individual ambidexterity by gaining a deeper knowledge of the construct and laying the groundwork for future research. Second, in the research, the unit of observation will not just be the managers, but also employees at different levels. Third, the research will help in finding factors that influence ambidexterity at an individual level; personality traits for instance in this research. Finally, the practical outcome of this research could also have implications for the firms to hire employees with the goal of achieving higher performance.

The objective of this research will be attained by means of a mixed-method approach of qualitative and quantitative methods. First, a qualitative approach via interviews of employees will be conducted, to explore and get insights on what people think of ambidextrous employees and how personality traits may influence ambidextrous behaviour. Later, quantitative data will be collected through an online survey distributed among individuals and finally conclusions will be drawn.

1.2 Research structure

The structure is as follows:

- **Chapter 1:** Outlines the study's overview, the observed issue, the research gap, the study's scope, objectives, main and sub research questions.
- **Chapter 2:** Presents literature review at the individual level. It gives an in-depth overview of the personality traits and mediators that were examined in this study.
- **Chapter 3:** Elaborates on the research design and methodology. Presents study 1, where qualitative data are gathered through three semi-structured interviews. Valid inferences are drawn by content analyses. Further, presents study 2, where an online survey was conducted. The chapter elaborates on data collection methods and research instruments that were used to validate the variables.
- **Chapter 4:** The chapter elaborates on qualitative data results and proposes a conceptual model. Further, it elaborates on quantitative data results, validity & reliability of the constructs, and outlines the result and interpretation of correlation analysis and three regression analysis.
- **Chapter 6:** Elaborates on the implications of the study, limitations and directions for future research.
- **Chapter 7:** Summarizes and concludes the research by addressing the research question and objectives stated in Chapter 1 and to confirm that the study's objectives are met.

Chapter 2 : Literature review

2.1 Exploitation and Exploration

The balance between exploration and exploitation is the focus of organizational ambidexterity (Gibson & Birkinshaw, 2004). Organizations that use an exploitative approach for innovation concentrate on incremental innovation and current clients. (Benner & Tushman, 2001). Exploitation often yields faster results than exploration. This characteristic encourages businesses to concentrate on exploitation in order to generate more predictable short-term profits. The "success trap" is a term used to describe this type of behaviour (Levinthal & March, 1993). To put it another way, exploitation provides short-term certainty, efficiency, and profits while ignoring the development of new skills. This short-term approach allows rivals to experiment with new skills that might risk upcoming opportunities. He & Wong (2004) used the term "exploitative innovation approach" to describe innovation and technology practices aimed at enhancing product portfolio position.

Organizations that use an exploratory approach for innovation concentrate on developing markets and radical innovation. This, in turn, is linked to a company's performance and long-term success (Benner & Tushman, 2001). Organic forms, loosely interconnected systems, adaptability, and independence are all linked with these businesses (He & Wong, 2004). Exploration includes actions such as broadening one's knowledge and pursuing new possibilities at the individual level (Benner & Tushman, 2001). As previously stated, constant attention to exploitation might lead to issues. However, focusing solely on exploration seems to have its own set of disadvantages. Companies that just concentrate on exploration would be unable to maximize the value of the company. The "failure trap" is a term used to describe this type of behaviour (Levinthal & March, 1993), exploring new capabilities is associated with a high level of result uncertainties, indefinite period frames, and dispersed consequences. According to He and Wong (2004), technological innovation activities targeted at accessing new product target markets is referred to as an "explorative innovation approach".

Finally, a company's value is determined by both the projected benefit from a new task and the existing returns of a company's current skills, providing strong evidence that a company's strategy should include both exploitation and exploration. It appears that exploration is riskier than exploitation. Why keep exploring when it is more problematic? Tushman and O'Reilly (1996) described the tension between evolution and revolution. In some industries, such as the semiconductor sector, the evolution pattern can be gradual or rapid. An organization might become best in class in the existing technology if it sticks to evolution or exploitation. However, if this technology is substituted by another firm, not necessarily a rival, the performance of the firm that continues to use the old method might gradually decline, finally leading to bankruptcy. This example demonstrates the significance of exploration and, as a result, the conflict that exists between exploitation and exploration. This is why scholars on the ambidexterity field argue that there must be a balance between the two.

Tushman and O'Reilly (1996) clarify why trying to balance exploration and exploitation is challenging, claiming that both notions have fundamentally distinct logic, demanding conflicting approaches and structures which are difficult to balance. In addition, they fight for scarce resources. Gupta et al. (2006) investigated if exploration and exploitation are two extremes of a line or rather separate elements of organizational behaviour across both situations. They pointed out that the exploration and exploitation tasks are mutually exclusive at the individual level. Therefore the person has to make a choice if they have to explore or exploit or balance both.

2.2 Individual ambidexterity

Individual ambidexterity is defined as individuals' behaviours that include exploring long term organizational processes, experimenting, innovating, and reassessing established beliefs and decisions, while also using their existing expertise, implementing, enhancing, and expanding existing competencies, and shedding light on existing views and choices (Mom, et al, 2007). As discussed before, ambidexterity consists of two contexts that are distinct but associated. First, exploration includes tasks that involve adjusting one's experience in order to extend one's current knowledge base (Mom, et al., 2007). For example, exploring and gaining new information, as well as other activities such as taking risks, experimenting, cognitive flexibility, discovering, and searching for new ideas (Mom, et al., 2007). Second, being exploitative refers

to improving the consistency of one's interactions as well as the incorporating and deepening of one's knowledge (Keller & Weibler, 2014). Enhancement, productivity, selection, execution, efficiency, and implementation are all examples of exploitative practices (Mom, et al., 2007). Individual ambidexterity is still difficult to define, however, a recent analysis by Good and Michel (2013) proposes the following description "the individual-level cognitive ability to flexibly adapt within a dynamic context by appropriately shifting between exploration and exploitation" (p. 437). They used several abilities namely divergent thinking, focused attention and cognitive flexibility to explain ambidexterity at the individual level. One of the most challenging aspects of being ambidextrous as a person is coping with the uncertainty and tension between the two activities. While most ambidexterity studies focus on organizations, individuals are a key driver of ambidexterity because they must deal with a constantly changing environment (Good & Michel, 2013) and individual's autonomy and flexibility are necessary to accomplish organizational ambidexterity.

There is still a lot of uncertainty in the literature on how to conceptualize ambidexterity. Furthermore, ambidexterity's utilization as a construct has been reduced as a result of this conceptual ambiguity. There are several explanations for ambidexterity, in fact, make it ambiguous to what degree top management must be involved in establishing a trade-off between exploration and exploitation or striving to optimize both at the same time. Cao, et al. 2009 proposed two distinct dimensions: "Combined Dimension of Ambidexterity" (CD) wherein they consider the combined magnitude of exploration and exploitation ($\text{Exploration} * \text{Exploitation}$) and "Balance Dimension of Ambidexterity" (BD) pertaining to the balance between the tasks ($\text{Exploration} - \text{exploitation}$). Ambidexterity may be defined as the absolute difference between exploration and exploitation, which corresponds to the "balancing" perspective (He & Wong, 2004). Ambidexterity can be operationalized as the product in the "combined" perspective (Gibson & Birkinshaw, 2014). Because of the difference in how ambidexterity is defined, it is hard to differentiate outcomes among research and gather data that might help top management decide to either pursue a balance between exploration and exploitation or optimize both. The distinct dimensions mentioned by Cao, et al. (2009) in the research refers to organizational ambidexterity level but it is supposed to be consistent, and hence applies to individual ambidexterity level. According to many scholars, the most appropriate measurement for

ambidexterity is multiplier interaction (Cao et al., 2009, Gibson & Birkinshaw, 2004; Mom, et al., 2009), therefore for the purpose of this thesis, the combined dimension of ambidexterity is considered.

The study of Gibson and Birkinshaw (2004) establishes a more significant link between organizational and individual ambidexterity. They distinguished between structural and contextual ambidexterity, both of which were related to employee abilities. Individual ambidexterity, according to this link, assesses organizational ambidexterity and is, therefore, an essential antecedent. Individual ambidexterity is considered to be extremely significant in increasingly dynamic and unpredictable environments (Davis et al., 2009). As a result, a greater knowledge of ambidexterity on an individual level would contribute to a better interpretation of ambidexterity at the macro level, which further increases the company's value.

Despite the fact that the studies on individual ambidexterity are increasing, this leaves a lot of room for future research in this field. The first step toward bridging this void is to use a trait-based model to study individual ambidexterity.

2.3 Personality traits

Earlier studies have provided evidence that personality traits are significant indicators for ambidextrous behavior that is ingrained in the individual (Bonesso, et al., 2014). People who focus on exploration, for example, have a different personality than those who focus on exploitative activities, according to Amabile et al. (2004). Adding on, Raisch et al. (2009) pointed out that individual characteristics play a big role in the ambidextrous activity. In order to address this issue, it might be appropriate to look into the personal characteristics of individuals. Ajzen (2005) mentioned that personality characteristics are preferences or tendencies to engage in multiple roles. Finally, using a psychological approach to micro study (Individual level) instead of the macro study (Organizational level) employed in the majority of work, Kauppila and Tempelaar (2016) individuals' ambidextrous activity is influenced by a variety of psychological factors. These observations highlight the issues regarding which personality traits are the strongest determinants of ambidexterity in people. As a result, this research will examine

whether personality traits, which are a widely accepted means of determining a person's ability, can determine individual ambidexterity.

The Five-Factor Model (FFM), also known as the Big Five personality traits, acts as a reference point for determining personality traits (Digman, 1990). It is a framework in which all individual differences in personality are classified into five traits: Neuroticism, Extraversion, Openness to Experience, Agreeableness and Conscientiousness. In this research, three of the traits are analysed in detail: Openness to experience, Conscientiousness and Extraversion at the individual level. The FFM's cross-cultural relevance is also investigated, with results indicating that it is accurate for a diversity of backgrounds and languages, strengthening the FFM's effectiveness in this analysis (Digman, 1990).

The focus of this study is to broaden and enhance research at individual level. This study adds to the existing literature on individual ambidexterity by adopting a trait-based method. It is vital to continue investigating individual ambidexterity because the previous study falls short of addressing why certain people are much more likely to act ambidextrously than others. As previously stated, personality traits may play a role in people's ability to act ambidextrously. The knowledge gained might be of good use in human resource management procedures.

2.3.1 Openness to experience

The openness to experience dimension consists of people who are open to new experiences, imaginative, flexible, intellectually curious, broad-minded, creative, cultured and independent of judgement (Barrick & Mount, 1991). People who score low on openness to experience are more conventional in their behaviour and conservative in order to avoid risk. They prefer the familiar ways, and their emotional reactions are suppressed (Barrick & Mount, 1991).

Openness to new experiences is extremely important for exploration. As stated earlier, individuals with a strong openness trait engage in new experiences, because of their desire for diversity and wider goals are thought to be better at exploration (Ali, 2019). Apart from exploration, ambidexterity is a trade-off between exploration and exploitation. As a result, individuals must be able to adapt between different modes flexibly in a dynamic environment.

