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## **PROACTIVE PERSONALITY AND EMPLOYEES’ INNOVATIVE BEHAVIOURS: THE ROLE OF NETWORK BUILDING ABILITY**

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The study aims to expand our knowledge of the employees’ innovative behaviours in the service sector by adopting the coevolution theory of the psychological–sociological perspective as the lens in which the study will utilise to investigate the antecedents of each stage of the employees’ innovative behaviours: Idea generation, idea promotion, and idea realisation behaviours. The relation between proactive personality and each stage of employees’ innovative behaviours was tested, focusing on the intermediary role of network building ability. A total of 406 questionnaires from employees working in the service sector were collected and analysed using structural equation modelling. The study findings illustrate the importance of building networks for proactive employees to be able to innovate and demonstrated that different stages of employees’ innovative behaviours may require different antecedents and, therefore, separating the analysis for each stage may enrich our knowledge and enhance our understanding of employees’ innovative behaviours.

*Keywords:* Employees’ innovative behaviour; proactive personality; network building ability; service organisations.

### **Introduction**

Defining the employees who are more probably to innovate in their organisations has engrossed organisational scholars for decades, yet it is still an area of a major enquiry. The core of innovation is about generating and implementing new ideas, and in any organisation the employees are the ones who develop, implement, and modify these novel ideas (van de Ven, 1986; Sebastiani and Paiola, 2010);

therefore, understanding employees' innovative behaviours is very critical to the success of effective innovation management in organisation (Scott and Bruce, 1994; Gallouj, 2002), that guarantee the organisation's survival, effectiveness, and competitiveness (Ratny *et al.*, 2017; Zainal and Matore, 2019).

Employees' innovative behaviours refer to the employees' participation in producing and implementing novel ideas in their work place, these behaviours are vital for new product and service innovation (Wu *et al.*, 2014). Janssen (2000, p. 288) defined employees' innovative behaviour as "...the intentional creation, introduction and application of new ideas within a work role, group or organisation". According to Janssen (2000) innovation occurs mainly in three stages: First, the idea generation stage in which the employees identify a problem and engage in creating new ideas. Second, the idea promotion stage in which the employees try to develop support for their novel ideas and secure the required approvals in their organisations. Third, idea realisation in which the new idea will be transformed into useful and applicable solutions. The same approach of dividing the employees' innovative behaviour into stages is also presented by Scott and Bruce (1994) as well since they referred to the idea generation stage and the implementation stage of the employees' innovation process. However, previous studies in the literature considered the employees' innovative behaviours as a single construct (Scott and Bruce, 1994; Yuan and Woodman, 2010) or a multi-dimensions construct (Janssen, 2000; Rodrigues and Rebelo, 2019) that exhibits the employees' innovative behaviours in the three stages of the innovation process, nonetheless measured as one variable. Therefore, recent studies in innovation's literature call for more in-depth analysis for each stage of the employees' innovative behaviours since each stage might require different types of antecedents and skills (Woods *et al.*, 2017; Rodrigues and Rebelo, 2019; Nasaj, 2020; Nasaj and Badi, 2021).

Two main different perspectives are distinguishable in the existent literature that clarifies the mechanisms by which some employees may outperform their peers in innovative work behaviour: A behavioural perspective and a social deterministic perspective. Indeed, there is a continuing debate on whether employees' innovation is best explained by individual's differences or social determinism (Snyder and Deaux, 2012). Some psychologists believe that the roots of behaviours are the inner force of human being that is their personality traits that forms the drivers of the employee's behaviours; whereas, some sociologists will build on the view that observes the individuals as social creatures who usually alter and adapt their behaviours based on the situation and their social environment (Snyder and Deaux, 2012). Therefore, these two schools in the literature (Sociology and Psychology) usually investigated phenomena from opposing theoretical perspectives (Tracy *et al.*, 2009). However, even though these two schools start their analysis from

different points of view, they more and more began to discover themselves in more mutual grounds (Snyder and Deaux, 2012). Hence, integrated perspective between the two may enrich each other and offers a better understanding of the studied phenomena (Tasselli *et al.*, 2015; Baer *et al.*, 2015; Landis, 2016; Nasaj and Badi, 2021; Kilduff and Lee, 2020).

Previous research that explored the innovation behaviours were looking into this phenomenon from psychological perspective by examining personality traits impact on employees' innovative behaviours (George and Zhou, 2001; Madjar, 2008; Raja and Johns, 2010). Others looked into employees' innovative behaviours from sociological perspective by studying the influence of social capital (McFadyen and Cannella, 2004; McFadyen *et al.*, 2009), network positions (Zhou *et al.*, 2009; Obstfeld, 2005), characteristic (Burt, 2004; Schweisfurth and Raasch, 2015), and roles (Bettencourt and Brown, 2003; Perry-Smith, 2006) on employees' innovative behaviours. Only few but growing studies looked into this phenomenon from both perspectives (Baer *et al.*, 2015; Tasselli *et al.*, 2015; Fang *et al.*, 2015; Nasaj and Badi, 2021). These kinds of studies that examine employees' innovative behaviours from both perspectives (psychological and sociological perspectives) enrich both psychological and sociological literatures since they highlight the joint effects of social properties and individual agency in determining employees' innovative behaviours (Anderson *et al.*, 2014).

In personalities literature, employees associated with proactive personality are equipped with the capability to adjust their social and non-social environment as a result of personal and situational motives (Bateman and Crant, 1993). Proactive employees generally are not restricted by their situational limits, initiate change in their environments, search for novel opportunities, plan in advance, take actions, and solve problems (Bateman and Crant, 1993; Cant, 1996). In the literature, the relation between proactive personality and employees' innovation has been investigated and found to mainly link proactive personality to creativity and innovation (Gong *et al.*, 2012; Zhu *et al.*, 2014; Giebels *et al.*, 2016; Tai and Mai, 2016; Pan *et al.*, 2018; Rodrigues and Rebelo, 2019). However, a more in-depth analysis will be conducted in this research that examines the relation between proactive personality and each stage of the employees' innovative behaviours.

The sociological perspective attempts to interpret the employees' innovative behaviours by attributing it to their social ties and networks (McFadyen and Cannella, 2004; Obstfeld, 2005; Perry-Smith, 2006; Zhou *et al.*, 2009). Therefore, sociologists are preoccupied with how social structures may influence innovation. For example, what are the influence of the number and the strength of the individual's exchange relationships on the employees' innovative behaviours? (McFadyen *et al.*, 2009; Schweisfurth and Raasch, 2015), or the employee social

network density (Obstfeld, 2005; Perry-Smith, 2006; Zhou *et al.*, 2009) with no regards of the employee's differences and the influence that may have on the employee's innovative behaviours. Nonetheless, the outperformance of the individual to their peers might not be only because of differences in their networks, but it might also be because of individual's differences in personality traits (Kilduff and Lee, 2020).

