Intrapreneurial personality and individual innovation behaviour in service organisations: Network building ability as a mediator

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Abstract

The research investigates network building ability as a mediating mechanism of influence in the relationship between intrapreneurial personality and three stages of employees' innovative behaviours: idea generation, promotion, and realisation. A quantitative research methodology was adopted with 410 questionnaires collected from employees in the UAE service sector and subsequently analysed using structural equation modelling. The research found a significant direct relationship between intrapreneurial personality and the idea realisation stage and no direct relationship between idea generation and idea promotion. In addition, network building ability was found to mediate these relationships, underlining the importance of building networks for intrapreneurial employees to innovate. These results across the three main stages of individuals' innovative behaviours may enrich our teachable skills to improve individuals' innovative behaviour.

Keywords: Service innovation; intrapreneurial personality; network building ability; individuals' innovative work behaviour.

Introduction

Entrepreneurship within the boundary of an organisation is referred to as intrapreneurship (Sinha & Srivastava, 2013). Intrapreneurship is a bottom-up process in which employees at any level can start new businesses within the confines of their parent company while working within the hierarchy. Intrapreneurial individuals combine vision and action (Zhu et al, 2014) and are often described as task self-appointed, self-determined and action-oriented (Pinchot 1985). This study aims to explain the innovative behaviour of individuals with high intrapreneurial personalities (Antoncic & Hisrich, 2001; Shetty, 2004). Innovation behaviour within organisations is defined as "…the intentional creation, introduction and application of new ideas within a work role, group or organisation" (Janssen 2000, p. 288). It is seen to be composed of three stages: idea generation, idea promotion, and idea realisation (Janssen, 2000). The question then becomes how intrapreneurs who are action-oriented can be innovative across the three distinct stages of innovation. The need to explain the innovative behaviour of intrapreneurial employees is driven by the fast-changing and highly competitive world within which 21st Century service organisations are embedded. Thus, organisations need creative employees capable of putting their novel ideas into practice and taping them into their creative energy (Scott & Bruce 1994; Zainal & Matore 2019).

Identifying which employees tend to be innovative has attracted organisational researchers for decades and is still a subject of great interest. In the existing literature, two main approaches explain how some employees exceed their counterparts in terms of innovation: a behavioural and a social deterministic viewpoint. On the one hand, psychologists believe that a person's personality traits are the foundation of their innovative behaviour. On the other hand, sociologists consider people as social beings that alter and adapt their behaviour in response to their circumstances and social environment (Snyder and Deaux, 2012). Thus, sociologists and psychologists have looked into the innovation phenomena from different theoretical perspectives (Tracy et al., 2009). Although these two perspectives begin their analyses from distinct places, they often discover common ground (Snyder and Deaux, 2012). As a result, there is an increasing scholarly interest in contributing to a co-evolutionary perspective on behaviour that considers psychological and sociological perspectives in unison (e.g. Anderson et al., 2014; Fang et al., 2015; Landis, 2016; Nasaj & Badi, 2020; Nasaj, 2021).

To bridge the psychological-sociological devide, we propose a new integrative model that combines the two theoretical domains of personality and social capital to explain how intrapreneurial individuals innovate in service organisations. The study examines intrapreneurial personality in the context of social networking and hypothesises that a key skill, network building ability, serves as a mediator between intrapreneurial personality and innovative work behaviours. Network building ability (Ferris et al. 2005) is a concept originating from Social Capital Theory that studies the individual ability to construct social networks (Thompson, 2005). Network building ability pertains to a person's capability of building associates and networking with

powerful and senior individuals (Ferris et al., 2005). The following are the study's two research questions:

What is the relationship between an intrapreneurial personality trait and innovation, and does network building ability mediate this relationship?