Good and Michel (2013) defined individual ambidexterity as: ‘the individual-level cognitive ability to flexibly adapt within a dynamic context by appropriately shifting between exploration and exploitation’. In the study of Good and Michel (2013), one of the requirements for being ambidextrous is cognitive flexibility. Individuals that are ambidextrous use flexibility to handle the pressure between exploration and exploitation (Mom, 2006). Individuals with a strong openness trait are flexible which positively relates to this factor (Digman, 1990). Second, Andriopoulos and Lewis (2009) explained the relation between creativity and ambidexterity by defining creativity as a predictor of innovation. For instance, to attain incremental innovation creating a balance between exploitation and creativity and to attain radical innovation creating a balance between exploration and creativity (Andriopoulos & Lewis, 2009). Third, according to the study of Zacher et al. (2016), leaders that support increased rates of exploration and exploitation behaviours in their workforce are better able to accomplish innovation objectives. Zacher et al. (2016) add to the body of evidence that people who are open to new experiences are more able to behave ambidextrously. Fourth, according to Keller and Weibler (2014), ambidexterity demands evaluating present activities and substituting them with alternatives. To do so, people should be able to meet the increased needs of exploration and exploitation. As a result of their tendency for diverse thinking and behavioural flexibility, we predict employees with strong traits of openness tend to experience less cognitive strain from acting ambidextrously. Finally, divergent thinking, which is one of the traits of exploration, is another significant consideration for individual ambidexterity (Smith & Tushman, 2005; Good & Michel, 2013). As stated earlier, divergent thinking is positively related to openness (Barrick & Mount, 1991).

2.3.2 Conscientiousness

Conscientiousness is characterized by being hardworking, persistent, neat, well-organized and goal-oriented (Costa, 1992). People who score high on conscientiousness are less dependable (responsible and careful) and they appear to be better at coping, particularly task-focused, and thus have lower stress levels (Costa, 1992). People scoring less tend to be unorganized, easy-going and careless (Barrick & Mount, 1991).

Having to balance between exploration and exploitation is said to trigger stress because a person must continually shift between the two activities as it is difficult to do both simultaneously. As a result, it is claimed that being able to cope with stress is a vital trait for being ambidextrous. People with a strong trait of conscientiousness show lower levels of stress (Costa, 1992) and are able to act ambidextrously. Kauppila and Tempelaar (2016) mentioned that “employees with high general self-efficacy believe that they possess the skills and capacity required to change a situation, reach even the most difficult goals, and perform effectively over time and across a variety of work situations” (p.6). This term is closely linked to conscientious people’s clear mission and goal-oriented personalities. They also identified proof that generalized self-efficacy (GSE) is linked to ambidextrous performance in people (Kauppila & Tempelaar, 2016). Good and Michel (2013), found in their study that focused attention is needed to attain a balance between exploration and exploitation. People with a strong trait of Conscientiousness are goal-oriented and systematic which relates to focused attention. Finally, conscientious people are more involved in exploitation activities, according to Keller and Weibler (2014), but they can’t seem to find evidence that conscientiousness is adversely linked to exploration tasks. This indicates that, due to distinct exploitation priorities, these individuals can also switch to exploratory behaviour and so be ambidextrous (Keller & Weibler, 2014).

2.3.3 Extraversion

Extraversion describes individuals who are sociable, talkative, energetic, optimistic, assertive and active (Costa, 1992). People with a strong trait of extraversion are arrogant and overconfident in their skills. Individuals who are low in extraversion prefer to be isolated, independent, and silent, while others who are high in extraversion prefer to be involved, initiate conversations, and promote social activities (Barrick & Mount, 1991).

Previous literature has shown a link between extraversion and divergent thought, or the ability to think beyond the box and come up with something innovative (Furnham, et al., 2009), which is positively related to exploration activity. Extraverts often seem to have broader and more varied social support networks than introverts, allowing them to get support and assistance from a wider range of individuals (Swickert, et al., 2002). Extraverts often report that they rely on social support rather than introverts. According to Swickert et al. (2002), when introverts are subject to

high levels of support networks, they can become stressed and overwhelmed. Therefore people with strong traits of extraversion tend to have a bigger social support network and individuals will access information and ideas across their networks. The support from the social network can bring insights and skills that may be utilized to improve their current work or to come up with new ideas by incorporating knowledge and hence have a positive relationship with individual ambidexterity. Shifting between exploration and exploitation induces stress, extravert people have the ability to deal with stressful situations (Costa, 1992).

2.4 Intervening variables in the personality-ambidexterity link

2.4.1 Affective commitment

Affective commitment can be described as the behaviour of an individual who truly connects with the organization's objectives, emotional attachment and intends to stay a part of it. As a result, positive work-related behaviour and consequences will be stimulated (Allen & Meyer, 1990). Individuals are more likely to have a good impression of the organization and its performance if they believe that the organizational environment is "their own" (CegarraNavarro et al., 2018). Individuals with strong traits of openness are more inclined towards exploration. While talking about exploitation, an affective commitment of the individual may influence the individual to perform exploitation tasks based on the logic of openness people's willingness to engage in assigned tasks, it's reasonable to expect that people will feel more invested in projects they own or projects in which their opinions were considered. As a result, openness is more likely to influence employees' level of affective commitment to their company (Farrukh, Ying and Mansori, 2016). Therefore, a possible explanation for openness people to act ambidextrously is affective commitment, which may be explaining the link between openness and ambidexterity. The effect of affective commitment on individual ambidexterity has not directly been researched before, to my knowledge, but there are various studies on firm performance. Previous researchers have argued that affective commitment is positively related to overall job performance (Meyer al., 1989). Therefore it can be argued that affective commitment mediates the relationship between openness to experience and individual ambidexterity.

2.4.2 Self efficacy

Self-efficacy is described as "perceptions with one's ability to mobilize the motivation, personal abilities, and actions required to satisfy certain changing demands" (Gilad al., 2001, p.62). After evaluating the previous research on self-efficacy, it was established that self-efficacy seems to be an important predictor of job performance. Kauppila and Tempelaar (2016) use a measurement evaluating generic self-efficacy (GSE) as a predictor of individual ambidextrous ability. Conscientious individuals tend to exploit more than explore. Since conscientious people tend to be achievement striving and goal-oriented, if the situation demands exploration they tend to work towards the goal. To act ambidextrous, they need to perform exploration tasks. Individuals who are overloaded by unpredictable exploratory needs may withdraw from these actions, limiting the future potential for the growth of their creative talents. Self-efficacy refers to one's belief in one's capacity to handle exploratory problems, and it helps towards reducing the adverse tendency of avoiding exploration or exploitation activities (Chen and Gully's, 2001). Therefore it can be argued that self-efficacy explains the relationship between conscientiousness and individual ambidexterity.

2.4.3 Team player

Extroverts tend to have large social groups or networks. They prefer groups and frequent activity and often think aloud. External stimulation such as personal interactions, group activities, and shared ideas excite and refresh them. They gain energy from being in the company of others. There are no studies relating team players and ambidexterity. According to Swickert et al. (2002), extroverts have broader and more varied social support networks. Being a team player they indulge in interactions and tend to use information gained through interaction to exploit and explore. For years, teamwork has been a vital aspect of a company's success. Therefore, it can be argued that being a team player, can explain the relationship between extraversion and individual ambidexterity.

2.5 Conceptual model

Based on the above literature review, sub research questions are framed and a conceptual model is proposed, where affective commitment will mediate the link between openness to experience and individual ambidexterity. Self-efficacy will mediate the link between conscientiousness and individual ambidexterity. The team player will mediate the link between extraversion and individual ambidexterity. The proposed conceptual model is as shown in figure 2.1.

MRQ: *Which personality traits influence an individual's ambidextrous behaviour ?*

- **SRQ1:** *How does openness to experience trait influence ambidextrous behaviour and what is the role of affective commitment in this link?*
- **SRQ2:** *How does conscientiousness trait influence ambidextrous behaviour and what is the role of self efficacy in this link?*
- **SRQ3:** *How does extraversion trait influence ambidextrous behaviour and what is the role of team player in this link?*

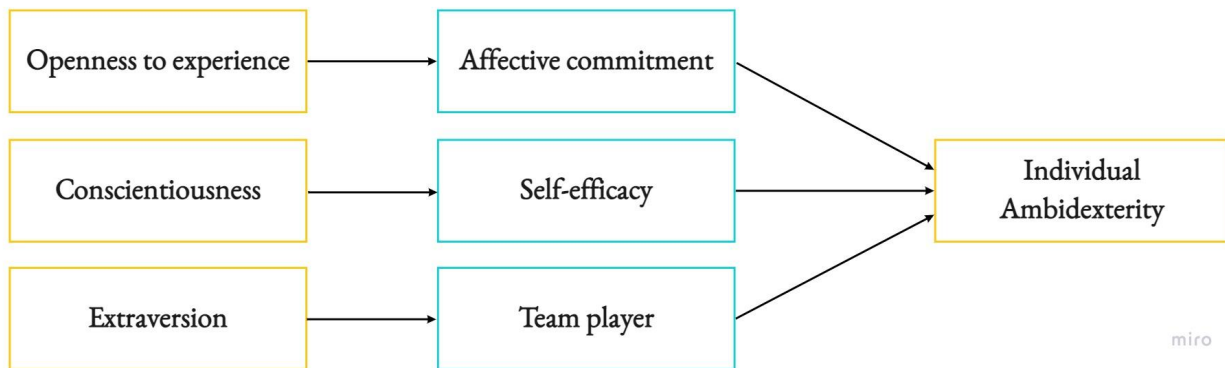


Figure 2.1: *Conceptual model*

Chapter 3 : Research methodology

The research questions will be addressed through qualitative and quantitative approaches using semi-structured interviews and surveys. The mixed-method approach gives a better understanding of the problem and analyses the relationship between personality traits, individual ambidexterity and enables us to understand why certain people are more ambidextrous than others. The term “mixed methods” refers to an emergent methodology of research that helps focus on collecting, evaluating, and combining both quantitative and qualitative data in a single analysis (Creswell, 2003). The general concept with this method of investigation is that combining qualitative and quantitative methods creates a better extensive explanation of a research topic than both methods separately. Each one is insufficient on its own to actually understand a research problem, but the strengths of both quantitative and qualitative research can give more detailed knowledge (Creswell, 2003).

3.1 Study 1 (Qualitative Method)

The qualitative research design and data collection of the study are discussed in this chapter. The objective of the qualitative research is to explore and get insights on what employees think about ambidextrous individuals and how personality traits may influence the behaviour. A secondary objective is to identify and analyse the abilities of openness to experience, consciousness and extraversion individuals to act ambidextrously and the reasons motivating them to do exploration and exploitation. The primary method of qualitative data collection was through semi-structured interviews. To make a valid inference from the interview, a content analysis method was adopted, which is further discussed in the following sections.

3.1.1 Research design

Individual interviews have been recognized as a suitable strategy for engaging in an in-depth study of the participant's perspectives. Interviews can either be structured, semi-structured, or unstructured. In order to understand the phenomenon that explains the link between personality traits and individual ambidexterity, semi-structured interviews were conducted.

The questions were framed in such a way that it allowed respondents the freedom and flexibility to investigate further into the phenomena. Open-ended questions were chosen to motivate participants to express opinions and react honestly to inquiries. When required, additional questions were asked to enable participants to explain or clarify their responses. The questions were framed to study people's perceptions of significance in their daily tasks of exploration and exploitation. The open-ended questions enable respondents to answer in whatever way they see relevant. The first few questions were directed to build the background understanding the context of the company's way of doing exploration and exploitation. Next, the questions were framed to know the person's perspective of his/her daily tasks and how they manage to perform better. Further, questions were directed on what they think of ambidextrous employees and on the significance of having ambidextrous employees in the company. In addition, questions were asked about the barriers in the company that are holding employees back to act ambidextrously. Finally, to understand the mechanism of behaviour of different personalities, a few questions were framed. The questions analysed the relationship between personality traits and individual ambidexterity, to know why certain people are more ambidextrous than others and what according to them is an essential trait that needs attention apart from the traits under this study.

Participants were informed of the current study objectives, research protocols, strategic importance, their freedom to withdraw at any time, and privacy protections as a first step of the interview session. The interviews were recorded and transcribed with participant permission. Throughout all interviews, notes were written down to keep track of important facts to refer to later in the conversation and also for statistical analysis. Without having previous knowledge of the concept, the interview questions were asked on the spot to eliminate biased answers to a certain level. Table 3.1 demonstrates the framework of the interview guideline, as well as the main focus of the questions in each part.