In sociology literature, social capital is the largest growth area in organisational network research (Borgatti and Foster, 2003). Social capital refers to the social relationship of the employee that can create a set of resources for the employee, and these resources vary from one employee to another (Loury, 1977). The relation between social capital and innovation has been explored in previous literature at the organisational level (Chen and Zhou, 2017; Thompson, 2018) and at the individual level (Zheng, 2010; Moustaghfir *et al.*, 2013) a positive relation between the employees' social capital and their innovative behaviour has been found since the employees may activate different parts in their social capital based on the nature of the task they are willing to perform in their innovation behaviour process (Perry-Smith and Mannucci, 2017). Network building ability has been selected—in this research—from the social capital literature that measures the employee's ability to build networks since it has been used as a representative of social capital theory as in the well-recognised work of Thompson (2005). Network building ability was defined as the individuals' ability to create allies and connect themselves to others who are in influential positions and have power in their society (Ferris *et al.*, 2005). The role of network building ability will be tested on the relation between proactive personality and the three stages of employees' innovative behaviours. By combining these theoretical psychological and sociological perspectives this study proposes a fine-grained understanding of the avenues by which innovation occurs in organisations.

Previous innovation literature concentrated more on manufacturing industries rather than service industries (Li and Hsu, 2016). Although service organisations exhibit different characteristics from manufacturing organisations (Drejer, 2004), yet our current understanding of service sector innovation is still based on manufacturing sector innovation with limited number of studies that focus on the innovation in the service sector (Rubalcaba, 2007; Un and Montoro-Sanchez, 2010). Service innovation defined as actions that create value for customers, employees, employers, and society via presenting novel and/or enhanced services, service's processes, or even a new service business model (Ostrom *et al.*, 2010). In their service sector innovation literature review, Snyder *et al.* (2016) pointed out that service innovation as a concept is still fuzzy and not clearly defined in the literature. The paucity of studies that examine innovation in the service sector compared to manufacturing

sector was stated by many scholars in the literature (Lee *et al.*, 2014; Lai *et al.*, 2016; Li and Hsu, 2016; Javed *et al.*, 2017; Bani-Melhem *et al.*, 2018). In addition, a special call to further investigation of the employees' innovative behaviours in the service sector was identified and encouraged by Danaei and Iranbakhsh (2016), Li and Hsu (2016), Bani-Melhem *et al.* (2018) and Nasaj and Badi (2021).

Based on the above discussion, the research's objective will be: To explore the relation amongst proactive personality and network building with each stage of the employee's innovative behaviours (Idea generation, idea promotion, and idea realisation) in the service sector using an integrative psychological and sociological perspective.

## **Theoretical Background**

### **Coevolution of psychological and sociological perspective**

Sociologists and psychologists generally inspect phenomena from opposing theoretical perspectives and different methodologies (Tracy *et al.*, 2009). Nevertheless, sociologists and psychologists start their analysis from different points of view; they more and more started to discover that they have a mutual ground (Snyder and Deaux, 2012). To illustrate further, individuals' personality traits might motivate them to behave in a certain manner that make them involve in a specific situation that again might influence their behaviours. Tasselli *et al.* (2015) presented a fine discussion in their literature review regarding the type of relations between individual differences and social network positions. They attempted to answer the questions of Do people make the network? Or does individuality emerge from network patterning? Or is it that people and networks coevolve? Therefore, they raised the point that some scholars debate the idea that certain personality traits usually drive the individuals to occupy certain positions in their networks. However, other scholars presented a different debate in which they stated that network positions may create a social personality for the individuals that occupy such a position (Burt, 2012). This perspective assumes that any individual regardless of their personality traits will create similar attitudes and behaviours if they occupy the same position (Burt, 1982). The interrelated mechanism between the individuals' differences and their social network—in the sense of which is influencing which—is a new rising question concerning the micro foundations of organisational social networks (Tasselli *et al.*, 2015). Fang *et al.* (2015) stated that both individuals' personality characteristics and the positions they occupy in their social networks are related to work outcomes. Therefore, they suggested a model that contains both personality traits and network positions as predictors for individuals' work outcomes. The importance

of integrating the psychology and sociology perspectives was stressed on in recent literature, since each perspective offer us an interpretation of behaviours that the other perspective does not, therefore, each one of these perspectives complements the other (Landis, 2016). Integrating the psychological concept of personality traits and the sociological concept of social capital in explaining employees' innovative behaviours will attend to a gap in the literature identified by several studies such as Anderson *et al.* (2014), Baer *et al.* (2015), Fang *et al.* (2015), Tasselli *et al.* (2015), Kilduff and Lee (2020), and Nasaj and Badi (2021).

### **Proactive personality and employees' innovative behaviours**

Although the first focus was on talent innovators, researchers start to realise that ordinary employees contribute to innovation in the service sector (Weiermair, 2006). Such an early focus on talent innovators only might justify the interest of scholars in analysing the talent innovator personality which was the focus of several studies in innovation literature such as Raja and Johns (2010) and Madrid *et al.* (2014) that investigated the relation between the employees' personality traits and their innovative behaviours. Personality traits talk about human characteristics, emotions, type of thoughts and behaviours that are constant over time and interpret employees' behaviours in various situations (Barrick *et al.*, 2005). Later, the potential role of ordinary employees' contribution to their organisations' innovation is more acknowledged in literature (Kesting and Ulhøi, 2010; Cadwallader *et al.*, 2010).

Personality traits act as a uniting concept that offers meaning, direction and explanation of the individuals' behaviours tendencies (Morris *et al.*, 1994). It has widely been used as a valid predictor of individuals' job performance (Leutner *et al.*, 2014). One of the definitions of personality is introduced by Robbins and Judge (2015, p. 175) as "the sum total of ways in which an individual reacts to and interacts with others". Robbins and Judge (2015) further explained that personality is often characterised by the measurable traits an individual displays that describes the enduring characteristics of employees' behaviours. For instance, we may describe a person as organised, passionate or fearless.

Proactive personality was presented by Swietlik, (1968, however, the seminal work of Bateman and Crant (1993) offered researchers a scale and a clear definition of proactive personality, that help to attract the attention of other scholars. Proactive personality has its origins in interactionism which "argues that situations are as much a function of the person as the person's behaviour is a function of the situation" (Bowers, 1973, p. 327), and social cognitive theory (Bandura, 1986) which states that the individual, surroundings, and behaviour constantly impact each other.

Fuller and Marler (2009) stated that employees with high proactive personality usually pursue their ideas and suggestions to bring change, and take charge to translate them into reality. Parker *et al.* (2010) identified three main features for proactive employees: Change oriented, self-starting, and future focussed. Therefore, proactive employees might have the ability to predict future outcomes, and they are motivated to take actions to gather resources for implementing constructive changes (Gong *et al.*, 2012). Employees with proactive personality have the ability of drawing the attention of individuals with high power in their networks, manage to secure powerful employees' sponsorship, able to associate to voice and taking charge behaviours, establish fine relationships with their superiors, can track opportunities across organisational borders, and entice sponsors and resources (Li *et al.*, 2010).