By answering the above questions, the study makes the following contributions to knowledge:

- First, the study elaborates on the factors that allow highly intrapreneurial employees to be innovative in service organisations. Even though intrapreneurs are recognised for forming strategic partnerships (Mehra et al., 2001; Mehra et al., 2008; Sasovova et al., 2010), there is limited knowledge about how this ability contributes to innovative work behaviour.
- Second, to provide a nuanced understanding of the pathways through which organisations innovate by integrating the two theoretical domains of personality and social capital.
- Third, unlike previous studies that studied individuals' innovative behaviours as one construct (Scott & Bruce 1994), this study explores a more recent perspective that sees individuals' innovative behaviours composed of three stages: idea generation, idea promotion, and idea realisation (Janssen, 2000). We anticipate that by doing so, we will be able to respond to recent recommendations to distinguish between the three stages of innovation behaviour, as each stage may necessitate different determinants and predicting factors (Wisse et al. 2015, Woods et al. 2017; Rodrigues & Rebelo 2019; Nasaj & Badi, 2021; Nasaj, 2021).
- Finally, the study is positioned in the UAE service sector. The service sector is a major building block of the economy, constituting approximately 50% of developed countries' Gross Domestic Product (GDP) (Ratny et al., 2017). With higher employees' numbers than manufacturing, the service sector has a critical role in growing economies (Un & Montoro-Sanchez, 2010). Although the two sectors have distinct characteristics (Drejer, 2004), research on service sector innovation was first based on understanding manufacturing sector innovation (Li & Hsu, 2016). As a result, service sector innovation remains a fertile ground for further scholarly cultivation (Rubalcaba 2007).

Conceptual grounding

Service Sector Innovation

Due to the fast-changing market environment, innovation has become a critical component in determining the effectiveness of service organisations (Campo et al., 2014; Coombs & Miles, 2000; Li & Hsu, 2016). Organisations develop new products and services to meet the demands of current and potential customers (Forsman 2011). Service is typically an experience-based process in which the human element plays a significant part in delivering services. Service is best

characterised as a process that involves interacting with a consumer in some way, whether it's through human or technical contacts (Bitner et al., 2008). Service innovation is seen as a critical component of a company's market competitiveness and success (Komaladewi et al., 2012). Assuming a bottom-up approach to the innovation process, Sundbo (1997) explains the difficulty of measuring and managing service innovation and attributes these difficulties to the role of intrapreneurs in the organisations (Pinchot 1985; Amo & Kolvereid 2005). In this perspective, innovation is initiated by the working individuals in the organisations rather than top management. This notion points at the humanistic aspect of innovation in the service sector. It underlines individuals' innovative behaviours as vital in contributing to the innovation of services due to the humanistic aspects of service delivery, which renders the distinction of the service from its delivery process difficult to ascertain (Bitner, Ostrom & Morgan 2008).

Individuals' Innovative Behaviours in the Service Sector

Employees are the developers, modifiers and implementers of new ideas, which are the foundation of innovation (Sebastiani & Paiola 2010). Therefore, employees' innovative behaviours are an essential element that contributes to the success and survival of the organisation (Komaladewi et al., 2012; Zainal & Matore 2019). Individuals' innovative behaviours have been afforded less attention in the extant literature than studies of innovation at the team and organisational levels (Li & Hsu 2016). An individual's innovation behaviour is defined as their actions that contribute to developing new products, new markets, or improving business processes in their organisations (Amo 2005). Individual's innovative behaviour relates to a complex set of behaviours that aim to generate, promote, and realise new ideas in the workplace (Madrid et al. 2014). These behaviours were recognised as beneficial for organisational functioning (Yuan & Woodman 2010). Individuals' innovative work behaviours require a readiness to challenge the status quo in the workplace (Yuan & Woodman 2010) and make an effort to adopt novel ideas (Kanter 1988). The importance of an individual's innovative behaviours is more pronounced in customer service-oriented organisations since the nature of customer expectation is ever-changing, hence, requiring employees with innovative orientation to satisfy their customers (Bani-Melhem et al., 2018).

Innovation is often conceptualised as encompassing three key stages: idea generation, promotion, and realisation (Janssen 2000; Scott & Bruce 1994). As Janssen (2000) explains, an individual will create new ideas at the idea generation stage, search for new ways of doing things, and generate novel solutions for problems (Janssen, 2000). Following this, at the idea promotion stage, the individual will gather support for his novel ideas, acquire necessary approvals, and motivate important members in his organisation for the innovative idea. Following that, in the idea realisation stage, the novel ideas are developed into practical models and applications, with the usability of these ideas being evaluated (Janssen, 2000). Empirically, these three distinct behaviours are often measured as a single construct in studies of individual innovation behaviour (Scott & Bruce 1994). This approach, however, may not be adequate to capture the multi-

dimensional complexity of innovation behaviours. Indeed, there are recent calls in the literature to examine innovation behaviour as a multi-faceted concept: idea generation, promotion and realisation. Each of the three stages may be affected by a unique set of antecedents and factors (Wisse et al., 2015; Woods et al. 2017; Rodrigues & Rebelo 2019). This multi-dimensional approach will be adopted in this study to develop a fine-grained understanding of the multitude of individual innovative behaviour in service organisations.