Part	Question Topic	Primarily Focus of Questions
1,2,3	Experience	Questions aren't explicitly related to the research question; rather, they're targeted at gaining a better knowledge of the case's context.
	Current Position	
	Responsibilities within the current position	

4	Exploration & Exploitation	Questions aimed to understand how the company sees exploration and exploitation
5	Ambidextrous person	Questions aimed to understand what they feel about an ambidextrous person
6	Need for ambidextrous individuals	Questions aimed to understand the importance of individual ambidexterity
7	Personal experience	Questions aimed to understand how they manage exploration and exploitation
8	Openness to experiences	Questions related to understanding the factors influencing exploration and exploitation tasks
9	Extrovert	
10	Conscienceness	
11	Organizational constraints	Questions aimed to understand the barriers to become an ambidextrous person
12	Combination of personality traits	Questions aimed to find what other key personality trait is needed

Table 3.1: Structure of the interview guideline

3.1.2 Data collection

Initially, e-mails were sent out to the company requesting participants for an interview. The mail elaborated on the objectives, significance and privacy concerns. Out of fifteen, three respondents were ready to be interviewed. The interview was conducted via video conferencing platforms such as zoom and teams, with the duration for each interview being 30-45 minutes. With the participants' approval, the interviews were audio-recorded and converted into transcripts in order to decrease information loss and to improve the research's reliability. Semi-structured interviews were the primary data gathering source, which is typical of most exploratory approaches. Out of three interviewees, two were men and one was a woman. The participants ranged in age from 25 to 46 years old from the same company in the Netherlands. Table 3.2 provides an overview of the interviewees.

At first, the researcher's aim was defined and information was acquired by interviews, with each interview being one unit of analysis. The same question list was utilized in each interview, and the concepts were thoroughly defined and described to the participants, ensuring that everyone viewed the questions the same way. It was critical that the researcher and participants had the same definition of the words in order to acquire how participants facilitated exploration and exploitation. For instance, few participants were unfamiliar with the phrase individual ambidexterity, and the phrases exploration and exploitation. Furthermore, sample variation is also created by interviewing people at various levels of the organization, including intern, entry-level and senior managers. In addition, asking interviewees behavioural questions, such as providing a personal experience, causes variation. This method was used to gain a better insight into the respondents' personal experiences as well as the challenges of simultaneously implementing exploration and exploitation. Later, the audio recordings were transcribed carefully. After completing the transcripts, the content analysis method was used to draw the valid inference. Table 3.2 shows the overview of participants.

ID	Gender	Position	Working years	Domain
I1	Male	Manager	6	Sales
I2	Male	Senior-level	4	Operations specialist
I3	Female	Entry-level	1.5	Supply chain

Table 3.2: Overview of interviewees

3.1.3 Data analysis

Content analysis was adopted to code the interviews. Content analysis is a method for describing communications content that is scientific, objective, systematic, quantitative, and generalizable. Because this method allows for the classification of textual information and the reduction of it to more meaningful, usable bits of data, it will be vital to researchers (Weber, 2004). However, the most distinctive feature that distinguishes content analysis from other qualitative or subjective analysis is the goal of meeting the standards of the scientific method. While qualitative analysis

supports data collection and identification of factors responsible, both qualitative and quantitative analysis are used to corroborate the findings. This study employs qualitative literature content analysis, which includes inductive coding (concept, dimensions, and components) and applies statistical approaches. Content analysis is mainly concerned with obtaining information from a large number of texts by identifying and analyzing their meaning (Weber, 2004).

To begin with, transcribed interview information was re-read multiple times in order to look for repeated behaviour patterns. Statements and phrases from the interviews which were relevant to the qualitative research objective were noted down. Further, the phrases, string of words and sentences that answered the research objective were then classified as content analytic units and put into an open coding list. The captured codes were analysed and comparable codes were grouped together, then the results were categorized. Then continuous comparison approach to switch back and forth over the transcribed interviews till categories developed, all of which seemed consistent yet unique. Category's labels were assigned, classified the transcript, and grouped the sections into folders identified with each category's label. Next, combined the coded interviews and notes taken down during the interview; and explored for links within and between the data. Finally, I evaluated the preliminary classifications against the information as they developed. Combined and simplified the categories until they became distinct concepts.

3.2 Study 2 (Quantitative Method)

To validate the relationships between personality traits and individual ambidexterity, an online questionnaire was used to collect information on personality characteristics, exploration, and exploitation activities by utilizing data from 116 individuals which is further discussed in following sections. The purpose of study 2 is to shed more light on the relationship between the personality traits and individual ambidexterity, by investigating the potential mediating effects of affective commitment, self-efficacy and team player on these links.

3.2.1 Data collection procedure

The study was carried out within a coffee company in the Netherlands. The data collection was done through an online questionnaire further discussed in section 5.2. To have a heterogeneous sample, the survey was sent across different departments of the company, so that the results could be generalizable within the context of the organization.

An initial test was taken by two employees to see if the questions were clear and then an email was sent out with an introduction for the participation of the research. The survey's introduction assured anonymity and confidentiality. The scales from existing research were used which is further discussed in the following sections. Participants were told that their involvement would be important in providing the right responses. To avoid invalid data, the participants were instructed to share only with their colleagues. Participants were identified in the study's private contacts as well as the networking of other business employees. Furthermore, email reminders were sent out to complete it if they missed taking it.

To get a valid sample, snowball sampling was used. Initially, employees of various departments were chosen to form a heterogeneous sample. Next, the employees were instructed to complete the survey and send it across to their teammates. It was specified in the email that it was very important to keep it within departments to have a good sample. By verifying the demographic questions in the survey it was easy to track the heterogeneity responses. Out of 138 responses, 126 people started the survey, and 117 people completed it. However, due to incorrect data, one of the responses was removed. Finally, a total of 116 responses were considered for the analysis.

3.2.2 Measurement of variables

A single questionnaire was the research instrument that was used for this particular survey. Employees provided their scores for independent (openness to experience, conscientiousness and Extraversion) and dependent variables (individual ambidexterity), as well as for the potential mediating variables (affective commitment, self-efficacy and team player). Employees also indicated their demographic characteristics. All the items are gathered from existing research. Appendix A.2 has a detailed list of items that make up the measurements.

3.2.2.1 Personality traits

For the measurement of personality traits, we adapted the 5 items Likert scale from Goldberg, (1992). In particular, employees indicated their scores for each of the particular traits, in a 5 item Likert scale (ranging from “1=Strongly Disagree”; “5=Strongly Agree”). Examples of statements to measure openness to experience are “I have a vivid imagination”, “I am full of ideas”, and “I do not have a good imagination” (reversed item). Sample items for conscientiousness are "Am always prepared" and "Leave my belongings around ". Finally, Sample items for extraversion were "Am the life of the party" and "Don't talk a lot".

3.2.2.2 Individual ambidexterity

For the measurement of individual ambidexterity, we adopted the scale of Mom, et al., (2009), who treated exploitation and exploration separately. In particular, for the measurement of exploration, sample items were “To what extent did you engage in work-related activities requiring you to search for new possibilities with respect to products/services, processes, or markets” and “Activities requiring quite some adaptability of you” (1 = To a very small extent, 5 = To a very large extent). For the measurement of exploitation, sample items included “To what extent did you engage in work-related activities of which a lot of experience has been accumulated by yourself” and “Activities which you carry out as if it were routine” (ranging from "1 = To a very small extent", "5 = To a very large extent").

3.2.2.3 Mediating variables

Firstly, Affective commitment scale, developed by Allen and Meyer (1990) is widely used to measure. All items are measured on a 5 item Likert scale (ranging from “1=Strongly Disagree”; “5=Strongly Agree”). An example item for affective commitment is: "I would be very happy to spend the rest of my career with this organization". The second mediator, self-efficacy, adopted from Chen and Gully's (2001) measured on a 5-item Likert scale (ranging from "1 = To a very small extent", "5 = To a very large extent"), one of the example is: "I will be able to achieve most of the goals that I have set for myself". Finally, for the measurement of a team player, the Role-Based Performance Scale from Welbourne and Johnson (1997) was adopted, which measures different performance roles, with team member roles being one of them. The scale

consists of four items and uses a Likert scale (ranging from "1= very dissatisfied" to "5= very satisfied").

3.2.2.4 Control variables

The study's control variables were asked at the opening of the questionnaire to give respondents a head start and encourage them to finish the whole survey. It was also critical to obtain extensive information on the participants in order to analyze the sample's heterogeneity. The research contained control variables to assure that the outcomes for the individual ambidexterity were caused by the personality traits and mediating variables listed above and not impacted by any other variables. Gender, age, educational level and job experience are the study's control variables. To measure the control variables, gender was a categorical variable coded as 0=male, 1=female, 2=prefer not to say. Age was a continuous variable measured in the number of years, 0=18-24 years, 1=25-34 years, 3=35-44 years, 4=45-54 years, 5=55-64 years and 6=65 years or older. Similarly, work experience was coded as, 0=0-2 years, 1= 2-5 years, 2=5-10 years, 3=10-20 years and 4=more than 20 years. Finally, the job position was coded as, 0= Intern, 1=Entry level, 2=Analyst/Associate, 3=Manger, 4=Senior manager, 5=Director, 6=CEO and 7=Others.

3.2.3 Data analysis

IBM SPSS Statistics was used to do statistical analysis calculations. Once the data from the survey was collected, statistical analysis was performed. All constructs were over the threshold ($\alpha=.600$) on the Kaiser-Meyer Olkin (KMO) Measure of Sampling Adequacy, and Bartlett's Test of Sphericity was significant for all constructs. All the scales were drawn from previous research, and there were no compelling justifications for adapting the scales. Adopting the same scales as previous studies enhances the potential of comparing data from other surveys that utilized the same scales. Normality tests for skewness and kurtosis were performed next. Correlation and three regression tests were run. The results of the quantitative analysis are further discussed in chapter 6.

Chapter 4 : Results

4.1 Results of Qualitative Method (Study 1)

The findings of the interviews' codification are presented in this section. The primary purpose of this study 1 was to understand the phenomenon that explains the link between personality traits and individual ambidexterity. The main research question was strengthened by the experiences and opinions of the participants discussed in the interview. Significant data was collected through talking to and evaluating the experiences of these employees. The majority of interview questions were asked precisely as stated in Appendix A1. To collect more information, frequently repeated semi-structured queries using open-ended questions like "Why?" and "Could you tell me more?" were used. The further sections elaborate on qualitative findings.

4.1.1 Ambidextrous individual

Initially during the interview, questions were directed to understand what they think about the concept of individual ambidexterity and the importance of employing ambidextrous individuals for the organization. The respondent 2 opinion about ambidextrous employees was that *It is about promoting actions that includes adapting to new possibilities while remaining strongly connected with the company's overarching plan.* The respondents made it explicit that ambidextrous employees should have the abilities to generate and implement new ideas and also work on enhancements of their daily tasks depending on the organization's needs. Adding on, if there is a need for developing new software or a new promotion campaign, employees have to take up challenges and risk, to deliver the requirements of the company. *They also need to consider the organizational constraints which hinders the performance such as resources, budget and time pressure, and try optimizing it.* Apart from exploring and exploiting, the respondent uncovered it is also about the ability of an employee to take risk and consider how to overcome the organizational constraints with their ability. Adding on, respondent 1 claimed to be an ambidextrous individual *I believe that I am capable of playing a larger part in attempting to achieve high amounts of both exploitation and exploration. Foremost, the potential to cope with disagreement and reconcile conflicts. Next, the potential to multitask and finally the ability to develop and update the information, techniques, and competence.* The respondent revealed it's

not only about exploration and exploitation tasks but also being able to deal with conflict. To summarize, respondents consider an ambidextrous person to be someone who can create and execute new ideas while also completing existing responsibilities, accept risks, manage conflict, and adapt to organizational demands by overcoming organizational restrictions.