Previous research linked proactive personality to creativity and innovation (Kim *et al.*, 2009; Gong *et al.*, 2012; Zhu *et al.*, 2014; Giebels *et al.*, 2016; Tai and Mai, 2016; Pan *et al.*, 2018; Rodrigues and Rebelo, 2019; Alikaj *et al.*, 2020). However, all the previous research investigated employees' innovative behaviour as a single construct, whereas this study examines the relationship of proactive personality with each stage of employees' innovative behaviours as clearly suggested by Rodrigues and Rebelo (2019) as a future research, since they attempt to run their analysis on the relation between proactive personality and employees' innovative behaviours stages separately. Unfortunately, they could not do it since they found strong correlations between these three stages in their data that preventing their use as independent criteria.

Different mediators or moderators that play intermediary role over the relation between proactive personality and employees' innovative behaviours have been investigated in the literature. For example, the role of organisational support and psychological empowerment was tested by Yildiz *et al.* (2017) who stated that proactive personality is a strong predictor of employees' innovative behaviours; however, the fundamental processes through which proactive employees innovate in their organisations are still to a large extent unknown. Pan *et al.* (2018) suggested after examining the relation between proactive personality and creativity that researchers should pay more attention to the role of social perspective on the relation between proactive personality and creativity since the previous literature has overlooked this role. The research of Alikaj *et al.* (2020) is one of the interesting recent studies in the literature that examines the relation between proactive personality and creative behaviour with a focus on the role of employees thriving at work. They found that employees thriving at work have the role of full mediator between proactive personality and creative behaviour that somehow present a new debate in the literature that proactive personality has no direct relation with creative behaviour and

the relation is fully mediated by other variables. Giebels *et al.* (2016) examined the relationship between proactive personality and innovation behaviours of 166 employees working in a municipality in Netherlands. They found that a task conflicts mediates the positive relation between proactive personality and employees' innovative behaviour.

### **The role of network building ability**

The term social capital was introduced in the economy field by Loury (1977) to refer to the social relationship of the employee that can create a set of resources for the employee, and these resources vary from one employee to another. Pierre Bourdieu is acknowledged in the literature as the first scholar who introduced a systematic analysis of social capital, Bourdieu defined social capital as "The aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalised relationships of mutual acquaintance or recognition" (Bourdieu, 1985, p. 248). Bourdieu's definition separated social capital into two main foundations: First, the social relationship that permits actors to have access to resources owned by their connections. Second, the volume and quality of those resources. Coleman is one of the most recognisable scholars who contributed to the transfer of social capital concept from its economic use to sociological use as well. Coleman (2000) introduced the definition of social capital as a variety of different entities that has mainly two shared elements: Aspects of social structure and facilitation of specific activities of actors within this structure.

In describing how the social capital is expected to have return two theoretical concepts are identified: First, the social capital capacity that assumes that the larger the network the higher the return, so this approach is linking between the accessed social capital and potential return. Second, the actual use of social capital that assumes the better we utilise our capital the higher the return and this approach is known as mobilised social capital (Lin, 2008).

Social networks are defined as "a set of actors connected by a set of ties. The actors (often called "nodes") can be persons, teams, organisations, concepts, etc." (Borgatti and Foster, 2003, p. 992). These relationship networks define the extent to which an employee can obtain access to information, have influence, and effectively implement changes as suggested by social capital theory (Burt, 2009), since the larger the network that the employees are able to create the more the employees can access information and find support from their network. The concept of network building ability is initially introduced by Ferris *et al.* (2005) as a significant political skill that assists the individual to create allies and connect himself to others who are in influential positions and power in their society. Social networks building is defined as "individuals' attempts to develop and maintain relationships

with others who have the potential to assist them in their work or career” (Forret and Dougherty, 2004, p. 420). This indicates that individuals who have a high network building ability will usually manage to cultivate a large network and will have the benefit of building relationships with influential people in their society and decision makers in their work which creates their network support for getting things done and achieve their goals and objectives (Ferris *et al.*, 2005). Therefore, the outcome of network building ability is closely related to social capital concept.

### **Hypotheses development and conceptual framework**

Although studies like Woods *et al.* (2017) and Rodrigues and Rebelo (2019) used Janssen (2000) individuals’ innovative behaviour scale; nonetheless, this study aims to examine each stage of the three innovation stages as a separate behaviour and not as one construct in order to enhance our understanding of the predictors relations with each behaviour. The relationship between personality traits and innovation is a complex one (Anderson *et al.*, 2014) and it reveals contradictions in its finding (Woods *et al.*, 2017).

Proactive individuals are not limited by their situational constraints, initiate change in their environment, search for opportunities, plan in advance, action takers, and problem solvers (Bateman and Crant, 1993). Previous literature illustrated a positive relation between proactive personality and creativity (Gong *et al.*, 2012; Zhu *et al.*, 2014; Tai and Mai, 2016; Pan *et al.*, 2018). Proactive employees are thought to involve in creative activities because they take the responsibility for improving situations, in addition to their motivation to learn new things (Kim *et al.*, 2009). Kim *et al.* (2009) called for further investigation to what might mediate the relationship between proactive personality and creativity that is related to idea generation. In a recent study, Pan *et al.* (2018) recommended paying more attention to the role of social perspective on the relation between proactive personality and creativity since previous literature overlooked this role.

Proactivity may be considered an important predictor for employees’ innovative behaviour (Giebels *et al.*, 2016; Yildiz *et al.*, 2017; Purba and Paundra, 2018; Rodrigues and Rebelo, 2019). Most of the employees in organisations except those who belong to top management lack the authority of implementing their new ideas or solutions even though they have the inner force in their personality traits to try to change their environment and take novel initiative. They will not be able to implement these ideas without the support of their management and get other colleagues on board of implementing the new changes. In other words, without being high in network building ability that will assist the employee to have large network that creates a pool of trusted information which can contribute to new idea generation and enhance innovation (Milliken *et al.*, 2003). To put it differently, with large

number of connections, the employees will have the opportunity to access more diverse information from different sources of knowledge that will allow them to recognise new opportunities and have a higher access to raw materials that will enable them to generate novel ideas (Baer *et al.*, 2015). Thus, for idea generation behaviour, the study may present the following hypothesis:

**H1:** *Network building ability mediates the relation between proactive personality and idea generation stage.*

Janssen (2000) clarified that in idea promotion stage the employees will engage in social activities to allocate friends, backers, and sponsors surrounding an idea, or to form a coalition of supporters who offer the necessary power behind the new idea. Proactive employees usually are not limited by their situational constraints; contrarily, they have the ability to start change in their surroundings and search for new opportunities (Bateman and Crant, 1993) and likely to involve in networking (Thompson, 2005). Li *et al.* (2010) stated that proactive employees are expected to establish positive social exchange relationships with their supervisors for the purpose of acquiring information related to emerging problems and opportunities. Furthermore, proactive employees seem to appreciate the value of founding relationships with people who control resources to benefit from what social networks usually offers: Access to information, resources, and opportunity identification (Thompson, 2005). Fuller and Marler (2009) stated that proactive employees are likely to advance within organisations because they attract the attention and sponsorship of powerful individuals. These behaviours will facilitate the promotion of the proactive employees' new idea.