Intrapreneurial Personality Trait

In previous literature, entrepreneurship in organisations was presented in three main levels: organisational level (Camelo-Ordaz et al. 2012), team level (Iacobucci & Rosa 2010), and individual level (Douglas & Fitzsimmons 2013). These three perspectives lead to different concepts tackling entrepreneurship in organisations. New concepts emerged, such as corporate venturing, corporate entrepreneurship, entrepreneurial orientation and intrapreneurship, which created confusion due to lack of a clear classification (Christensen 2005). Hence, the definition of intrapreneurship as a concept is inconsistent in literature (Amo & Kolvereid 2005; Christensen 2005; Blanka 2018). In addition, the main focus of intrapreneurship studies was on the organisational level rather than the individual level (De Jong & Wennekers, 2008). Research on entrepreneurship in existing organisations failed to identify the individuals behind the intrapreneurial process, their role and effectively manage their behaviours (De Jong & Wennekers, 2008). Hence, our study will contribute to current knowledge of the individual level of employee's entrepreneurship, namely the intrapreneurial personality trait of the employees.

Personality traits are consistent characteristics, feelings and actions that predict a person's behaviour under differing conditions (Barrick et al., 2005). Robbins and Judge define personality as "the sum total of ways in which an individual reacts to and interacts with others" (Robbins & Judge, 2015 p.175). Personality traits provide meaning, guidance explanation of a person's behavioural tendencies (Morris et al., 1994). Personality theory has been widely used to predict individuals' job performance (Leutner et al., 2014). The focus of this study is on the intrapreneurial personality trait. Intrapreneurship as a personality trait was initially presented by Pinchot (1985), who developed twelve measures that identify whether an individual is high on intrapreneurship or otherwise. An individual with a high intrapreneurship trait is self-determined, self-assured, and action-oriented (Pinchot, 1985). In addition, proactiveness, risk-taking, self-determination, the pursuit of opportunity and confidence are all characteristics of the intrapreneurial personality trait (Sinha & Srivastava, 2013). Several studies have investigated the intrapreneurial personality trait of employees, such as Amo & Kolvereid (2005) and Pinchot and Pellman (1999). Amo & Kolvereid (2005) tested the relation between the intrapreneurial personality trait of 634 business graduates working in different Norwegian organisations and their innovative behaviours. They found a significant relationship between the two; however, they called for further improvement to the intrapreneurial personality traits measurements. The generalisability of Amo & Kolvereid's

(2005) study is limited as data were collected from a relatively homogenous sample of alumni. Hence, further corroboration of their findings is needed in different cultures and individuals from other educational backgrounds.

Social Network Building Ability

One of the most studied theories in sociology is social capital (Thompson 2005). Social capital was defined as "resources embedded in a social structure that is accessed and/or mobilised in purposive actions" (Lin et al., 2001, p.29). This definition of social capital identifies three components: resources embedded in a social structure (Embeddedness), access to these social resources (Opportunity), and use of these social resources (Mobilisation) (Thompson 2005). These social resources available within a person's network pertain to the degree of information access, influence, and change implementation (Coleman 1988; Burt 2009). Hence, a large social network within which individuals are embedded will allow them access to information and social support. Network building is an individual's key ability to establish large social networks and take advantage of these networks. The construct was initially developed by Ferris et al. (2005) as a key ability that assists individuals to seek allies and link themselves to other individuals who occupy positions of influence and power in their societies. Essentially, an individual with high network building ability will develop relationships with key decision-makers in their work and receive their support and backup (Ferris et al., 2005).