Further questions were directed to know the importance of having ambidextrous employees, the respondent 2 gave an example of the COVID-19 outbreak that motivated businesses and employees throughout the world to reconsider how they operate. While major process changes typically fail or face employee opposition. *Having an ambidextrous individual, the transition in the working ways is much smoother, they tend to respond to the dynamic environment and adapt to changes.* Furthermore, Participant 3 mentioned, *I realize that ambidexterity, as well as an awareness of its value, may benefit companies in overcoming the uncertainties created by the COVID-19 outbreak. We had to explore and find new ways to retain and grow the customer base. Employing ambidextrous employees we can avoid opposition as they are multitaskers who are comfortable wearing several hats.* The significance of ambidextrous employees was mentioned by the respondents in relation to unanticipated events such as the COVID-19 outbreak, and they noted that few employees adapt effortlessly and few struggle to succeed. Finally, when respondents were questioned about the organizational constraints holding them back to act in an ambitious way, factors such as interdepartmental collaboration issues were revealed. Communication difficulties across the organization's many business sectors can often make it difficult to collaborate on new procedures. Next, due to time pressure, it is difficult to try new ways (explore) and employees tend to stick to their daily routines. The interviews also revealed a combination of individuals high on openness and conscientiousness can be a better fit for individual ambidexterity.

4.1.2 Openness and ambidexterity link

During the interviews, questions were directed to understand the factors influencing exploration and exploitation tasks of individuals with a strong trait of openness. In particular, questions were directed for openness traits, such as: *“How do you think open to new experiences people would perform in terms of exploration and exploitation? Why?”*. All the respondents had the same answer for openness to experienced people to perform better in exploration tasks as they are

creative, have divergent thinking and open to do something new. When asked about the motivation to get involved in exploitation tasks, Participant 1 noted that *Job profile is such that you need to work on the assigned work (exploitation)*. Here, the respondents talk about the internal factor enabling employees to perform exploitation tasks. Due to organizational commitment, he has to perform the job which is assigned even though exploration is what the employee enjoys more. Participant 3 reported, *Firm is paying you for your work*. Yet again, this can be categorized as an organizational commitment of the employee to earn money. There were other responses mentioning the satisfaction one derives by performing the intended tasks. All these findings were closely related to affective commitment.

4.1.3 Self-efficacy and ambidexterity link

During the interviews, questions were directed to understand the factors influencing exploration and exploitation tasks of individuals with a strong trait of conscientiousness. The specific questions that were directed for conscientiousness traits were: *“How do you think conscientiousness people would perform in terms of exploration and exploitation? Why?”*. All the respondents had the same answer for a conscientious person to perform better in an exploitation task as they are systematic, hardworking and goal-oriented. When asked about the motivation to get involved in exploration tasks, Participant 1 noted that *Since they are also achievement-striving, to stand out they might take extra effort in exploration*. Here, the respondents talk about the internal factor enabling employees to perform exploration tasks. Due to achievement-striving behaviour, if the employee has to work on an exploration task, he performs the job with all the ability to excel in the work (achievement-striving). Participant 3 reported, *Because of the motivation or short /long term goal they have set, that might drive them to reach their goal with their ability. It is about the satisfaction of work at the end*. The participant makes it explicit if learning new software is a short term goal and since they are goal-oriented they strive to reach with their ability. Further, participant 3 added, *They also see their success through task achievement. If they encounter a problem in their regular work, they need to explore to achieve success in what they are doing*. To do a task never done before, the employee needs the motivation to reach the goal as they are achievement-striving. All these findings from the interviews are closely related to self-efficacy.

4.1.4 Team player and ambidexterity link

During the interviews, questions were directed to understand the factors influencing exploration and exploitation tasks of individuals with a strong trait of extraversion. In particular, some questions directed for extraversion traits were: *“How do you think extraversion people would perform in terms of exploration and exploitation? Why?”*. Participant 1 noted that *They look to others and outside sources for ideas and inspiration. When you are facing a problem, you prefer to discuss the issues and various options with others*. Here, the respondents talk about the internal factor enabling employees to perform exploration and exploitation tasks. As the extraversion people are good at communicating, they tend to discuss and get new ideas or incorporate ideas into their current exploitation tasks. Participant 2 reported, *Having extraverts they socialize a lot. That is exactly one of the traits, you speak up if you need help, gather information, and also help people around*. The participant makes it explicit, for extroverts communication is key. They tend to help people around and have discussions to expand their knowledge base, these qualities help extroverts to act ambidextrously. Adding to that, *They also work well in a team and they encourage ideas/comments. Usually very determined, likely to take charge and be confident*. emphasizing being a good team member and encouraging people around. All these findings are closely related to the ability of the employees to act as team players.

Main Theme	Categories	Subcategories	Interview Codes	Frequency
Openness	Affective commitment	Organizational rules	<i>Job profile is such that you need to work on the assigned work (exploitation)</i>	(11,12, 13)
			<i>Managers' sense of responsibility for their own job security and that of employees"</i>	(11)
		Personal Involvement	<i>Firm is paying you for your work</i>	(13)
			<i>Getting involved in the work, the satisfaction of completing the work</i>	(12)
			<i>Deriving inner peace from performing one's duties</i>	(11)

Conscienceness	Self-efficacy	Performance-based self-awareness	<i>Since they are also achievement-striving, to stand out they might take extra effort in exploration.</i> <i>People that are dedicated and diligent will work on a problem until it is resolved. They will try again if they fail</i> <i>Because of the motivation or short /long term goal they have set, that might drive them to reach their goal with their ability. it is about the satisfaction of work at the end</i> <i>They also see their success through task achievement, if they encounter a problem in their regular work, they need to explore to achieve success in what they are doing</i>	(11) (12) (13) (13)
		Intrinsic motivation		
Extraversion	Team player	Communication	<i>They look to others and outside sources for ideas and inspiration. When you are facing a problem, you prefer to discuss the issues and various options with others</i> <i>They are also open and willing to share, they are also helping people around too.</i> <i>They find a way to get things done, good at communicating, it is a key</i>	(11, 12, 13) (12) (13)
		Ready to help people	<i>Having extraverts they socialize a lot. That is exactly one of the traits, you speak up if you need help, gather information, and also help people around</i> <i>They also work well in a team and they encourage ideas/comments. Usually very determined, likely to take charge and be confident.</i>	(11, 12) (11,13)

Table 4.1: Interview results

4.2 Results of Quantitative Method (Study 2)

The number of participants, averages, standard deviations, minimum scores, maximum scores, skewness, kurtosis, correlations, regression among all independent variable and control variables applied in this research were all examined to get a better understanding of the data under investigation. First, the demographic characteristics of the sample are presented. To see whether the variables under study are correlated, a correlation matrix based on a Pearson Correlation analysis is presented in figure 4.6. To test the mediation effect regression test was run using PROCESS macro by Hayes (2013). Three regression analyses were conducted in order to test the potential mediating effects of affective commitment, self-efficacy and team player on the relationships between personality traits and individual ambidexterity.

4.2.1 Demographics characteristics

The final sample included 116 subjects who completed the whole questionnaire. 42.2% were female (n=49) and 55.2% were male (n=64) and 2.6% preferred not to say (n=3). The participants are from different age group, 11.2% lie between 18 - 24 years (n=13), 63.8% lie between 25 - 34 years (n=74), 8.6% lie between 35 - 44 years (n=10) and 16.4% lie between 45 - 54 years (n=19). The mean age of the respondents is 32.2 years. The work experience is divided as follows: 33.6% has an work experience of 0 - 2 years (n=39); 36.2% 2 - 5 years (n=42); 6.0 % 5 - 10 years (n=7); 11.2% 10 - 20 years (n=13); 12.9% More than 20 years (n=15). The mean work experience of the respondents is 7.3 years. And finally, the participants are from different job positions 6.9% were senior manager level, 14.7% were managers, 11.2% were interns, 10.3% were entry level, 41.4% were analyst/ associate, 0.9% were CEO, 2.6% were directors and 12.1% were from other job position level. The sample characteristics are as shown in figure 4.1.

<i>Demographic characteristics</i>		Number	Percentage (%)
<i>Gender</i>	Male	64	55.2
	Female	49	42.2
	Prefer not to say	3	2.6
<i>Age</i>	18 - 24 years	13	11.2
	25 - 34 years	74	63.8
	35 - 44 years	10	8.6
	45 - 54 years	19	16.4
<i>Work Experience</i>	0 - 2 years	39	33.6
	2 - 5 years	42	36.2
	5 - 10 years	7	6
	10 - 20 years	13	11.2
	More than 20 years	15	12.9
<i>Job Position</i>	Intern	13	11.2
	Entry Level	12	10.3
	Analyst/ Associate	48	41.4
	Manager	17	14.7
	Senior Manager	8	6.9
	Director	3	2.6
	CEO	1	0.9

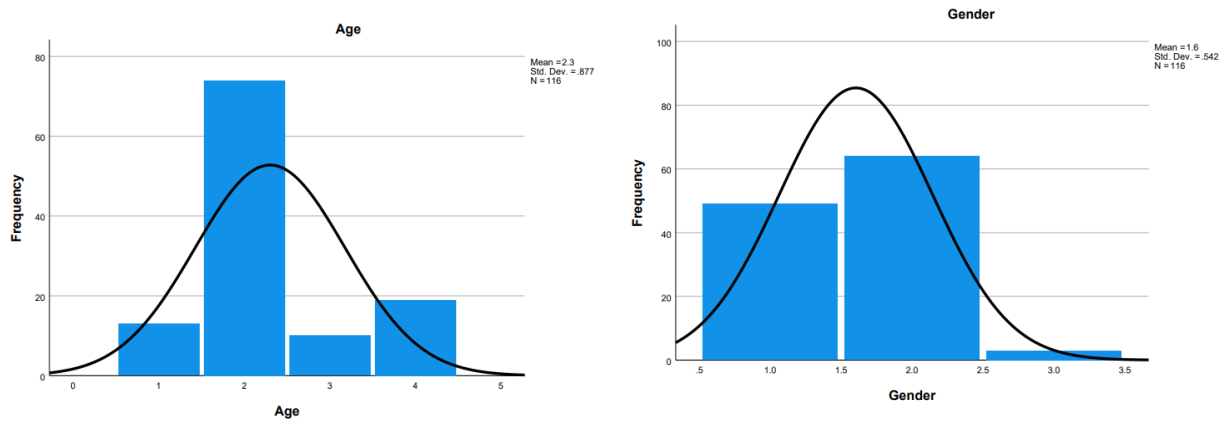
Figure 4.1: Demographic characteristics

4.2.2 Descriptives statistics

Figure 4.2 shows the mean and standard deviations of constructs. Figure 4.3 shows frequency distribution. The minimum score observed on openness was 2.8 and the maximum was 4.8, with a mean of 3.7 (SD=0.5). The minimum score observed on conscientiousness was 1.7 and the maximum was 4.8, with a mean of 3.6 (SD=0.65). The minimum score observed on extraversion was 2 and the maximum was 4.7, with a mean of 3.4 (SD=0.56). The mean score of the sample on exploration was 3.75 and exploitation was 3.84, which are high. The mean of individual ambidexterity construct was 14.60.

