

Extrinsic rewards for employee creativity? The role of perceived organisational support, work engagement and intrinsic motivation

Abstract

Purpose: This study investigates the relationship between extrinsic rewards and employee creativity through the intervening mechanism of perceived organisational support and work engagement. The moderating role of intrinsic motivation on the relationship between work engagement and employee creativity is also examined.

Design/methodology/approach: We report the results of a survey completed by 372 respondents employed in the United Arab Emirates. Structural equation modelling was applied to test the hypothesized relationships.

Findings: The main findings are that extrinsic rewards influence employee creativity through perceived organisational support and work engagement. Moreover, the effect of work engagement on employee creativity is moderated by intrinsic motivation. This model effect is stronger for employees with high intrinsic motivation.

Originality/value: Our study contributes to the limited amount of available literature on creativity and rewards adding to our knowledge about the influence of extrinsic rewards on creativity considered in the presence of intrinsic motivation. Theoretical and practical recommendations are discussed.

Research limitations: Convenience sampling was used which limits its generalizability. Also, the data were collected through a cross-sectional survey at one point in time.

Practical implications: Managers should consider provision of extrinsic rewards and support to increase employee motivation and engagement in creative work.

Keywords: extrinsic rewards, perceived organisational support (POS), work engagement, intrinsic motivation, employee creativity.

1. Introduction

In this paper, we argue that extrinsic rewards play a crucial role in encouraging employees to be more engaged in creative activities. Our research considers extrinsic rewards from a social exchange theory (SET) perspective with the rational expectation that when employees perform their work, they will be rewarded in two forms: monetary (e.g., financial incentives, high rating in performance appraisal linked to pay or bonus, promotion) and non-monetary (e.g., recognition, appreciation, support, empowerment from the organisation).

The empirical research is based in the United Arab Emirates (UAE) which is considered one of the most advanced countries in the Arab world. In 2021, the UAE is ranked 33rd worldwide and first regionally and 40th worldwide regarding creative output, and second place worldwide for the creative goods and services indicator (WIPO, 2021). A limited number of studies in the UAE context have investigated creativity as an outcome variable. We aim in this study to advance knowledge on whether or not extrinsic rewards enhance creativity in the presence of POS, work engagement and intrinsic motivation. This study is the first one in the context of the UAE to investigate direct and indirect relationships between extrinsic rewards and employee creativity. Employees who are externally motivated work when they think it will have favourable results, such as monetary incentives, job advancement, promotion or increased income (Putra *et al.*, 2017). Positive social exchanges arise when both parties can achieve satisfactory rewards but do not occur in the reverse situation (Yin, 2018).

Creativity has been defined as the “production of novel, useful ideas or problem solutions” (Amabile *et al.* 2005, p. 368). Creativity is central to human development (Hennessey and Amabile, 2010) and employee creativity often contributes to organisational effectiveness and

success (Tse *et al.*, 2018). Creativity is broadly considered an important 21st-century survival skill (Puccio, 2017) and academic knowledge on creativity has increased dramatically over the past three decades (Amabile and Pratt, 2016).

The phrases ‘extrinsic motivation’ and ‘extrinsic reward’ are often used interchangeably and so there is some confusion in the literature on the definition of extrinsic reward (Amabile *et al.*, 1994; Ryan and Deci, 2000). Several scholars have defined extrinsic reward addressing only one part of the global definition, usually by focusing on monetary rewards. For instance, Yin (2018) defined *extrinsic rewards* as quantifiable monetary benefits given to individuals, such as wage, extra, health and other benefits that primarily meet the individuals’ basic needs, such as survival and security. We will argue in favour of understanding *extrinsic rewards* comprehensively as encompassing both monetary and non-monetary values (Malik *et al.*, 2019) defined as “forms of reinforcement such as money, prizes, desirable activities or outcomes, praise, or recognition” (Byron and Khazanchi, 2012, p. 810).

Surprisingly few studies have investigated extrinsic motivation’s effect on creativity and innovation (Fischer *et al.*, 2019). Malik *et al.*’s (2019) study found that intrinsic motivation and extrinsic rewards influence radical and incremental creativity. Similarly, Shaheen *et al.* (2020) report that extrinsic rewards are related to creative performance through the mediating role of intrinsic motivation. Yoon *et al.* (2015b) likewise found extrinsic motivation was significantly related to employee creativity, but the relationship between intrinsic motivation and employee creativity was non-significant. Three studies have linked extrinsic rewards with creativity through different intervening mechanisms. Malik *et al.* (2019) examined the relationship between extrinsic rewards and intrinsic motivation through two moderators (learning goal orientation and

performance goal orientation). Shaheen *et al.* (2020) investigated intrinsic motivation as a mediator between extrinsic rewards and creativity and Yoon *et al.* (2015b) investigated individual commitment to creativity as the independent variable with extrinsic and intrinsic motivation as moderators.