Conceptual Framework and Hypotheses

In this study, innovative work behaviour is defined as a multi-dimensional construct encompassing three distinct stages: idea generation, idea promotion, and idea realisation, as defined by Janssen (2000). The idea generation stage is the first innovation stage (Janssen, 2000). The individual will create new ideas, search for new methods of doing things, and generate a novel solution for problems. (Drucker, 1985). A front desk employee, for example, might come up with a concept for a digital customer service platform that responds quickly to consumer concerns. Producers of new ideas require cognitive flexibility and divergent thinking to expertly integrate an assortment of knowledge into a novel assemblage during the early idea generation stage (Perry-Smith & Mannucci, 2017; de Vet & de Dreu, 2007). When seeking information, innovators choose the knowledge that allows for alternative thinking (Kirton & de Ciantis, 1986). They seek knowledge that embodies the varied viewpoints of individuals rather than facts and data (McKinnel Jacobson, 1993). The larger is an innovator's social network, the greater is their chances to have access to various sources of information that will ultimately aid them in recognising new opportunities for innovation (Baer et al., 2015). Indeed, during the early idea generation phase, innovators need mental flexibility to efficiently mix a range of knowledge into a new successful combination (Perry-Smith & Mannucci, 2017). During this stage, weak network linkages that bring together varied thoughts and perspectives could support inventors of new ideas (Granovetter, 1973; Perry-

Smith & Mannucci 2017). Since network building ability will help individuals build their network, the more they have ties, the more they can create a reservoir of reliable information that contributes to creativity and innovation (Milliken et al., 2003).

Intrapreneurs are known to proactively establish relationships and build networks inside and outside their companies (Blanka, 2018). In the context of entrepreneurial innovation, Sarasvathy and colleagues' seminal work (Sarasvathy and Dew 2003; Dew et al., 2007; Prashantham et al., 2019) distinguish between the most extensively observed transactional networks (Sarasvathy and Dew 2003) and 'effectual' networks. In times of high uncertainty, effectual networks are driven by the resources available to an entrepreneur (who she/he knows), and are founded on relational interactions characterized by cooperation, pre-commitments and the co-creation of business opportunities. These connections allow intrapreneurs to be more open-minded, identify new business prospects, and hone their brokering skills (Blanka, 2018). These brokering competencies help the intrapreneurial individual collect data from inside and outside the organisation, taking the role of a gatekeeper in networking terminology. Then combinations of different knowledge obtained by an intrapreneurial individual through networking can easily be translated into innovation (Bjornali & Støren 2012). Hence, the following hypothesis is proposed:

H1: Network building ability plays the role of a mediator in the relation between intrapreneurial personality trait and idea generation.

Idea promotion is the second stage of innovation, in which an employee advocates an idea through networking and establishing a supportive alliance in support of their innovative project. At this point, a front desk employee who has developed a unique digital customer service platform may try to sell the idea to business leaders, aiming to persuade them of the idea's originality and potential. The innovative employee cultivates potential sponsors and supporters within the company who has the authority to drive the initiative forward (Kanter, 1988). This stage also requires obtaining funding and political support, and promoters must make compelling arguments for the ideas' organisational benefits (Perry-Smith & Mannucci, 2017). Original ideas are difficult to advocate because of the significant likelihood of being rejected owing to perceived ambiguity and the dangers they entail. Promoting a new idea requires powerful individuals who are seen as legitimate and capable by decision-makers (Perry-Smith & Mannucci 2017). Perry-Smith & Mannucci (2017) believe that networks abundant in structural holes (Burt, 1992); vacuums between highly connected clusters are important for an individual's idea promotion. Bridging these network gaps boosts an individual's legitimacy, which is necessary for championing new ideas. In idea promotion, the strength of the tie between the individual and others in their social network is also considered crucial (Perry-Smith & Mannucci, 2017). Strong relationships, defined by frequent communication, reciprocal services, and emotional closeness, can assist an innovator by

encouraging mutual support from their contact network (Kanter, 1983). In the case of intrapreneurs, they often engage in networking activities (Halme et al., 2012). Thompson (2005) described networking as an individual's efforts to form and maintain relationships with those who may aid them in their profession or career. As a result, we may anticipate that high intrapreneurial employees will find it easier to socialise and form lasting relationships to aid their innovation promotion attempts. Therefore, we present the following hypothesis:

H2: Network building ability plays the role of a mediator in the relation between intrapreneurial personality trait and idea promotion.