	N	Minimum	Maximum	Mean	Std. Deviation
Age	116	1.00	4.00	2.30	0.87
Gender	116	1.00	3.00	1.60	0.54
Work Experience	116	1.00	5.00	2.53	1.35
Job position	116	1.00	8.00	3.76	2.58
Extraversion	116	2.00	4.70	3.43	0.56
Conscientiousness	116	1.70	4.80	3.70	0.65
Openness	116	2.80	4.80	3.79	0.50
Exploration	116	2.57	5.00	3.75	0.58
Exploitation	116	2.71	5.00	3.84	0.63
Affective commitment	116	1.63	5.00	3.44	0.82
Self efficacy	116	3.00	5.00	3.98	0.54
Team player	116	2.75	5.00	4.28	0.64
Individual Ambidexterity	116	6.98	25.00	14.60	4.14
Valid N (listwise)	116				

Figure 4.2 : Means and Standard Deviations



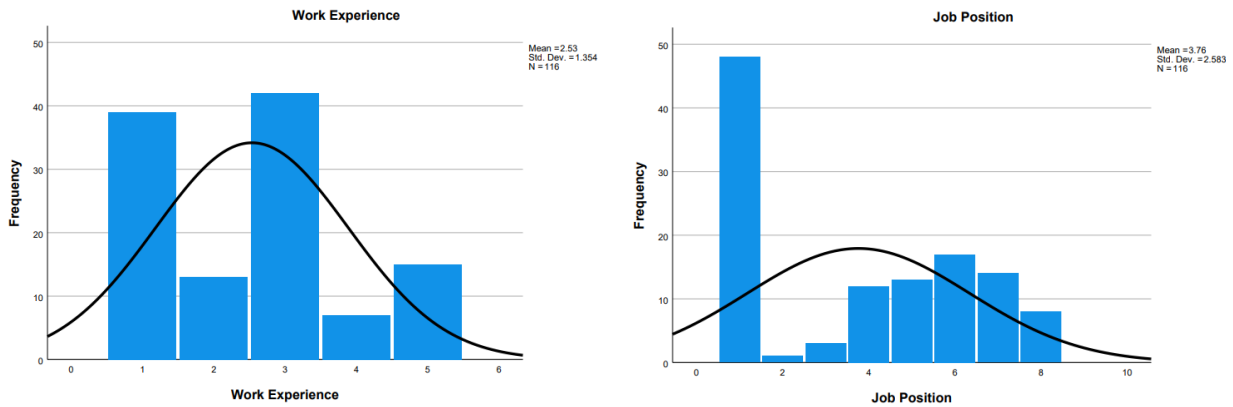


Figure 4.3: Frequency distribution

4.2.3 Measure Validation and Reliability

The software package SPSS was used for statistical analysis. A factor analysis was carried out to check the construct validity. Kaiser-Meyer-Olkin measure of sampling adequacy (KMO) gave 0.75, which exceeded the minimum requirement of 0.5 (Kaiser, 1970). This indicates that the sample is suitable for factor analysis (Figure 4.4). Construct reliability was assessed using Cronbach's alpha. Reliability statistics for the construct is as shown in figure 4.5. All factors had an acceptable reliability; independent variables; openness $\alpha = 0.687$, conscientiousness $\alpha = 0.801$ and extraversion $\alpha = 0.713$. For dependent variables; exploration $\alpha = 0.746$ and exploitation $\alpha = 0.801$. The most reliable factor was an affective commitment with this $\alpha = 0.865$, following that was team player with $\alpha = 0.852$ and self-efficacy with $\alpha = 0.830$.

Kaiser-Meyer-Olkin Measure of sampling Adequacy		0.75
Bartlett's Test of Sphericity	Approx. Chi-square	272.82
	df	28
	Sig.	<.001

Figure 4.4: KMO & Bartlett's Test

Cronbach's Alpha	$\alpha =$
Openness	.687
Conscientiousness	.801
Extroversion	.713
Affective commitment	.865
Self efficacy	.830
Team player	.852
Exploration	.746
Exploitation	.801

Figure 4.5: Reliability test

4.2.4 Correlation analysis

Correlation analysis is represented in Figure 4.6. The direct effect of openness to experience has a positive effect on the ability to perform exploration and exploitation (individual ambidexterity), figure 4.6 represents a weak correlation on Individual ambidexterity ($r = 0.288$, $p < 0.002$) and is highly significant. The direct effect of conscientiousness has a positive effect on the ability to perform exploration and exploitation (individual ambidexterity), a moderate correlation is seen between conscientiousness and individual ambidexterity ($r = 0.317$, $p < 0.001$) and is highly significant. Finally, the direct effect of extraversion has a positive effect on the ability to perform exploration and exploitation (individual ambidexterity), a moderate correlation is seen between extraversion and individual ambidexterity ($r = 0.463$, $p < 0.001$) and is highly significant.

		M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13
1	Age	32.200	0.870	-												
2	Gender	1.600	0.540	-0.222	-											
3	Work experience	7.300	1.350	0.522**	-0.159	-										
4	Job position	3.760	2.580	0.232*	-0.293**	0.137	-									
5	Openness	3.790	0.500	-0.069	0.226*	0.095	-0.099	[0.687]								
6	Conscientiousness	3.690	0.650	0.332**	-0.100	0.240**	-0.159	0.056	[0.801]							
7	Extraversion	3.430	0.570	-0.025	0.058	-0.087	0.226*	0.335**	-0.080	[0.713]						
8	Affective Commitment	3.450	0.820	0.218*	0.075	-0.003	0.201*	-0.018	0.051	0.297**	[0.865]					
9	Self efficacy	3.980	0.540	0.240**	0.243**	0.231*	0.030	0.463**	0.279**	0.292**	0.145	[0.830]				
10	Team player	4.280	0.640	0.173	0.204*	0.272**	-0.164	0.257**	0.229*	0.273**	0.269**	0.549**	[0.852]			
11	Exploration	3.750	0.580	0.136	0.003	0.229*	0.285**	0.402**	0.189*	0.432**	0.212*	0.505**	0.368**	[0.746]		
12	Exploitation	3.840	0.640	0.188*	0.001	0.188**	0.118	0.111	0.364**	0.363**	0.326**	0.577**	0.596**	0.500**	[0.801]	
13	Individual Ambidexterity	14.600	4.140	0.196*	0.024	0.248**	0.240**	0.288**	0.317**	0.461**	0.301**	0.635**	0.555**	0.857**	0.867**	-

N=116

Variable reliability on diagonal

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

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

Figure 4.6: Correlation analysis

4.2.5 Regression analysis

In order to test for mediating effects, PROCESS macro developed by Hayes (2013) was used. Model 4 was used to perform a simple mediation analysis. Each component of the proposed mediation model was evaluated using multiple regression analysis. In particular, we run different regression models for openness to experience, conscientiousness and extraversion. A distinct regression analysis checks if affective commitment, self-efficacy and team player mediate the effect on individual ambidexterity respectively. A total of three regression analyses were executed and the results are shown in figure 4.7, figure 4.8 and figure 4.9.

First, regression analysis was run to investigate to test if affective commitment mediates the effect of openness on individual ambidexterity. Results indicated that openness was not a significant predictor of affective commitment, ($B = -.0294$, $SE = .1536$, 95% CI $[-.3337, .2749]$, $p = .8486$), and that affective commitment was a significant predictor of individual ambidexterity, ($B = 1.5480$, $SE = .4312$, 95% CI $[.6937, 2.4022]$, $p = .0005$). These results do not support the mediational effects. Openness was a significant predictor of individual ambidexterity after controlling for the mediator, affective commitment, ($B = 2.4298$, $SE = .7073$, 95% CI $[1.0285, 3.8310]$, $p = .0008$). Approximately 18% of the variance in individual ambidexterity was accounted for by the predictors ($R\text{-sq} = .1767$). The results indicate the indirect coefficient was not significant, ($B = -.0455$, $SE = .2282$, 95% CI $[-.5112, .4487]$) and that there is a significant and direct link between openness and individual ambidexterity.

Outcome Variable: Affective Commitment

Model Summary

R	R ²	MSE	F	df1	df2	p
0.0179	0.0003	0.6800	0.0366	1.0000	114.0000	0.8486

Constant Openness

Coeff	se	t	p	LLCI	ULCI
3.5566	0.5882	6.0469	0.0000	2.3915	4.7218
-0.0294	0.1536	-0.1913	0.8486	-0.3337	0.2749

Outcome Variable: Individual ambidexterity

Model Summary

R	R ²	MSE	F	df1	df2	p
0.4204	0.1767	14.4123	12.1275	2.0000	113.0000	0.0000

Constant Openness Affective Commitment

Coeff	se	t	p	LLCI	ULCI
0.0468	3.1120	0.150	0.9880	-6.1186	6.2122
2.4298	0.7073	3.4353	0.0008	1.0285	3.8310
1.5480	0.4312	3.5900	0.0005	0.6937	2.4022

Outcome Variable: Individual ambidexterity

Model Summary

R	R ²	MSE	F	df1	df2	p
0.2878	0.0828	15.9151	10.2937	1.0000	114.0000	0.0017

Constant Openness

Coeff	se	t	p	LLCI	ULCI
5.5524	2.8456	1.9512	0.0535	-0.0847	11.1894
2.3843	0.7431	3.2084	0.0017	0.9121	3.8564

Figure 4.7: Regression analysis explaining openness to experience on individual ambidexterity

Second, regression analysis was run to investigate if self-efficacy mediates the effect of conscientiousness on individual ambidexterity. Results indicated that conscientiousness was a significant predictor of self efficacy, ($B = .2311$, $SE = .0746$, 95% CI [.0833, .3788], $p = .0024$), and that self efficacy was a significant predictor of individual ambidexterity, ($B = 4.5156$, $SE = .5662$, 95% CI [3.3938, 5.6373], $p = .0000$). Conscientiousness was a significant predictor of individual ambidexterity after controlling for the mediator, self efficacy, ($B = 2.0009$, $SE = .5612$, 95% CI [.8892, 3.1126], $p = .0005$). These results do support the mediational effect. More specifically, the results indicate that self-efficacy partially mediates the link between

conscientiousness and individual ambidexterity. Approximately 10% of the variance in individual ambidexterity was accounted for by the predictors ($R^2 = .1003$). The results indicate the indirect coefficient was significant, ($B = 1.0435$, $SE = .4432$, 95% CI [.3549, 2.1003])

Outcome Variable: Self efficacy

Model Summary	R	R ²	MSE	F	df1	df2	p
	0.2787	0.0777	0.2757	9.6008	1.0000	114.0000	.0024
Constant Conscientiousness	Coeff	se	t	p	LLCI	ULCI	
	3.1276	0.2796	11.1861	0.0000	2.5737	3.6814	
	0.2311	0.0746	3.0985	0.0024	0.0833	0.3788	

Outcome Variable: Individual ambidexterity

Model Summary	R	R ²	MSE	F	df1	df2	p
	0.6514	0.4243	10.0773	41.6493	2.0000	113.0000	0.0000
Constant Conscientiousness Self efficacy	Coeff	se	t	p	LLCI	ULCI	
	-6.9045	2.4480	-2.80205	0.0057	-11.7545	-2.0546	
	0.9574	0.4695	2.0393	0.0438	0.0273	1.8875	
	4.5156	0.5662	7.9752	0.0000	3.3938	5.6373	

Outcome Variable: Individual ambidexterity

Model Summary	R	R ²	MSE	F	df1	df2	p
	0.3167	0.1003	15.6113	12.7130	1.0000	114.0000	0.0005
Constant Conscientiousness	Coeff	se	t	p	LLCI	ULCI	
	7.2182	2.1038	3.4311	0.0008	3.0506	11.3858	
	2.0009	0.5612	3.5655	0.0005	0.8892	3.1126	

Figure 4.8: Regression analysis explaining conscientiousness on individual ambidexterity

Finally, regression analysis was run to investigate if that team player mediates the effect of extraversion on individual ambidexterity. Results indicated that extraversion was a significant

predictor of team player, ($B = .3089$, $SE = .1021$, 95% CI [.1066, .5111], $p = .0031$), and that team player was a significant predictor of individual ambidexterity, ($B = 2.9851$, $SE = .4835$, 95% CI [2.0272, 3.9430], $p = .0000$). These results do support the mediational effect. Extraversion was a significant predictor of individual ambidexterity after controlling for the mediator, team player, ($B = 3.38319$, $SE = .6068$, 95% CI [2.1811, 4.5851], $p = .0000$). Approximately 21% of the variance in individual ambidexterity was accounted for by the predictors ($R\text{-sq} = .2143$). The results indicate the indirect coefficient was significant, ($B = .9220$, $SE = .2721$, 95% CI [.4388, 1.5021]).