Proactive people may be mostly effective in marketing their ideas and creating wide support, which debatably promotes successful idea realisation (Swaab *et al.*, 2007; Giebels *et al.*, 2016). In addition, employees who have a lot of trusted connection will have an advantage in diffusing new ideas (McFadyen and Cannella, 2004). Since trust amongst actors will help to have more cooperation and this will facilitate task coordination amongst actors, easier knowledge transfer and securing the needed resources for implementation (Obstfeld, 2005). Therefore, in idea promotion behaviour; the more the employees have large network, the easier will be for them to promote new ideas. Hence, the study presents the following hypotheses:

**H2:** *Network building ability mediates the relation between proactive personality and idea promotion stage.*

The final stage of the innovation process is idea realisation that is producing a prototype or model of the novel idea that can be practiced and applied within a work role, a team or the whole organisation (Janssen, 2000). Employees are often

capable of completing simple innovations but the completion of more complex innovations demands teamwork based on a variety of specific knowledge, competence, and work roles (Kanter, 1988).

Proactive personality is usually associated with problem solving, decision making, and to plan ahead (Bateman and Crant, 1993). Proactive employees are likely to act upon their own ideas or suggestions for bringing about change and take charge to translate these ideas into reality (Fuller and Marler, 2009). Furthermore, Fuller and Marler (2009) stated that proactive employees have the ability to attract the attention and sponsorship of powerful individuals which will create an obvious advantage to proactive employees to implement their ideas. In addition, proactive employees are usually effective in selling their ideas and forming wide support that arguably promotes successful idea realisation (Swaab *et al.*, 2007; Giebels *et al.*, 2016).

Proactive employees tend to have the will and the ability to adapt to situational cues pertaining to appropriate behaviour (Fuller and Marler, 2009); these behaviours facilitate structuring a common understanding and vision amongst their colleagues regarding the new changes. Perry-Smith and Mannucci (2017) stated that implementing a novel idea is driven by common understanding and vision amongst organisational members. According to Perry-Smith and Mannucci (2017), network closure (Coleman, 1988) and external ties outside the team (Tortoriello and Krackhardt, 2010) are best to support idea application. In addition, employees' network will help them to gain their colleagues cooperation that will facilitate task coordination, support easier knowledge transfer, and secure the needed resources for implementation (McFadyen *et al.*, 2009); therefore, the research creates the following hypotheses:

**H3:** *Network building ability mediates the relation between proactive personality and idea realisation stage.*

The conceptual framework is presented in Fig. 1. The model combines the psychological concept: Proactive personality, and the sociological concept:

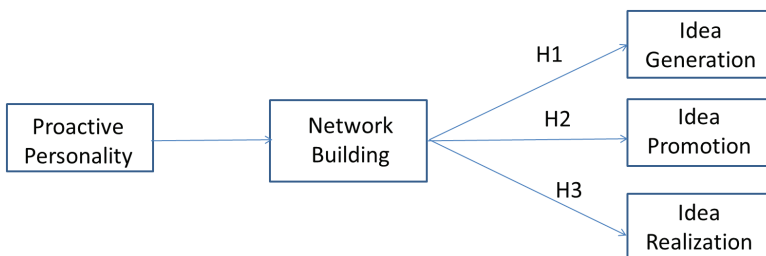


Fig. 1. Conceptual framework.

Network building ability to explain the employees' innovation behaviours in service sector.

## Methodology

Since the nature of the research is deducting the relation amongst proactive personality, network building ability and employees' innovative behaviours, a quantitative method was adopted with a positivist approach to ensure objectivity through working with factual data, and separate the researcher from the subjects of the research (Saunders *et al.*, 2016). The study's data was collected through a self-reporting questionnaire-based survey distributed to employees working in the service sector in United Arab Emirates (UAE), then analysed using structural equation modelling to test the research's hypotheses.

### Data collection and sample

UAE has a service-driven economy (Augustine, 2016), the service sector forms 53.11% of the country GDP as published by Statista research organisation in July 2020 report, and with the local government efforts to inspire innovation in all sectors, UAE service sector formed a great prospect for researchers to examine innovation (Suliman and Al-Shaikh, 2007; Rodrigues, Sarabdeen and Balasubramanian, 2016; Nasaj and Al Marri, 2018; Bani-Melhem, Zeffane and Albaity, 2018; Al-Hawari *et al.*, 2019; Nasaj, 2020; Aldabbas *et al.*, 2020). Hence, UAE service sector was selected as the research population since it offers a unique opportunity to study innovation phenomena in a country that depends on its service sector for their economy with a special focus on innovation. Random sampling technique was adopted to reduce the likelihood of bias in the collected data (Kothari, 2004). The data was collected randomly from a wide range of organisations operating in UAE service sector. Two organisations were selected from each of the following sub-sectors: Banking, health care, education, hotels, and telecommunication. With the assistance of HR managers in each organisation, the research's online survey questionnaire was distributed to random employees from different departments (100 survey in each organisation). A total of 406 complete responses were received, therefore, the study has a 40.6% effective response rate. SPSS v23.0 and Amos v23.0 programs were used to conduct data analysis.

### Research measures

All the variables were measured by a 5-point Likert scale survey. The answers will follow the agreement rating type suggested by Saunders *et al.* (2016), which will

be ranging from: Strongly agree, agree, natural, disagree, and strongly disagree. All the scales' items are attached in the appendices.

***Employees' Innovative Behaviours:*** They were measured using Janssen's (2000) nine-item self-evaluated survey that operates three questions to measure each of the three employees' innovative behaviours (idea generation, idea promotion, and idea realisation). Janssen (2000) stressed on the importance of employees' self-assessment of their innovative behaviour rather than colleagues' or supervisors' assessment. Employees will have more information about their daily work activity than their supervisors or peers; therefore, they will be more precise. In addition, when supervisors are requested to assess the innovativeness of their employees, they may disregard aspects of innovation since they will only assess the behaviours that left an impression on them since innovative behaviour is sensitive to individual characteristics. Such a scale has recently attracted more attention since it has a good reliability and validity test results with a Cronbach's alpha (0.95) as demonstrated by Janssen (2000).

***Network Building Ability:*** Ferris *et al.* (2005) developed a self-rating six-item scale that measures the ability of the individuals to build networks and benefit from the people in their networks, Ferris *et al.* (2005) named this scale network ability and consider it as one of the facets of political skills. Thompson (2005) used the same scale and named it network building ability, the scale reported reliability test was excellent at Cronbach's alpha (0.94).

***Proactive Personality:*** It was measured using Bateman and Crant (1993) 17-items scale that demonstrates high validity measures as suggested by Fuller and Marler (2009), since they found—after examining 107 studies—that the 17-item scale is a reliable measurement tool that is undistorted by social desirability. The average Chronbach's alpha coefficient of 30 samples used Bateman and Crant's (1993) 17-item was (0.86) which is a good result that indicates the reliability of this scale.