The third stage of innovation is idea realisation. For example, a front desk employee who has gained executive permission for a new digital customer service platform that they championed will work at this stage to put the new platform into effect by developing the digital prototype and trialling it in the workplace. Although some of these tasks can be done by the innovators themselves, more complex innovations may demand the participation of a large number of people with a variety of skills and knowledge (Kanter, 1988). As a result, innovators usually enlist the help of their social networks and the resources embedded with these networks to bring about change. As argued by Perry-Smith & Mannucci (2017), the best approaches for idea realisation are network closure (Coleman, 1988) and external links beyond the team (Tortoriello & Krackhardt, 2010). First, closed networks reduce uncertainty (Coleman, 1988), boost information exchange (Uzzi & Spiro, 2005), and encourage social commitments for cooperative behavior in the pursuit of shared objectives (Lingo & O'Mahony, 2010). External interactions outside of the organisation have also been proven vital for successful innovation realisation. They enable idea dispersion across diverse groups and make it easier to understand and accept (Uzzi & Spiro, 2005; Tortoriello & Krackhardt, 2010). Hence, a dense network (Coleman 1988) and ties stemming beyond the team (Tortoriello & Krackhardt 2010) are important factors for an intrapreneurial employee idea realisation. Moreover, an intrapreneurial employee's social networks will help them secure their co-workers' assistance, smooth task management, easier knowledge exchange, and gain the required resources for operation (Obstfeld 2005; McFadyen, Semadeni & Cannella 2009). Based on the above discussions, the following hypothesis is proposed:

H3: Network building ability plays the role of a mediator in the relation between intrapreneurial personality trait and idea realisation.

Figure 1 illustrates the study's conceptual model.

***** INSERT FIGURE 1 ABOUT HERE *****

Methodology

Data Collection and Sample

The study examines the relationship between an individual's intrapreneurial personality, network building ability, and innovative behaviour. Employees in the United Arab Emirates (UAE) service industry was chosen to represent the population in the study. The UAE is a service-driven economy, with the service sector accounting for 53.11% of GDP (Augustine, 2016; Statista, 2020). The UAE government developed several strategies to encourage innovation, such as the launch of the UAE innovation strategy in 2014 which aims to make the UAE among the most innovative nations in the world (UAE, 2014). In 2021, the UAE ranked 33rd in the Global Innovation Index (World Intellectual property Organisation, 2021). Hence, the UAE service sector provides a rich context to study innovation (Nasaj & Al Marri, 2018; Al-Hawari et al., 2019; Nasaj, 2020). A quantitative methodological approach was judged appropriate based on a survey questionnaire to determine the nature of the variables' relationships. A random sample technique was used to reduce the risk of bias in data collection (Kothari, 2004). Ten service organisations were selected for the study from the banking, health care, education, hotels, and telecommunication. Two organisations were selected from each organisational type and agreed to participate in the study. The survey was administered online by the Human Resources (HR) managers in each organisation (100 surveys). A total of 570 responses were received, and 410 were completed and usable. Therefore, a response rate of 41% was achieved.

Research Measures

The following measures were adopted to operationalise the study's variables. All measures employed are based on previously validated scales from the extant literature. All the scales' items are listed in Appendix 1.

Individuals' Innovative Behaviours: Using Janssen's (2000) self-evaluation scale, individuals' innovative behaviours were measured. The scale comprises three items about idea generation, idea promotion and idea realisation. Cronbach's alpha ranged from 0.74 to 0.88. In this study, the individual employee was asked to self-assess their innovative work behaviour rather than co-workers or managers (Janssen, 2000). Since individuals will be more knowledgeable about their daily job activities than their managers or co-workers, their replies accurately evaluate their daily activities. Furthermore, when direct managers evaluate employees' innovativeness, they may

unconsciously disregard important innovative actions. Hence, employees will evaluate their innovativeness more precisely than their managers.

Network Building Ability: We adopted Ferris et al.'s (2005) six-item scale that assesses an individual's ability to form networks and profit from those networks. Cronbach's alpha is 0.89 (see Table 2).

Intrapreneurial Personality Trait: Amo & Kolvereid's (2005) 12-items scale was adopted. Cronbach's alpha is 0.90 (see Table 2). The details of the items used can be found in Appendix 1.

Demographic Variables: Participants were also requested to share details about their age, gender, work experiences, and educational background. These control variables may significantly affect employees' perceptions of their work and their attitude, behaviour and performance (Kirkman et al., 2004; Pelled et al., 2004). Table 1 summarises the profile of the research participants.

***** INSERT TABLE 1 ABOUT HERE *****

Data Analysis

Common Method Bias

It is important to test for common method bias in self-administrated surveys ((Williams et al., 2010; Chang et al., 2010; Fuller et al., 2016). Harman's single-factor test was administered, one of the most popular common method bias testing techniques (Podsakoff & Organ, 1986). The results indicate that the single factor explains only 26.514% of the collected data, less than 50%, which is the maximum limit of acceptability. Thus, no common method bias was detected.