Outcome Variable: Team player

Model Summary	R	R ²	MSE	F	df1	df2	p
	0.2726	0.0743	0.3860	9.1545	1.0000	114.0000	.0031
Constant Extraversion	Coeff	se	t	p	LLCI	ULCI	
	3.2247	0.3557	9.0664	0.0000	2.5201	3.9293	
	0.3089	0.1021	3.0256	0.0031	0.1066	0.5111	

Outcome Variable: Individual ambidexterity

Model Summary	R	R ²	MSE	F	df1	df2	p
	0.6422	0.4125	10.2852	2.0000	2.0000	113.0000	0.0000
Constant Extraversion Team player	Coeff	se	t	p	LLCI	ULCI	
	-6.6528	2.4088	-2.7619	0.0067	-11.4250	-1.8806	
	2.4611	0.5478	4.4931	0.0000	1.3759	3.5463	
	2.9851	0.4835	6.1741	0.0000	2.0272	3.9430	

Outcome Variable: Individual ambidexterity

Model Summary	R	R ²	MSE	F	df1	df2	p
	0.4629	0.2143	13.6341	31.0886	1.0000	114.0000	0.0000
Constant Extraversion	Coeff	se	t	p	LLCI	ULCI	
	2.9734	2.1140	1.4065	0.1623	-1.2145	7.1612	
	3.3831	0.6068	5.5757	0.0000	2.1811	4.5851	

Figure 4.9: Regression analysis explaining extraversion on individual ambidexterity

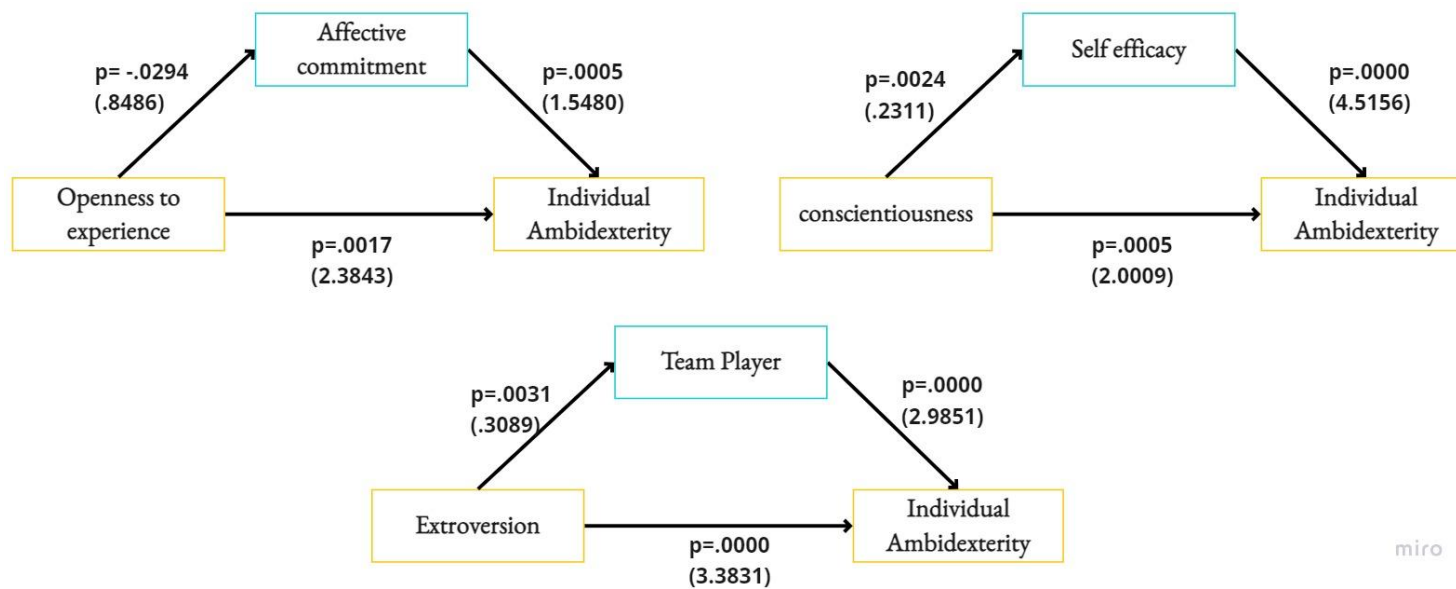


Figure 4.10: Results of the mediation analyses

Chapter 6 : Discussion, implications, limitations and future study

By combining the observations with insight from the literature review, this thesis highlights the primary findings of the statistical analyses and examines the study's main significant implications. Also highlighted are the study's practical and theoretical implications. The chapter ends with a discussion of the study's drawbacks as well as a conclusion for future study.

6.1 Discussion

The aim of this research was to gain a deeper understanding of ambidexterity at the individual level of analysis. To date, most of the literature talks about ambidexterity at different levels of an organization, with a focus on the organizational level. Researchers discuss the need for ambidexterity, but it is not clear how it can be achieved. In the dynamic environment, demand for the ambidextrous individual is essential to increase the performance of the firm. Tushman and O'Reilly (1996) in their research expressed that ambidexterity strengthens a company's, organizational unit, or employee's productivity. Therefore, firms look for individuals who can be ambidextrous. There were various recommendations by researchers to explore individual's characteristics to know how ambidexterity can be achieved at the individual level (Good & Michel, 2013; Keller & Weibler, 2014). In this thesis, I explored the effects of openness to experience, conscientiousness and extraversion on individual ambidexterity. Therefore, to choose an individual who has the ability to act ambidextrously, it is an important aspect to analyse why certain individuals are able to do both exploration and exploitation. Many researchers have tried answering considering the antecedents, characteristics of leaders and organization context (Good & Michel, 2013; Keller & Weibler, 2014; Mom, et al., 2009).

The findings from the qualitative study indicated insights on ambidextrous employee and personality traits that influence the behaviour which can be further explained by intervening variables, namely, affective commitment, self-efficacy and team player. Interviews revealed that there are ambidextrous individuals and they need the ability to create and execute new ideas while also completing existing responsibilities, accept risks, manage conflict, and adapt to

organizational demands by overcoming organizational restrictions. The interviews highlighted the employee ambidexterity is essential for organizations competing in a dynamic environment. One such instance is the COVID19 outbreak that impacted companies and employees all over the world to rethink their business practices. Adapting to this digital work environment requires flexibility, and ambidextrous people succeed at it, showing the importance of having ambidextrous employees. Furthermore, when respondents were questioned about the organizational constraints holding them back to act in an ambitious way, factors such as interdepartmental collaboration issues were revealed. Communication difficulties across the organization's many business sectors can often make it difficult to collaborate on new procedures. Next, due to time pressure, it is difficult to try new ways (explore) and employees tend to stick to their daily routines. The interviews also revealed a combination of individuals high on openness and conscientiousness can be a better fit for individual ambidexterity.

Based on earlier studies, it was demonstrated that individual ambidexterity is significantly related to openness to experience (Keller & Weibler, 2014; Zacher et al., 2016). Individuals with a strong trait of openness to new experience are more likely to act ambidextrously. The findings from this research are consistent with previous research. For instance, Keller & Weibler (2014) have shown individuals with an openness to experience trait, because of their tendency for creative thinking, incur less cognitive effort when performing ambidextrously and also flexibly adapting from one activity to another. Zacher et al. (2016) mentioned the opening and closing behaviours of leaders which in turn predict the employees' ability to explore and exploit. The study strongly predicts openness trait to influence individuals to act ambidextrously. The results show a positive correlation between openness trait and individual ambidexterity. Apart from the regular work (exploitation) the individual has to succeed in learning new things (exploration) and also to know when to shift between the tasks flexibly. The minimum score of an individual on exploitation is 2.71, signifying that every individual has exploitation ability. Apart from exploitation, having an exploration ability is important to act ambidextrously. The study shows openness to experience people show highly significant positive correlations of moderate strength with individual ambidexterity. The exploitation task, although positive, was not significant. Considering the combined individual ambidexterity is significant with positive correlations of weak strength. What could be inferred is that the combined construct of individual ambidexterity

shown in this research enables someone with a modest ability of exploitation to become ambidextrous since they are equally able to become explorative. This raises some questions concerning the concept of combined ambidexterity. This topic will be further discussed in the next section. Furthermore, this thesis did not indicate a mediating role of affective commitment on the link between openness and individual ambidexterity. One can argue that the employees of this study had high autonomy jobs and they tend to engage in work that gives them job satisfaction. Adding on, according to McCrae (1996) individuals with high openness to experience tend to underestimate things that many others value, this might be a reason for the non-significant findings. One can also argue that open people are “striving for status or a desire to progress” (McCrae, 1996). Meaning, openness is likely connected to a tendency to explore work opportunities both inside and outside the company. When compared to the present findings, it appears that some present employees are not that happy with their jobs and feel the need to look elsewhere for better chances.

Conscientiousness was found to be highly significant with positive correlations of moderate strength with individual ambidexterity, a finding that aligns with previous literature. In particular, Good and Michel (2013) have shown in their research that focused attention and coping with stress are important characteristics of conscientious individuals to act ambidextrously. Conscientious individuals tend to be more towards exploitation, and the study shows a highly significant positive correlation of moderate strength with individual ambidexterity. This means that those with a strong conscientious trait are much more inclined to be ambidextrous than people with the less conscientious trait. Furthermore, the mediating role of self-efficacy on conscientiousness and individual ambidexterity is found to be significant. Kauppila and Tempelaar (2016) spoke about individuals with high self-efficacy tend to perform difficult tasks over time which is closely linked to conscientious people’s clear mission and goal-oriented trait. The idea is that having a high level of self-efficacy helps people act ambidextrously because people with a high level of self-efficacy are often more inclined to undertake individual responsibility and lead the way to ambidextrous behaviour. Ambidextrous behaviour, for instance, increases the self-efficacy of an employee. Getting good comments, educational experiences, and continuing to learn skills in general cause self-efficacy to improve (Gilad al., 2001).

Extraversion was found to be significantly related to individual ambidexterity. In this study, extraversion has the strongest correlation with individual ambidexterity. Extraversion individuals in the study showed highly significant positive correlations of moderate strength with exploitation and the exploration was found to be significant with individual ambidexterity. The reason is that individuals with strong traits of extraversion have a large social network (Swickert et al., 2002). They may exploit these connections to manage their exploitation and exploration activity, as well as to handle stress. Extraverts may ask their connection for support in ensuring this balance; this may be observed in reality, as extraverts are more able to approach their connection to undertake certain tasks or to seek support help from others in planning their activities, therefore creating a balance. To conclude, the extraversion trait is positively correlated to individual ambidexterity, the reason is having a large network to get new ideas and implement either to explore or exploit. Furthermore, the mediating role of a team player on extraversion and individual ambidexterity was found to be significant. Extraverts appear to have a bigger and more diverse support network than introverts, enabling them to get encouragement and guidance from a wider group of people (Swickert et al., 2002). They are motivated and energized by external stimulation such as daily interactions, social activities, and shared ideas. By being a team player, they tend to discuss ideas, share knowledge and welcome new ideas, which motivates the team members to perform better. Extraverts also acquire a variety of viewpoints and ideas that they may employ in their exploration and exploitation activities. Besides their accomplishments, they have a tendency to support others, which helps the company develop as a whole.