***Demographic Variables:*** Age, gender, experiences, and education has been used since they might have a significant effect on employees' perceptions of their jobs which will affect their job's attitude, process and performance. (Kirkman *et al.*, 2004; Pelled *et al.*, 2004). The gender was included as a dummy variable (male = 1 and female = 0). Age was measured in years as the following (1 = 18–25 years, 2 = 26–33 years, 3 = 34–41 years, 4 = 42–49 years, 5 = more than 50 years). Years of experience has the following scale points (1 = less than one year, 2 = 1–3 years, 3 = 3–6 years, 4 = 6–10 years, 5 = more than 10 years). Educational background

Table 1. Participants' profile summary.

| Variable   | Item             | Frequency | Percentage (%) |
|------------|------------------|-----------|----------------|
| Gender     | Male             | 222       | 54.68          |
|            | Female           | 184       | 45.32          |
| Age        | 18–25            | 55        | 13.55          |
|            | 26–33            | 129       | 31.77          |
|            | 34–41            | 160       | 39.41          |
|            | 42–49            | 42        | 10.34          |
|            | < 50             | 20        | 4.93           |
|            | > 1              | 27        | 6.65           |
| Experience | 1–3              | 42        | 10.34          |
|            | 4–6              | 51        | 12.56          |
|            | 7–10             | 83        | 20.44          |
|            | < 10             | 20        | 50             |
|            |                  |           |                |
| Education  | High school      | 44        | 10.84          |
|            | Diploma          | 45        | 11.08          |
|            | Bachelor         | 191       | 47.04          |
|            | Master           | 108       | 26.60          |
|            | <b>Doctorate</b> | <b>18</b> | <b>4.43</b>    |

was measured by the following scale points (1 = high school, 2 = Diploma, 3 = bachelor degree, 4 = master degree, 5 = Ph.D. degree).

Data analysis

The research participants' profile was created by analysing the demographic variables in the survey. Table 1 summarizes the participants' profile.

Common method bias test

Recently, business research academics stress on the importance of testing common method bias (Bagozzi, 2011; Lance *et al.*, 2010; Williams *et al.*, 2010), especially in self-administrated survey research (Fuller *et al.*, 2016; Chang *et al.*, 2010). Harman's one-factor common bias method (Podsakoff and Organ, 1986; Podsakoff *et al.*, 2003) was examined since it is commonly used in the literature (Fuller *et al.*, 2016). The results show that the single factor explains only 38.03% of the collected

data, which is less than 50%. Therefore, the study does not have a common method bias issue.

### **Validity and reliability tests**

The research questionnaire reliability is tested through running a set of tests such as: Cronbach's alpha, and the cutoff value of 0.7 (Mallery and George, 2003) was adopted as an acceptable value. Kaiser–Meyer–Olkin (KMO) test that measures sample adequacy was also applied. For the KMO test, the closer the value to 1.0, the more reliable the scale, whereas a value less than 0.50 indicates that the scale is not reliable (Morgan *et al.*, 2004). The results show that (KMO = 0.946). The last test was Bartlett test of sphericity, which examines the occurrence of correlations; the significance of this test refers to reliable scales (Hair *et al.*, 2010). The results illustrate that Bartlett test of sphericity = (0.000). The three conducted reliability tests verified that the research's scales are reliable. Table 2 illustrates the correlation matrix and descriptive statistics for all the research's variables.

In terms of validating the research questionnaire's constructs, factor analysis was conducted. Exploratory Factor Analysis was performed using the principal component analysis as the extraction method and varimax rotations were used. The scree plot diagram (Fig. 2) demonstrates that the research has five latent variables that have eigenvalues of more than 1. The results match the number of constructs in this research.

In addition, the results show that all items in the questionnaire loaded on their constructs and have acceptable values that is more than 0.45 (Field, 2013). Test results are provided in Table 3.

Confirmatory factor analysis (CFA) was performed to further validate the research's scales; the results show that fit indices of the CFA indicated a good model fit:  $\chi^2/df = 2.850$  (Schreiber *et al.* 2006), root mean square residual (RMR) = 0.073 (Browne and Cudeck, 1993), comparative fit index (CFI) = 0.928 (Byrne, 2010), incremental fit index (IFI) = 0.929 (Bentler, 2007), Tucker–Lewis index (TLI) = 0.919 (Marsh *et al.*, 2004), root mean square error of approximation (RMSEA) = 0.068 (Steiger, 2007).

Finally, convergent and discriminant validity of the measurement scales were conducted. The cutoff criteria more than 0.5 for adequacy of results (Hair *et al.*, 2006) were followed. To examine discriminant validity of the constructs, square root of average variance extracted (AVE) was compared with inter-construct correlations of the constructs. When the square root of AVE is greater than the inter-construct correlation, the constructs discriminant validity is established (Hair *et al.*, 2006). The convergent and discriminant validity test amongst constructs

Table 2. Correlation matrix and descriptive statistics.

|                            | Mean | Std.<br>deviation | Cronbach's<br>alpha | 1       | 2       | 3       | 4       | 5       | 6       | 7       | 8       | 9 |
|----------------------------|------|-------------------|---------------------|---------|---------|---------|---------|---------|---------|---------|---------|---|
| 1-Gender                   | 0.55 | 0.49              | —                   | —       |         |         |         |         |         |         |         |   |
| 2-Age                      | 2.61 | 1.00              | —                   | 0.162** | —       |         |         |         |         |         |         |   |
| 3-Experience               | 3.97 | 1.28              | —                   | 0.229** | 0.684** | —       |         |         |         |         |         |   |
| 4-Education                | 3.03 | 0.99              | —                   | 0.050   | 0.237** | 0.284** | —       |         |         |         |         |   |
| 5-Proactive<br>personality | 3.54 | 1.08              | 0.968               | 0.044   | 0.113*  | 0.094   | 0.145** | —       |         |         |         |   |
| 6-Network building         | 3.66 | 1.08              | 0.895               | 0.046   | 0.044   | 0.103*  | 0.039   | 0.385** | —       |         |         |   |
| 7-Idea generation          | 4.23 | 0.79              | 0.882               | 0.046   | 0.108*  | 0.136** | 0.117*  | 0.266** | 0.310** | —       |         |   |
| 8-Idea promotion           | 4.21 | 0.67              | 0.757               | 0.100*  | 0.088   | 0.153** | 0.118*  | 0.244** | 0.343** | 0.229** | —       |   |
| 9-Idea realisation         | 4.40 | 0.60              | 0.741               | 0.023   | 0.004   | 0.019   | 0.003   | 0.299** | 0.246** | 0.287** | 0.426** | — |

Note: N = 406. \* $p < 0.05$ , \*\* $p < 0.01$ .