Validity and Reliability

Constructs' reliability was examined via running a set of tests. The first test was Cronbach's alpha, indicating reliable scales since all constructs have results higher than 0.7 (Mallory & George 2003). The Kaiser-Meyer-Olkin (KMO) test, which determines sample adequacy, was also used. The KMO test indicates that the scale is more reliable if the value is near 1.0, whereas a result less than 0.50 indicates that the scale is unreliable (Morgan et al., 2004). KMO is 0.868, according to the results. We also applied the Bartlett Test of Sphericity, which inspects correlations' existence; this test aims to indicate the degree of reliability of each used scale (Hair et al., 2006). The results show that the Bartlett Test of Sphericity is 0.000. As a result, all reliability tests conducted on the study's scales demonstrate reliability. The correlation matrix and descriptive statistics for the research variables are shown in Table 2.

***** INSERT TABLE 2 ABOUT HERE *****

The variables in the study were validated using factor analysis. Exploratory Factor Analysis (EFA) was carried out with the extraction method of principal component analysis and the rotation

method of varimax. The scree plot diagram in Figure 2 shows five latent variables with Eigenvalues greater than 1. The number of constructs utilised in this study matched the results. Furthermore, the EFA results show that all of the questionnaire's items loaded on their constructs and had acceptable cut-off values exceeding 0.45. (Field, 2013). Table 3 displays the results of the EFA.

***** INSERT FIGURE 2 ABOUT HERE *****

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In terms of Confirmatory Factor Analysis (CFA) the results show that the research model has a good model fit because all the indices have an acceptable value: $\chi 2/df = 2.290$ (Schreiber et al. 2006), RMR = .065 (Browne & Cudeck, 1993), CFI = .931 (Byrne, 2010), IFI = 0.932 (Bentler, 2007), TLI = .922 (Marsh et al., 2004), RMSEA = .056 (Steiger, 2007).

Finally, the measurement scales were tested for convergent and discriminant validity. For adequacy of results, a cut-off of more than 0.5 was employed (Hair et al., 2006). The inter-construct correlations of the constructs were compared to the square root of average variance extracted (AVE). The components discriminant validity is recognised when the square root of AVE is greater than the inter-construct correlation (Hair et al., 2006). The results in Table 2 show that both convergent and discriminant validity has been attained.

Results

The function of network building ability in mediating the relationship between intrapreneurial personality and individuals' innovative behaviour is investigated in this study. The research hypotheses were tested using structural equation modelling (SEM) with robust maximum likelihood estimation. Figure 3 illustrates the structural equation model.

***** INSERT FIGURE 3 ABOUT HERE *****

Research SEM fit indices illustrated a good model fit: $\chi 2/df = 2.352$, RMR = .067, CFI = .928, IFI = 0.929, TLI = .918, RMSEA = .057. The results of direct relations amongst the constructs are shown in Table 4.

***** INSERT TABLE 4 ABOUT HERE *****

The findings revealed that intrapreneurial personality is significantly related to network building ability and idea realisation at a 99% confidence level, but not to idea generation and idea promotion at a 95% confidence level. Furthermore, at a 95% confidence level, network building ability is highly associated with each individual's innovative behaviours. As a result, a possible mediating role is assumed.

The bootstrapping method (Preacher & Hayes, 2004) examined the indirect effect to validate further the mediating role of network building ability (MacKinnon et al., 2012; Hayes, 2017). The bootstrapping method contained 5000 repeated samples to reach 95% confidence intervals for the indirect effects of intrapreneurial personality on idea generation, idea promotion and idea realisation. Table 5 shows the results of the indirect relationships.

***** INSERT TABLE 5 ABOUT HERE *****

The indirect relationship between intrapreneurial personality and idea generation shows a lower limit of 0.038 and an upper limit of 0.122. The 0 is not included in the results interval, indicating that H1 is supported. We may conclude that network building ability entirely mediates the relationship between intrapreneurial personality and idea generation because there is no substantial direct relationship between the two.

Regarding H2, the results of the indirect relationship between intrapreneurial personality and idea promotion reveal that a lower limit of 0.034 and an upper limit of 0.114. Because 0 is not included in the interval of the results, H2 is supported. We infer that network building capacity is a full mediator between the two variables because there is no significant relationship between intrapreneurial personality and idea promotion.