6.2 Implications

6.2.1 Theoretical implications

This study contributes to the field of research on ambidexterity in a number of ways. The individual ambidexterity personality was explored to a greater extent throughout this research. Individual ambidexterity concepts are rarely investigated since organization ambidexterity receives the majority of the focus. Previous and limited research concentrated on extrinsic influences within the limited body of research performed upon individual ambidexterity (Gibson & Birkinshaw, 2004). Personal characteristics strongly influence individual ambidexterity,

according to Good and Michel (2013). This research concentrated on variables such as openness, conscientiousness and extraversion that influence ambidexterity within individuals and that specific variable could indeed estimate the ability to become individually ambidextrous, thus deepening the knowledge of the concept.

A further notable observation out of this research is that not only the top management but also other employees may act in an ambidextrous way. Though some people might become ambidextrous, the level of individual ambidexterity differs, reinforcing the idea that not everyone can achieve combined individual ambidexterity. An additional outcome of this research is that the measurement of individual ambidexterity is not quite standard. Although ambidexterity can be measured in a variety of ways, in this study a combined approach is performed. However, given the variety in the measurement of ambidexterity, it is difficult to provide a generalized solution about the appropriate measurement of the concept.

This research adds to the body of knowledge on ambidexterity by identifying strong and significant effects of openness, conscientiousness and extraversion. Although openness, conscientiousness and extraversion are among several personality traits that could account for why certain people are much more likely to behave ambidextrously, the significant findings confirm that personality traits represent a strong influence. If deeper analysis is able to develop a comprehensive list of factors that influence ambidextrous behaviour, it might be employed to assign individuals to activities that demand individual ambidexterity.

The thesis also investigated the mediating effects of affective commitment, self-efficacy and team player on the links between openness, conscientiousness and extraversion, on individual ambidexterity. There are no significant mediation effects for openness. Significant mediation effects are found for conscientiousness and extraversion.

Finally, according to Good and Michel (2013), the ambidextrous individual should flexibly shift appropriately between exploration and exploitation tasks within a changing environment. Flexibly adjusting and changing from exploration and exploitation tasks is not explicitly examined in this study, but the findings show that in order to become individually ambidextrous,

an individual must be open, conscientious, and extraverted, though the degree of flexibility within this is still up for debate.

6.2.2 Practical implications

In terms of practical application, this research confirms the need of stimulating exploratory behaviour in particular to activate individual ambidexterity. Openness, conscientiousness and extraversion are critical attributes for management to consider if they want an ambidextrous person. Human resources may put this research into effect by recruiting and choosing employees with strong traits of openness, conscientiousness and extraversion for their organizations in order to obtain better levels of individual ambidexterity and thereby increasing the performance of the organization.

Moreover, the openness trait had a significant effect on individual ambidexterity, so towards being capable of behaving ambidextrous, senior leadership must prioritize the development of something that enables an open way of thinking. For a conscientious individual, since self-efficacy mediates the relationship, the organisation must figure out how to enhance individuals self-efficacy so that they can contribute towards creative ideas. Top management may help their employees by motivating them and valuing their viewpoints and accomplishments. As a result, employees may see the results of their actions and contribute to the overall performance of diverse programs. Extraversion was found significant and team player mediated the relationship hence top management should foster group discussion and have brainstorming sessions so people interact with others to stimulate new ideas. It is indeed necessary to keep in mind that no suggestions are bad or silly during brainstorming, so individuals must keep their thoughts receptive to new ideas.

Workforce diversity seems to be another idea for boosting individual ambidexterity. Trying to work in different domains of the organization. Even if an employee performs a specific task for an extended period of time, their openness may be affected by the perception that all of that has been performed or attempted. This would be particularly recommended to managers since they may encourage various individuals to examine their ideas and relate those to the brainstorming process.

6.3 Limitations and future research

This study contains a number of limitations that need to be addressed, but it does also provide opportunities for further investigation. The first limitation is the environment where the information was gathered. The research doesn't consider the context such as complex, dynamic or unfavourable instances. When people evaluate their own exploration and exploitation tasks, subjectivity is an issue. While one person, in particular, may see themselves to be more exploitative in nature as compared to another, it may introduce bias in findings. Despite Mom, et al. (2007) tested this by conducting interviews while developing the exploration and exploitation scale, somehow it represents a risk to the objectivity of the data because the researchers didn't witness it with their own eyes, leaving room for discussion. Observational research in the future might add greater objectivity towards this area of study. The validity of a questionnaire's findings may even be determined by monitoring.

A methodology that includes alternative means of measurement, apart from the self-assessment means employed in this research, can be applied to expand the research. Because individuals' self-assessment responses might be influenced, further evaluations of individual ambidexterity, measured by a supervisor/manager or objective metrics might strengthen the findings. While I attempted to integrate significant predictors depending on the present status of ambidexterity research, it is indeed crucial to note that this could be a difficult and broad area. By using three personality traits and three mediators, my contributions are rather simple to comprehend. But on the other side, significant personality traits and mediators are not used in this study. Further research can be done exploring more personality characteristics and mediators that could influence individual ambidexterity in order to answer why few people tend to act more ambidextrously.

The next limitation is that the data collected was from a single company, therefore the results cannot be generalized to a larger population. The organization where the data were collected gives higher priority to exploratory tasks alongside their exploitative duties. This can be one of the reasons for the significant number of ambidextrous individuals in the research. As a consequence, it is unclear whether these employees view themselves as exploratory as a response to top management's constant attention or just as a result of ambidexterity's influence. Future

study in different domains and organizations might be used to see whether similar concepts can be generalized to several other situations.

There seems to be no consistent technique of evaluating individual ambidexterity, which is a disadvantage and a recommendation for further investigation. As a response to this, research is required on developing a clearer definition of the concept of individual ambidexterity, as well as on the methods for measuring it, and the expected scores needed to be categorized as ambidextrous. For instance, individual 1 scores five on exploitation, and two on exploration, the combined ambidexterity is ten. Individual 2 scores three on both scales with combined ambidexterity of nine. Individual 1 and 2 both have different scores on different scales but the score is almost similar on individual ambidexterity. Given that there exists no consistent standard throughout the research, it is difficult to tell whether results accurately reflect individual ambidexterity. Future research could shed more light on conceptualizing and measuring the term of individual ambidexterity.

Lastly, the size of the sample ($N=116$) was low. To solidify the outcomes, a bigger sample would be important. Because of the small sample size, there is a possibility of unexpected findings that could be avoided by adopting a bigger sample. Thereby increasing the validity and implications of the research. A bigger sample size, various organizations and data collection at different points on time can give added value to the present study. For qualitative analysis, the same size was low again ($N=3$). Unfortunately, problems arose throughout the data gathering process, since the number of responses was insufficient, resulting in a lesser number of interviewee's than the concerned study had hoped to acquire. The study's external validity is weakened by its small sample.

Chapter 7 : Conclusion

The research question and objectives stated in Chapter 1 are addressed in this section and to confirm that the study's objectives are met.

The goal of this research was to investigate and have a deeper understanding of ambidexterity at an individual level, with a broad question: *Is there such a concept as an ambidextrous employee? What does such an ambidextrous employee appear to be like?* To do so, a trait based approach was adopted. Thus, leading to the main research question:

MRQ: *Which personality traits influence an individual's ambidextrous behaviour ?*

SRQ1: *How does openness to experience trait influence ambidextrous behaviour and what is the role of affective commitment in this link?*

SRQ2: *How does conscientiousness trait influence ambidextrous behaviour and what is the role of self efficacy in this link?*

SRQ3: *How does extraversion trait influence ambidextrous behaviour and what is the role of team player in this link?*

From the qualitative and quantitative studies, it was discovered that individual ambidexterity is a behaviour of an employee to flexibly shift between exploitation and exploration activity appropriately. It revealed that there exists ambidextrous employees as the mean score of the sample on exploration was 3.75 and exploitation was 3.84, which are high. The mean of individual ambidexterity construct was 14.60 indicating that there exists ambidextrous individuals. The research is an initial step towards establishing a link between personality traits and ambidexterity on an individual level. This study contributed to the existing knowledge on ambidexterity by examining various internal antecedents at the micro-level. The effects of openness, conscientiousness, and extraversion on individual ambidexterity, as well as the mediators that influence the relationship, such as affective commitment, self efficacy and teamplayer respectively. Openness to new experiences, conscientiousness and extraversion positively relate to individual ambidexterity, and as a result, revealing that internal factors can be used to determine individual ambidexterity. Next to these findings, self efficacy mediates the relationship between conscientiousness and individual ambidexterity, and team player mediates

the relationship between extraversion and individual ambidexterity. Contrary to our expectations, affective commitment did not mediate the relationship between openness to experience and individual ambidexterity.

Given that the majority of previous literature findings has focused on external factors (Yao & Li, 2020), top management (Zacher et al., 2016) and different levels of analysis (Benner & Tushman, 2001), this research fills the void in the topic of individual ambidexterity. Furthermore, there is a lot of uncertainty in conceptualizing ambidexterity construct as there are several explanations for individual ambidexterity, in fact, make it ambiguous to what degree top management must be involved in establishing a trade-off between exploration and exploitation or optimize both. It is indeed a significant discovery that top management may employ to create ambidextrous groups of employees. Ambidexterity is a vague concept that is difficult to describe. There is no standardized framework or method for assessing individual ambidexterity. This validation may motivate more study into this concept ahead. Further, mediators for conscientiousness and extraversion were found: self-efficacy and team play respectively. This research was a significant step forward in the exploration of personality traits as a determinant of ambidextrous behaviour. Another question has been and continues to be why certain people are more ambidextrous over others. Several personality traits which are and perhaps more useful for explaining this subject may be uncovered in future work. The knowledge gained from this thesis may help other organizations develop ambidextrous behaviour in order to improve business performance.

Reflection

Reflecting on the scientific work of this master's degree thesis, I took a while to narrow down my interest and arrive at the research gap. It was my first time conducting research within a real context or company. Supervisors' advice, as well as the discussions with the graduation committee aided in sharpening attention. Researching literature on organizational ambidexterity, personality traits, and individual ambidexterity allowed me to figure out how to define my own area of study. My experience of defining research questions and focusing on appropriate research tools and methodologies was an incremental procedure. Trying to reflect on the study methodology helped me realize the vast array of different methodologies available. Despite

research methods covered in the MoT syllabus about qualitative and quantitative methods, personally doing one is a very distinct experience. The fundamental concepts mentioned in the research method curriculum have undoubtedly benefited. The other course that assisted and sparked my curiosity is Leadership and technology management, where I learnt about ambidexterity and personality traits. On the other hand, this study is just one of many which have been done to better understand the concept of ambidexterity at individual level. I hope that more people are enthusiastic to explore the benefits, conceptualizing and measuring individual ambidexterity. Reflecting on the results, I believe that cultivating ambidexterity at the individual level is critical for a firm to stay competitive. Next, measuring individual ambidexterity is a priority since there is no consistent method. If I had more time to explore, inclusion of contextual factors such as time pressure would have made the research more realistic. Over the time I have built interest in this topic and I would definitely read more so one day I can manage a team and foster ambidexterity.

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Appendix

Appendix A : Research questionnaires

A1. Qualitative : Interview questions

1. Could you please tell me your educational background (education and job experience)?
2. What is your position and role in this organization? What are your most important tasks & responsibilities?
3. How long have you been working for this organization?
4. Do you recognize elements of ambidexterity within your organization? How would you describe those elements in your organization?
5. Do you think that there is an ambidextrous person? If so, what are his/her characteristics?
6. Do you think there is a need for ambidextrous individuals in an organization?
7. Can you share an experience where you had to manage a new system, process, technology, or idea (explore) and perform your regular work (exploit) simultaneously? (follow up: Do you shift between them hourly? Daily? Weekly?)
8. How do you think open to new experiences people would perform in terms of exploration and exploitation? Why?
9. How do you think Extroverts people would perform in terms of exploration and exploitation? Why?
10. How do you think consciousness people would perform in terms of exploration and exploitation? Why?
11. Do you feel there are any organizational constraints holding you back to be an ambidextrous person?
12. What do you think would be the ideal combination of personality traits to become ambidextrous?