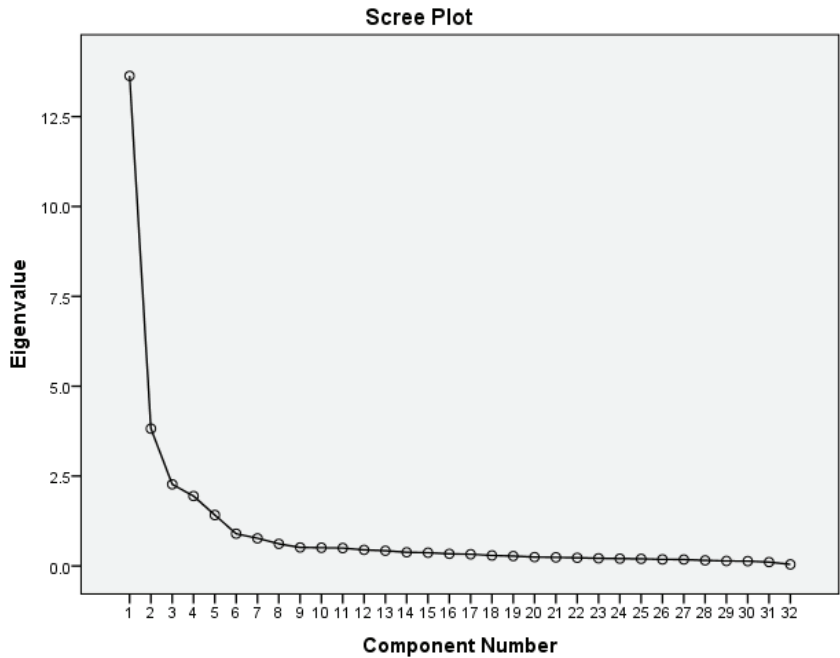


Fig. 2. Scree plot diagram.

Table 3. Exploratory factor analysis.

| Rotated component matrix <sup>a</sup> |           |   |   |       |   |
|---------------------------------------|-----------|---|---|-------|---|
|                                       | Component |   |   |       |   |
|                                       | 1         | 2 | 3 | 4     | 5 |
| IBIR07                                |           |   |   | 0.699 |   |
| IBIR08                                |           |   |   | 0.756 |   |
| IBIR09                                |           |   |   | 0.709 |   |
| ProacP01                              | 0.871     |   |   |       |   |
| ProacP02                              | 0.783     |   |   |       |   |
| ProacP03                              | 0.724     |   |   |       |   |
| ProacP04                              | 0.821     |   |   |       |   |
| ProacP05                              | 0.822     |   |   |       |   |
| ProacP06                              | 0.879     |   |   |       |   |
| ProacP07                              | 0.817     |   |   |       |   |
| ProacP08                              | 0.852     |   |   |       |   |
| ProacP09                              | 0.832     |   |   |       |   |
| ProacP10                              | 0.792     |   |   |       |   |

Table 3. (Continued)

| Rotated component matrix <sup>a</sup> |           |       |       |   |       |
|---------------------------------------|-----------|-------|-------|---|-------|
|                                       | Component |       |       |   |       |
|                                       | 1         | 2     | 3     | 4 | 5     |
| ProacP11                              | 0.811     |       |       |   |       |
| ProacP12                              | 0.808     |       |       |   |       |
| ProacP13                              | 0.808     |       |       |   |       |
| ProacP14                              | 0.805     |       |       |   |       |
| ProacP15                              | 0.831     |       |       |   |       |
| ProacP16                              | 0.814     |       |       |   |       |
| ProacP17                              | 0.875     |       |       |   |       |
| NBA01                                 |           | 0.782 |       |   |       |
| NBA02                                 |           | 0.798 |       |   |       |
| NBA03                                 |           | 0.748 |       |   |       |
| NBA04                                 |           | 0.830 |       |   |       |
| NBA05                                 |           | 0.678 |       |   |       |
| NBA06                                 |           | 0.803 |       |   |       |
| IBIG01                                |           |       | 0.936 |   |       |
| IBIG02                                |           |       | 0.938 |   |       |
| IBIG03                                |           |       | 0.721 |   |       |
| IBIP04                                |           |       |       |   | 0.704 |
| IBIP05                                |           |       |       |   | 0.722 |
| IBIP06                                |           |       |       |   | 0.759 |

<sup>a</sup> Rotation converged in six iterations.  
*Note:* Extraction method: Principal component analysis.  
Rotation method: Varimax with Kaiser normalization.

exemplified in Table 4. The results show that convergent and discriminant validity is achieved.

Results

The research aims to examine the mediation role of network building ability on the relationship between proactive personality and employees’ innovative behaviour. Structural equation modelling with robust maximum likelihood estimation was used to test the research hypotheses. The structural equation model is represented in Fig. 3.

Table 4. Convergent and discriminant validity.

| Constructs            | Proactive personality | Network building | Idea generation | Idea promotion | Idea realisation |
|-----------------------|-----------------------|------------------|-----------------|----------------|------------------|
| Proactive personality | <b>0.715</b>          |                  |                 |                |                  |
| Network building      | 0.68                  | <b>0.903</b>     |                 |                |                  |
| Idea generation       | 0.27                  | 0.34             | <b>0.539</b>    |                |                  |
| Idea promotion        | 0.23                  | 0.30             | 0.11            | <b>0.568</b>   |                  |
| Idea realisation      | 0.27                  | 0.18             | 0.11            | 0.20           | <b>0.522</b>     |

Note: Diagonal values are representing the square root of AVE.

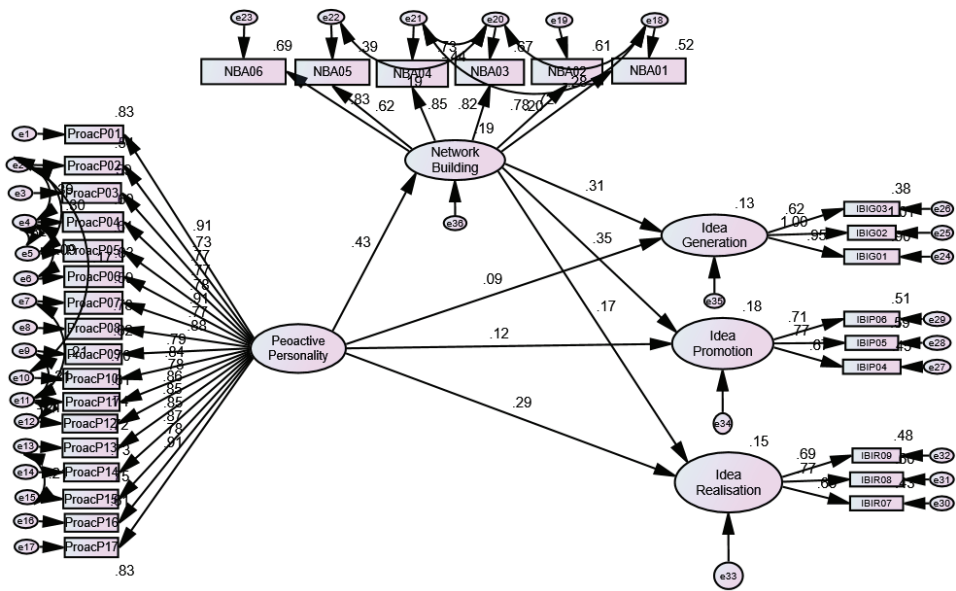


Fig. 3. Structural equation model.