Furthermore, the results of the indirect relationship between intrapreneurial personality and idea realisation for H3 show a lower limit of 0.013 and an upper limit of 0.072, with 0 not included in the results interval. As a result, H3 is supported. The relationship between intrapreneurial personality and idea realisation is partially mediated by network building ability. This partial mediation is due to a significant direct relation between intrapreneurial personality and idea realisation.

Discussion and conclusion

This study aimed to answer two main research questions in the context of service industries in the UAE:

What is the relationship between an intrapreneurial personality trait and innovation, and does network building ability mediate this relationship?

Two significant findings emerged from the study in response to the first question. First, a direct relationship was found between the intrapreneurial personality trait and the idea realisation stage. Hence, the findings underline that intrapreneurs can turn ideas into significant results to support innovation through idea realisation. Second, no direct relationship was found between the intrapreneurial personality trait and the other two stages of the innovation process: idea generation and idea promotion. This finding supports Sinha & Srivastava's (2013) assertion that intrapreneurs are not usually known for coming up with new ideas. Still, they do have the capacity to turn such ideas into actual results that help businesses develop and grow.

In response to the second question, a direct relation between the intrapreneurial personality trait and network building ability has been found. This finding further supports the work of Blanka (2018), who pointed out that intrapreneurs actively seek to create relationships and build networks inside and outside the organisation. In addition, this finding further supports De Jong & Wennekers (2008) work in which they stressed the important role of social capital in helping the intrapreneurs' active search for information. The more information the intrapreneurs collect from their network, the more they may link ideas together and develop new ideas to solve their issues. Furthermore, as the supporting results for H1, H2 and H3 have indicated, network building ability was found to fully mediate the relationship between intrapreneurial personality and both idea generation and idea promotion, while partially mediating the relationship between intrapreneurial personality and idea realisation. These findings suggest that intrapreneurs depend on building networks to cultivate the social capital they utilise to generate, promote and realise their innovative ideas.. The study's result -which points to the importance of network building ability for intrapreneurs' innovation- answers the question raised by Neessen's et al. (2019) literature review. Neessen's et al. (2019) pointed that measuring the individual's intrapreneurship by three behaviours: innovativeness, proactiveness, and risk-taking are not enough, and they recommended including networking to this scale and test if the behaviour can compensate for the low score of other behaviours. According to the findings of this research, this was confirmed as we found that network building ability can compensate for the lack of a direct relationship between intrapreneurial personality trait and idea generation and idea promotion stages of innovation. According to De Jong & Wennekers (2008), Intrapreneurs focus on seeking opportunity regardless of the resources they already control. This study may point out that the intrapreneurs adapt to implement their ideas and mobilise the needed resource through building social networks.

Furthermore, one of the distinctions between entrepreneurs and intrapreneurs is that intrapreneurs rely on their employer's resources, whereas entrepreneurs rely on their own. Hence, intrapreneurs use the organisation's existing resources and essentially work within their organisations' policies (Camelo-Ordaz et al., 2012; Baruah & Ward, 2015). Creating relationships with decision-makers, managers, and colleagues is important for intrapreneurs. These relationships enable the intrapreneurs to mobilise the needed resource within their company to promote or realise their innovative ideas. Essentially, the intrapreneurs are not using their own resources and need approvals to use the organisation's resources. Furthermore, this finding explains how intrapreneurs innovate in their organisations, which is a critical component for expanding intrapreneurship in businesses (Lankinen et al., 2013; Baruah & Ward, 2015). Finally, the research contributes to recent calls from scholars to assume a co-evolutionary viewpoint that seeks to understand and predict behaviours from both psychological and sociological perspectives (e.g. Anderson et al., 2014; Snyder & Deaux, 2012; Nasaj & Badi, 2021; Nasaj, 2021).