A2. Quantitative: Items used in survey



Section 1 of 6

Master Thesis survey on Individual Ambidexterity and personality traits

Welcome!

You are being invited to participate in a research study titled Individual Ambidexterity and personality traits. This study is being done by Aishwarya Tumkur Venkatesh from the TU Delft.

The purpose of this research study is to evaluate the relationship between personality traits and individual ambidexterity, and will take you approximately 6-7 minutes to complete. The data will be used for academic purposes.

Your participation in this study is entirely voluntary and you can withdraw at any time. You are free to omit any question. We believe there are no known risks associated with this research study; however, as with any online related activity the risk of a breach is always possible. To the best of our ability your answers in this study will remain confidential. For more information or questions about the study, please send an email to:

A.TumkurVenkatesh@student.tudelft.nl

Which category below includes your age? *

- ☐ 18 - 24 years
- ☐ 25 - 34 years
- ☐ 35 - 44 years
- ☐ 45 - 54 years
- ☐ 55 - 64 years
- ☐ 65 years or older

What is your gender? *

- ☐ Female
- ☐ Male
- ☐ Prefer not to say

How many years of work experience do you have? *

- ☐ None
- ☐ 0 - 2 years
- ☐ 2 - 5 years
- ☐ 5 - 10 years
- ☐ 10 - 20 years
- ☐ More than 20 years

What is your current job profile/domain ? *

Short answer text

.....

Which of the following most closely matches your current occupation/ job position? *

- ☐ Intern
- ☐ Entry Level
- ☐ Analyst/ Associate
- ☐ Manager
- ☐ Senior Manager
- ☐ Director
- ☐ CEO
- ☐ Other

After section 1 Continue to next section



How much do you agree with each statement about you as you generally are now, not as you wish to be in the future?



In general, I...

Am the life of the party. *

	1	2	3	4	5	
Strongly Disagree	☐	☐	☐	☐	☐	Strongly Agree

Am always prepared. *

1	2	3	4	5
---	---	---	---	---

...

Have a rich vocabulary. *

	1	2	3	4	5	
Strongly Disagree	☐	☐	☐	☐	☐	Strongly agree

Don't talk a lot. *

	1	2	3	4	5	
Strongly Disagree	☐	☐	☐	☐	☐	Strongly agree

Leave my belongings around. *

	1	2	3	4	5	
Strongly Disagree	☐	☐	☐	☐	☐	Strongly agree

Have difficulty understanding abstract ideas. *

	1	2	3	4	5	
Strongly Disagree	☐	☐	☐	☐	☐	Strongly agree

Feel comfortable around people. *

	1	2	3	4	5	
Strongly Disagree	☐	☐	☐	☐	☐	Strongly agree

Pay attention to details. *

	1	2	3	4	5	
Strongly Disagree	☐	☐	☐	☐	☐	Strongly agree

Have a vivid imagination. *

	1	2	3	4	5	
Strongly Disagree	☐	☐	☐	☐	☐	Strongly agree

Keep in the background. *

	1	2	3	4	5	
Strongly Disagree	☐	☐	☐	☐	☐	Strongly agree

Make a mess of things. *

	1	2	3	4	5	
Strongly Disagree	☐	☐	☐	☐	☐	Strongly agree

...

Am not interested in abstract ideas. *

	1	2	3	4	5	
Strongly Disagree	☐	☐	☐	☐	☐	Strongly agree

Start conversations. *

	1	2	3	4	5	
Strongly Disagree	☐	☐	☐	☐	☐	Strongly agree

Get chores done right away. *

	1	2	3	4	5	
Strongly Disagree	☐	☐	☐	☐	☐	Strongly agree

Have excellent ideas. *

	1	2	3	4	5	
Strongly Disagree	☐	☐	☐	☐	☐	Strongly agree

Have little to say. *

	1	2	3	4	5	
Strongly Disagree	☐	☐	☐	☐	☐	Strongly agree

Often forget to put things back in their proper place. *

	1	2	3	4	5	
Strongly Disagree	☐	☐	☐	☐	☐	Strongly agree

...

Do not have a good imagination. *

	1	2	3	4	5	
Strongly Disagree	☐	☐	☐	☐	☐	Strongly agree

Talk to a lot of different people at parties. *

	1	2	3	4	5	
Strongly Disagree	☐	☐	☐	☐	☐	Strongly agree

Like order. *

	1	2	3	4	5	
Strongly Disagree	☐	☐	☐	☐	☐	Strongly agree

Am quick to understand things *

	1	2	3	4	5	
Strongly Disagree	☐	☐	☐	☐	☐	Strongly agree

Don't like to draw attention to myself. *

	1	2	3	4	5	
Strongly Disagree	☐	☐	☐	☐	☐	Strongly agree

Shirk my duties. *

	1	2	3	4	5	
Strongly Disagree	☐	☐	☐	☐	☐	Strongly agree

Use difficult words. *

	1	2	3	4	5	
Strongly Disagree	☐	☐	☐	☐	☐	Strongly agree

Don't mind being the center of attention. *

	1	2	3	4	5	
Strongly Disagree	☐	☐	☐	☐	☐	Strongly agree

Follow a schedule. *

	1	2	3	4	5	
Strongly Disagree	☐	☐	☐	☐	☐	Strongly agree

Spend time reflecting on things. *

	1	2	3	4	5	
Strongly Disagree	☐	☐	☐	☐	☐	Strongly agree

Am quiet around strangers. *

	1	2	3	4	5	
Strongly Disagree	☐	☐	☐	☐	☐	Strongly agree

Am exacting in my work. *

	1	2	3	4	5	
Strongly Disagree	☐	☐	☐	☐	☐	Strongly agree

Am full of ideas. *

	1	2	3	4	5	
Strongly Disagree	☐	☐	☐	☐	☐	Strongly agree

After section 2 Continue to next section



To what extent did you, last year, engage in work related activities that can be characterized as follows

Description (optional)

Searching for new possibilities with respect to products/services, processes, or markets *

	1	2	3	4	5	
A very small extent	☐	☐	☐	☐	☐	A very large extent

...

Evaluating diverse options with respect to products/services, processes, or markets *

	1	2	3	4	5	
A very small extent	☐	☐	☐	☐	☐	A very large extent

Focusing on strong renewal of products/services or processes *

	1	2	3	4	5	
A very small extent	☐	☐	☐	☐	☐	A very large extent

Activities of which the associated yields or costs are currently unclear *

	1	2	3	4	5	
A very small extent	☐	☐	☐	☐	☐	A very large extent

Activities requiring quite some adaptability of you *

	1	2	3	4	5	
A very small extent	☐	☐	☐	☐	☐	A very large extent

Activities requiring you to learn new skills or knowledge *

	1	2	3	4	5	
A very small extent	☐	☐	☐	☐	☐	A very large extent

Activities that are not (yet) clearly existing company policy *

	1	2	3	4	5	
A very small extent	☐	☐	☐	☐	☐	A very large extent

Activities of which a lot of experience has been accumulated by yourself *

	1	2	3	4	5	
A very small extent	☐	☐	☐	☐	☐	A very large extent

Activities which you carry out as if it were routine *

	1	2	3	4	5	
A very small extent	☐	☐	☐	☐	☐	A very large extent

Activities which serve existing (internal) customers with existing services/products *

	1	2	3	4	5	
A very small extent	☐	☐	☐	☐	☐	A very large extent

Activities of which it is clear to you how to conduct them *

	1	2	3	4	5	
A very small extent	☐	☐	☐	☐	☐	A very large extent

Activities primarily focused on achieving short-term goals *

	1	2	3	4	5	
A very small extent	☐	☐	☐	☐	☐	A very large extent

Activities which you can properly conduct by using your present knowledge *

	1	2	3	4	5	
A very small extent	☐	☐	☐	☐	☐	A very large extent

Activities which clearly fit into existing company policy *

	1	2	3	4	5	
A very small extent	☐	☐	☐	☐	☐	A very large extent

After section 3 Continue to next section



How do you experience the following statements? ✕ ⋮

Read each statement carefully and decide how strongly you feel the knowledge or idea described in the statement regarding your work.

Description (optional)

I would be very happy to spend the rest of my career with this organization *

	1	2	3	4	5	
Strongly disagree	☐	☐	☐	☐	☐	Strongly agree

I enjoy discussing my organization with people outside of it *

	1	2	3	4	5	
Strongly disagree	☐	☐	☐	☐	☐	Strongly agree

I really feel as if this organization's problems are my own *

	1	2	3	4	5	
Strongly disagree	☐	☐	☐	☐	☐	Strongly agree

I don't think I could be as attached to another employer *

	1	2	3	4	5	
Strongly disagree	☐	☐	☐	☐	☐	Strongly agree

I experience myself in the so-called. "Into the family" *

	1	2	3	4	5	
Strongly disagree	☐	☐	☐	☐	☐	Strongly agree

I feel attached to the work community *

	1	2	3	4	5	
Strongly disagree	☐	☐	☐	☐	☐	Strongly agree

I have a strong sense of belonging to this employer *

	1	2	3	4	5	
Strongly disagree	☐	☐	☐	☐	☐	Strongly agree

⋮
This employer is of personal importance to me *

	1	2	3	4	5	
Strongly disagree	☐	☐	☐	☐	☐	Strongly agree

After section 4 Continue to next section



Read each statement carefully and decide how strongly you feel regarding your work.



Description (optional)

I will be able to achieve most of the goals that I have set for myself. *

	1	2	3	4	5	
Strongly disagree	☐	☐	☐	☐	☐	Strongly agree

When facing difficult tasks, I am certain that I will accomplish them. *

	1	2	3	4	5	
Strongly disagree	☐	☐	☐	☐	☐	Strongly agree

In general, I think that I can obtain outcomes that are important to me. *

	1	2	3	4	5	
Strongly disagree	☐	☐	☐	☐	☐	Strongly agree

I believe I can succeed at most any endeavor to which I set my mind. *

	1	2	3	4	5	
Strongly disagree	☐	☐	☐	☐	☐	Strongly agree

I will be able to successfully overcome many challenges. *

	1	2	3	4	5	
Strongly disagree	☐	☐	☐	☐	☐	Strongly agree

I am confident that I can perform effectively on many different tasks *

	1	2	3	4	5	
Strongly disagree	☐	☐	☐	☐	☐	Strongly agree

Compared to other people, I can do most tasks very well. *

	1	2	3	4	5	
Strongly disagree	☐	☐	☐	☐	☐	Strongly agree

Even when things are tough, I can perform quite well. *

	1	2	3	4	5	
Strongly disagree	☐	☐	☐	☐	☐	Strongly agree

After section 5 Continue to next section



This set of questions is to help us understand the way you think and feel about working with others at your workplace. Please indicate how you generally feel.

Description (optional)

Working as part of a team or work group *

	1	2	3	4	5	
very dissatisfied	☐	☐	☐	☐	☐	very satisfied

Seeking information from others in his/her workgroup *

	1	2	3	4	5	
very dissatisfied	☐	☐	☐	☐	☐	very satisfied

Making sure his/her work group succeeds *

	1	2	3	4	5	
very dissatisfied	☐	☐	☐	☐	☐	very satisfied

Responding to the needs of others in his/her workgroup *

	1	2	3	4	5	
very dissatisfied	☐	☐	☐	☐	☐	very satisfied