Clearly, more research should be performed on the relationship between extrinsic rewards and creativity, and evidence on the effect of extrinsic rewards on creativity is conflicting (Cai *et al.*, 2020). The link between extrinsic rewards and creativity has been a topic of continued debate within the fields of creativity and in the human resource management literature (Lin *et al.*, 2022). In this paper, we analyze extrinsic rewards and employee creativity mediated by perceived organisational support (POS) and work engagement and we assess the moderating influence of intrinsic motivation on the relationship between work engagement and employee creativity. Therefore, we aim to advance knowledge on whether or not extrinsic rewards enhance creativity in the presence of POS, work engagement and intrinsic motivation.

Our study strongly responds to the call by researchers for more research on the effect of rewards on creativity (Anderson *et al.*, 2014, Lin *et al.*, 2022, Zhou and Shalley, 2003). To explain the relationship between extrinsic rewards and creativity and to justify the concepts used in this study, we narrow our focus on external rewards that are specifically given for being creative, rather than external rewards for overall performance (Malik *et al.*, 2019). Second, we propose that POS and work engagement are highly appropriate intervening concepts because they help to create a work environment that is beneficial to creativity. Put differently, individuals who perceive greater organisational support are more likely to respond with higher levels of engagement (Saks, 2006, 2009). POS can lead to greater work engagement because the organisation's feedback and

assessment of employees' work can motivate them to feel more capable and engaged (Shanock *et al.*, 2019). In addition, POS has potential to contribute to numerous positive human resource outcomes (Eisenberger *et al.*, 1986), and so we examine the contribution of POS and work engagement to increasing the effect of extrinsic rewards on employee creativity. Third, since the influence of extrinsic rewards and intrinsic motivation are debated in the literature, we propose more thoroughly examining the moderating role of intrinsic motivation in the presence of extrinsic rewards.

Our empirical study explores service industries (banking, IT, healthcare) in the UAE. Employees working, for example, as software engineers, nurses and quality assurance professionals often have to create new ideas and quickly find solutions to problems. For instance, the banking industry has faced many challenges (e.g., economic crises, rapid technological change) which require creative responses (Suifan and Al-Janini, 2017). Information technology (IT) can advance organisational efficiency and effectiveness and support creative work processes (Aldabbas *et al.*, 2021a; Dewett, 2003). In healthcare, there is pressure on employees to create new practices and be innovative (Patterson and Zibarras, 2017; Slåtten *et al.*, 2020).

To reiterate, this study examines in the UAE, extrinsic reward and employee creativity through POS, and work engagement. We also investigate the moderating role of intrinsic motivation in the relationship between work engagement and employee creativity. In the next section, we review the literature and present our theoretical model. Then, we analyze and discuss the results of our study theoretically and its implications for managers, identifying limitations making recommendations for future research, and finally our conclusions.

2. Literature review and conceptual framework

2.1 Social exchange theory (SET)

SET is a comprehensive and flexible theory (Cropanzano et al., 2017) and can be defined “as an exchange of activity, tangible or intangible, and more or less rewarding or costly, between at least two persons” (Homans, 1961, p. 13). Social exchange philosophers approve of the mutual ideology of social exchange forms; however not all frameworks elucidate the same values about resources (Mitchell *et al.*, 2012). Since the value of understanding individual motivation and how it contributes to organisational goals is illustrated by SET, it views organisational behaviour as the integration of individuals’ motives to perform particular tasks under shared obligations between individuals and the organisation (Aselage and Eisenberger 2003).

SET is considered one of the most influential theories in analysing employee behaviour in the workplace due to its flexibility towards analysing direct and indirect relationships in one conceptual framework. The exchange principle also describes how employees react differently to the same exchange situation, which affects the social exchange processes and succeeding outcomes (Song and Gu, 2020). Individuals and groups may react differently since employees who are low in an exchange ideology are less expected to care about obligations and are less likely to be concerned if exchanges are not returned, also individuals who hold a strong exchange ideology are likely to reciprocate a decent action more so than those who are low in exchange ideology. Social exchange behaviours are affected by employee-organisation relationships, as explained above, and are influenced particularly when the people involved are from diverse cultural contexts (Hui *et al.*, 2021). All the above arguments confirm the flexibility of SET for understanding relationships between the employees and their employers.