Research SEM fit indices showed a good model fit:  $\chi^2/df = 3.177$ , RMR = 0.077, CFI = 0.915, IFI = 0.915, TLI = 0.905, RMSEA = 0.073. The results of direct relations amongst the constructs are illustrated in Table 5.

The results show that proactive personality is significantly related to network building ability and idea realisation at 99% confidence level, and significantly related to idea promotion at 95% confidence level, whereas not significantly related to idea generation at 95% confidence level. In addition, network building ability is

Table 5. SEM direct relations results.

| Paths                 |   |                  | Estimate | S.E.  | C.R.  | P     |
|-----------------------|---|------------------|----------|-------|-------|-------|
| Proactive personality | → | Network building | 0.391    | 0.045 | 8.648 | ***   |
| Network building      | → | Idea generation  | 0.223    | 0.040 | 5.643 | ***   |
| Network building      | → | Idea promotion   | 0.179    | 0.033 | 5.350 | ***   |
| Network building      | → | Idea realisation | 0.078    | 0.029 | 2.695 | 0.007 |
| Proactive personality | → | Idea generation  | 0.059    | 0.034 | 1.734 | 0.083 |
| Proactive personality | → | Idea promotion   | 0.057    | 0.028 | 2.036 | 0.042 |
| Proactive personality | → | Idea realisation | 0.119    | 0.026 | 4.556 | ***   |

Table 6. Indirect relations results.

| Paths                 |   |                  | Lower bounds | Upper bounds |
|-----------------------|---|------------------|--------------|--------------|
| Proactive personality | → | Idea generation  | 0.050        | 0.137        |
| Proactive personality | → | Idea promotion   | 0.036        | 0.116        |
| Proactive personality | → | Idea realisation | 0.000        | 0.063        |

significantly related to at 99% confidence level with each behaviour of the employees' innovative behaviours.

Therefore, a potential mediating role is assumed. To further validate the mediating role of network building ability, the research adopted the bootstrapping method to construct confidence intervals for the indirect effect (Shrout and Bolger, 2002; Preacher and Hayes, 2004), which is the recommended method for testing mediation variables (MacKinnon *et al.*, 2012; Hayes, 2017). The bootstrapping method contained of 5,000 repeated samples were used to attain 95% confidence intervals for the indirect effects of proactive personality on idea generation, idea promotion and idea realisation. The results of the indirect relations are illustrated in Table 6.

The results of the indirect relation between proactive personality and idea generation show that the lower bounds value is (0.050), whereas the upper bounds value is (0.137). Since 0 is not included in the interval of the results (LL.050, UL.137), it means that H1 is supported, and since there is no direct relation between proactive personality and idea generation, it is safe to say that network building ability is a full mediator of the relation between proactive personality and idea generation.

In terms of H2, the results of the indirect relation between proactive personality and idea promotion indicate that the lower bounds value is (0.036) whereas the upper bounds value is (0.116). Since 0 is not included in the interval of the results

(LL 0.036, UL.116). Therefore, H2 is supported, and since there is a significant direct relation between proactive personality and idea promotion, network building ability assumes the role of a partial mediator between proactive personality and idea promotion.

Finally, for H3, the results of the indirect relation between proactive personality and idea realisation show that the lower bounds value is (0.000), and the upper bounds value is (.063). Since 0 is not included in the interval of the results (LL 0.000, UL 0.063), H3 is supported, and network building ability partially mediates the relation between proactive personality and idea realisation, since there is a significant direct relation between proactive personality and idea realisation.

## **Discussion**

This research attempts to have a more in-depth investigation of the relationship between proactive personality and each stage of the employees' innovative behaviours separately as recommended by Niu (2014), Wisse *et al.* (2015), Woods *et al.* (2017), Rodrigues and Rebelo (2019), and Nasaj and Badi (2021). This separation will differentiate between the three stages of innovation behaviours because each stage might require different predictors and antecedents. The research found that there is no direct relationship between proactive personality and idea generation stage, this result is in line with a recent study done by Alikaj *et al.* (2020) who found that proactive personality has no direct relation with creative behaviour of the individuals and this relation is fully mediated by employee thriving at work.

In addition, the research's finding further explains the work of previous literature that stated there is a relation between proactive personality and creativity which is linked to idea generation stage of innovation such as the work of Kim *et al.* (2009), Fuller and Marler (2009), Gong *et al.* (2012), and Tai and Mai (2016) since the research argues that the role of network building ability is essential for proactive employees to generate novel ideas. Thompson's (2005) work goes in line with this argument because he stressed the role of social capital to access information for proactive individuals to improve their work performance. The mediation role of network building ability will answer the call of Kim *et al.* (2009) and Gong *et al.* (2012) to examine different mediators to the relation between proactive personality and employees' innovative behaviours. Furthermore, the mediating role of network building ability will contribute to the work of Pan *et al.* (2018) in which they tried to answer the question of 'How does proactive personality promote creativity?', and their suggestion to integrate social perspective to the relation between proactive personality and creativity. Finally, the mediating role of the relation between proactive individuals and idea generation behaviours will fill a gap identified by

Jiang (2017) and Liu *et al.* (2017) to further explore the relation between proactive personality and creative behaviours since it is unexplored in literature.

The research results illustrate a positive direct relationship between proactive personality and the other two employees' innovative behaviours namely: Idea promotion and idea realisation, which is in line with the work of Giebels *et al.* (2016), Yildiz *et al.* (2017), Purba and Paundra (2018), and Rodrigues and Rebelo (2019), since they found that proactivity may predict employees' innovative behaviour (i.e., idea promotion and idea realisation). The research further suggests that network building ability will play the role of partial mediator in the relation between proactive personality and idea promotion and idea realisation stages of innovation.

Another contribution is that the research provides an in-depth investigation of the relation between network building ability and the three behaviours of employees' innovative behaviours. A significant positive direct relation has been found between network building ability and idea generation behaviour. This finding is in line with previous literature that stated a clear relation between social capital and creativity (Merlo *et al.*, 2006; Chen *et al.*, 2008; Perry-Smith and Mannucci, 2017) which is linked to idea generation behaviour. Perry-Smith and Mannucci (2017) explained the link between social capital and idea generation behaviour due to the advantages that individuals can have from their network such as combining an array of knowledge into a new successful combination by bring together various viewpoints and perspectives from their network. The same idea was supported by Baer *et al.* (2015) since they stated that large network of social relationships will offer the individual an access to a large amount of information, advice and support, that may increase the individual's capacity to develop new ideas.