Managerial Implications

From a managerial perspective, the metric we used for measuring the intrapreneurial personality trait reveals a diverse mix of attributes (see Appendix 1). This is important for governments, policymakers, universities, and other entities that promote intrapreneurship via training, sponsorship and funding programmes. Understanding the intrapreneurial personality will help build more effective support policies and training initiatives to encourage entrepreneurship within

the boundary of service organisations. The research also offers several practical contributions for recruitment managers who strive to support their companies with employees who can be innovative. First, the study highlights that intrapreneurial personality traits are related to innovation. Therefore, HR managers may improve the hiring processes by administering self-report or observer rating personality testing for the intrapreneurial trait (Connolly et al., 2007). Second, the integrative research model of personality and networking illustrates that hiring individuals with adequate personality traits is not enough to guarantee their innovativeness. Hence, service sector managers should introduce networking events among their subordinates since the results demonstrate that network building is a significant source of information and, ultimately, creativity and innovation. Customer participation is one of the characteristics of service innovation, which blurs the distinction between consumers and employees to the point where customers are seen as partial employees and resources for innovation (Chen et al., 2011; Duverger, 2012). Therefore, organisations are advised to create social events between customers and employees to enable the latter to identify any potential problems and motivate them to develop innovative solutions. Furthermore, highlighting the importance of network building ability of the individuals to innovate, HR managers may recognise jobs that require creativity and innovation skills. Mangers could then cultivate a work environment that stimulates creative encounters through socialisation and networking with customers and colleagues. Therefore, HR managers should incorporate building networking skills in their annual training plans to increase their employee's innovativeness.

Limitations and directions for future research

The research is subject to several limitations that need to be highlighted. The first limitation is the cross-sectional nature of the data. Therefore, to validate the research results, a longitudinal study is suggested. Second, self-report surveys are commonly used in intrapreneurship literature (Monsen & Boss 2009; Wakkee et al. 2010; Bosma et al. 2012; Moriano et al. 2014). However, future research may use other reporting techniques to validate the research's results. In addition, the study is based in the UAE service sector. Hence the findings cannot be fully generalised due to cultural aspects influencing innovation. For instance, an individual's tendency to take risks is positively related to the individual's innovative behaviour (Angel Ferrero & Bessière 2018). Certain cultural values and traditions may affect the individual's tendency to be risk-taking or risk-averse more than other cultures (Hofstede 2001). Therefore, we suggest that the framework of this study be tested in different cultural contexts to validate the results. Finally, this research offers an initial attempt to combine the psychological-sociological literature and examine the mediation effect of social science variables over personality to highlight the importance of modern work behaviours in organisations. Hence, future research might investigate other personality traits or social science variables to offer additional knowledge on the psychological-sociological co-evolutionary perspective.

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Appendix 1: Measurement scales

Construct	Measurement items	Source
Innovative work Behaviour	Nine items measured on a 7-points Likert scale ranging from 1 (never) to 7 (Always). • Creating new ideas for difficult issues. • Searching out new working methods, techniques, or instruments • Generating original solutions for problems • Mobilizing support for innovative ideas • Acquiring approval for innovative ideas • Making important organizational members enthusiastic for innovative ideas • Transforming innovative ideas into useful applications • Introducing innovative ideas into the work environment in a systematic way • Evaluating the utility of innovative ideas	Janssen (2000)
Network Building	Six items measured on a 7-point Likert scale ranging from 1 (very strongly disagree) to 7 (very strongly agree). • I spend a lot of time and effort at work networking with others. • I am good at building relationships with influential people at work. • I have developed a large network of colleagues and associates at work whom I can call on for support when I really need to get things done. • At work, I know a lot of important people and I am well connected. • I spend a lot of time at work developing connections with others. • I am good at using my connections and network to make things happen at work.	Ferris et al (2005); Thompson (2005)
Intrapreneurial Personality	Twelve items measured on a 5-point Likert scale ranging from 1 (to a very little extent) to 5 (to a very large extent). • Does your desire to make things work better occupy as much of your time as fulfilling your duty to maintain them the way they are? • Do you get excited about what you are doing at work? • Do you think about new business ideas while driving to work or taking a shower? • Can you visualize concrete steps for action when you consider ways to make a new idea happen? • Do you get in trouble from time to time for doing things that exceed your authority? • Are you able to keep your ideas under cover, suppressing your urge to tell everyone about them until you have tested them and developed a plan for implementation? • Have you successfully pushed through bleak times when something you are working on looked like it might fail? • Do you have more than your share of both fans and critics? • Do you have a network of friends at work whom you can count on for help? • Do you get easily annoyed by others' incompetent attempts to execute portions of your ideas? • Can you consider trying to overcome a natural perfectionist tendency to do all the work yourself and share responsibility for your ideas with a team? • Would you be willing to give up some salary in exchange for the chance to try out your business idea if the rewards for success were adequate?	Pinchot (1985)