The study's results show a positive significant relation between network building ability and idea promotion and idea realisation behaviours. This finding is supported by Perry-Smith and Mannucci (2017) since they stated that through the idea journey individuals may activate different parts of their network that help them perform different tasks during the idea journey, however, to generate, promote, or realise their new ideas. van de Ven (1986) stated that innovation includes interacting with other individuals since it is embedded in a social process in which individuals create alliances that enhance the probability of adopting novel ideas, which goes inline with the study finding. Madrid *et al.* (2014) as well pointed that individuals need to cooperate and coordinate tasks with other individuals to be able to promote and realise their novel ideas that support the research finding as well. Based on the above discussion the research may argue that service innovation may occurs by linking unconnected existing ideas, concepts, information, features or business models gathered from the employee's network together for the purpose of developing a new services or service delivery processes that exhibits the combined characteristics and adds value to the organisation.

Finally, there is a growing scholarly impetus to contribute to a coevolutionary perspective that interprets behaviours from both psychological and sociological stances (Snyder and Deaux, 2012; Anderson *et al.*, 2014; Tasselli *et al.*, 2015; Fang *et al.*, 2015; Baer *et al.*, 2015; Landis, 2016; Nasaj and Badi, 2021). This study offers a contribution to improve our understanding of the relationship between proactive personality (personality theory) and network building ability (social capital theory) in predicting employees' innovative behaviours. The research findings illustrate that network building ability has a role of a mediator on the relation between proactive personality and employees' innovative behaviours, and in some cases, it has the role of full mediator of the relation that means network building ability will be accountable for the relation between the proactive personality and innovation behaviour. To say it differently, when network building ability fully mediates the relation between proactive personality and the idea generation behaviour; network building enables the employees to generate novel ideas even though their inner force (i.e., their personality trait) may not enable them to generate new ideas.

Therefore, the research provides an empirical study that sheds the light on the type of relations and influences that gather between personality trait (psychology) and building network ability (sociology) whilst predicting employees' innovative behaviours and further supports the importance of integrating personality trait and social capital views to enhance our understanding of the studied phenomena. This finding is in line with the work of Tasselli *et al.* (2015) and Kilduff and Lee (2020) that examined the previous literature and presented the idea of integrated theory between psychology and sociology that combines both perspectives in a coevolutionary account of a dynamic process of mutual influence.

### **Conclusion, Implications, and Future Directions**

The study sheds the lights on the predictors of employees' innovative behaviours that contribute to the overall organisational innovativeness and its ability to be competitive in the market especially for companies operating in the service sector (Campo *et al.*, 2014; Amo, 2010). The research's findings have several practical contributions for managers in the service sector. First, HR managers can enhance their recruitment practices by applying either self-report or observer ratings personality testing (Connolly *et al.*, 2007) since the research highlighted that proactive personality is related to innovation.

Second, the integrative perspective between psychology and sociology shows that it is not enough to hire employees with the right personality traits and expect them to generate and implement innovative ideas magically and without any support from their surroundings; therefore, the study recommends managers to be aware

of the role of employees' networks play in their innovative behaviours. Hence, service sector managers should try to create networking events amongst the employees from different sections or departments within the organisation since the results of the research show that the more the employee creates networks with their managers and colleagues the more they will be able to collect information and come up with novel ideas to improve their current process or find solution for current problems.

Third, the research focuses on the service sector and the role of the employees who provide the service cannot be separated from the service itself, therefore, their interaction with the customers will contribute in shaping the provided service level, because one of the characteristics of the service innovation is customer participation (Chen *et al.*, 2011). These characteristics blur the borderline between customers and employees to the extent of considering the customers as partial employees and resources of innovative behaviours (Duverger, 2012). Therefore, organising networking event that facilitates creating relationships between employees and the company's customers will offer a great opportunity for the employees to identify problems in the services or the processes and stimulate their innovation.

Fourth, HR managers may stress on the importance of building networks for employees in many practices such as: Identifying jobs with innovative requirements and assign activities and tasks in their job description cards that boost their socialising and network skills. One more practice is to incorporate networking skills training courses in the annual employees' training plans to increase their innovativeness.

Finally, innovation managers in service organisations should realise that employees' differences such as personality traits might affect the performance of the employee innovativeness, so understanding these differences is very important to effectively utilise the employee's strength for different behaviours in the innovation process. For example, based on the study's results, Proactive employee will excel in implementing the novel idea rather than generating the ideas themselves. In addition, this might suggest developing an individual's knowledge management record by knowledge managers to capture these employees' differences and behaviours for more effective use of this knowledge in the future.

The research's findings are subject to several limitations. Firstly, the research adopted a self-reporting survey questions to measure the employees' innovative behaviours, which might offer an opportunity for the participants to be biased and rate themselves highly; nevertheless, asking the employee to rate his own innovativeness is defended by some scholars such as (Amo, 2005) since the employee might behave innovatively for mainly two reasons: Either influenced by his organisation or management to be innovative, or as a personal initiative that is not necessarily approved by their management, and it is related to the employee own characteristics. Therefore, asking the employees' managers to rate their innovative

behaviours might not be fair on the side of the employees since the evaluator will rate them based on the behaviours that he approves only and not the personal initiative of the employees that the evaluator did not like or approve. Another scholar that defended the use of self-reported survey questions to measure employees' innovativeness is Janssen (2000) who stated that an employee obtains more information regarding their daily tasks than their superiors; therefore, employees will have more precision in evaluating their innovativeness rather than their managers. Adding to this, the management assessment of the employees' innovativeness might neglect the core innovation of the employee since they will be assessing the behaviours that only left an impression on them since innovative behaviours is extremely sensitive to individuals' differences. In addition, using self-reporting survey questions is very common in intrapreneurship literature (Axtell *et al.*, 2000; Monsen and Boss, 2009; Zampetakis *et al.*, 2009; Wakkee *et al.*, 2010; Moriano *et al.*, 2014). However, future studies might adopt different reporting styles to add further validation of the research findings.

Second, the research investigated one personality trait variable, leaving the effect of other personality variables unexamined. Therefore, future research might consider different personality variables, such as the Big Five model (Goldberg, 1990), or other compound personality traits such as intrapreneurial personality (Pinchot, 1985) that will eventually improve our understanding of the psychological—sociological coevolutionary perspective of personality traits and social capital.

Third, the research selected UAE service sector employees as the research population, therefore, the generalisability of findings may be limited to UAE service sector only, since cultural differences may influence individuals' innovation. For example, risk-taking tendency of an employee was found to positively contribute to the employee's innovation (Angel Ferrero and Bessi re, 2018). However, some cultures may influence the employee's personality trait extent to take risks more than other cultures (Hofstede, 2001) that might influence the individual's innovative behaviours. Therefore, the study suggests as a future research to investigate the study conceptual framework in other cultures to validate its results across international level in order to address this limitation.

Even though this research sheds the light on the advantages of having large network that enables employees to innovate by exploiting the resources residing in these networks; however, a future research that investigates how these employees who have large networks compensate the dark side of maintaining these relations without affecting their work performance. For example, maintaining relations with other actors in large network will require more resources such as time or mental ability that might affect the employee's performance in other work-related tasks. In other words, what types of skills the individuals with large networks should develop to avoid the disadvantages of having large networks?

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