SET assumes that rewarding activities undertaken between the organisation and its employees generate an organisational relationship. Employees with expectations that the company can provide a healthy working atmosphere and rewards (monetary or non-monetary) will be motivated to leverage their expertise and experience to accomplish their goals, resulting in organisations achieving their goals and objectives. A beneficial exchange relationship between individuals and the organisation, thus, results in an improvement in mutual relationships. Social exchange relationships can be long-term, provided that the exchange is continuing and based on a sense of responsiveness (Andersen *et al.*, 2020).

2.2 Study context

In reviewing the empirical literature on creativity in the UAE context, only a few studies investigate the drivers of creativity. For instance, Politis (2005) surveyed 104 employees involved in self-managing tasks finding that factors in the work environment had a positive, significant effect on both productivity and creativity. Dayan *et al.* (2013) conducted an empirical study of 119 managers and business owners of firms in the UAE and found that expertise and creative self-efficacy are significantly linked to entrepreneurial creativity and that intrinsic motivation and sensing opportunity are key mediators of entrepreneurial creativity. Additionally, a survey based on 150 expatriate employees working in manufacturing and service industries in the UAE demonstrated that high levels of team potency resulted in reduced impact of leader-member exchange on employees' creative work involvement (Almazrouei *et al.*, 2020). Another study of 175 expatriate employees working in manufacturing and service industries in the UAE found that

job satisfaction mediates the relationship between cultural intelligence and creative self-efficacy (Almazrouei and Zacca, 2020).

The findings from these empirical survey studies conducted in the UAE reveal that more research is needed on factors influencing creativity. Our survey study is based on respondent self-reports, so we acknowledge that this constitutes a limitation of our research design. The creativity scale in the published UAE research to-date has been assessed through employees' self-ratings rather than supervisor or co-worker ratings. Consequently, there is a need for more research in the future conducted at different levels of analysis.

2.3 Extrinsic rewards and employee creativity

The influence of extrinsic rewards will vary according to employee differences, types of reward (monetary and non-monetary) and situation. Therefore, extrinsic factors can become extrinsic motivators when they influence individuals positively (Fischer *et al.*, 2019). Extrinsic rewards are understood in this study as available means of leveraging employee morale and motivation towards achievement of desired outcomes. When extrinsic rewards are utilised to recognise individual competence, these signals have potential to enhance individual motivation towards attainment of outcomes (Shaheen *et al.*, 2020).

Several studies in education have examined extrinsic rewards and employee creativity. Sung and Choi's (2009) longitudinal study of business school students found that the relationship between openness to experience and creativity was stronger when the students had high extrinsic

motivation. Malik *et al.*'s (2015) study of employees attending executive training programmes concluded that the importance of rewards moderates positively and significantly the relationship between extrinsic rewards and creative performance of employees.

Additionally, a recent study of 187 employees working in a manufacturing company in China found that extrinsic rewards lead to employee creativity through the mediating role of intrinsic motivation (Lin *et al.*, 2022). Another empirical study of 270 employees working in 13 Indonesian firms also found that extrinsic rewards positively and significantly influence creative performance (Sulistiyani and Rahardja, 2018). So too did a study of 158 employees in a firm in Ethiopia find that extrinsic rewards positively and significantly influence employee creativity (Nigusie and Getachew, 2019).

Consistent with SET, when managers motivate employees through extrinsic rewards it establishes a continuous obligation for these employees to give back by achieving valued outcomes such as employee creativity. Employees will compare risks to benefits and so should feel supported and rewarded by managers to help them tolerate the uncertainty of creative work. Hence, offering extrinsic rewards encourages different creative activities that might lead to novelty and problem solving. It is evident from the literature that the role of extrinsic rewards is as an antecedent motivator of employee creativity (Hammond *et al.*, 2011; Yoon *et al.*, 2015a; Yoon *et al.*, 2015b). Based on the above argument, the following hypothesis is presented:

Hypothesis 1. Extrinsic rewards relate positively to employee creativity

2.4 Extrinsic rewards and perceived organisational support

POS is defined as “global beliefs about the extent to which the organisation cares about employee well-being and values their contributions” (Eisenberger *et al.*, 1986, p. 501). Employees who have strong POS are more likely to have deep feelings of attachment and loyalty to their organisation (Eisenberger *et al.*, 1990). Rewards such as pay, job status, and job enrichment may enhance POS (Eisenberger *et al.*, 1986). Rhoades and Eisenberger (2002) state that rewards reinforce employees’ beliefs that the organisation differentiates between employees who increase work performance and those who do not. Hennessey and Amabile (2010) pointed out that “rewards can actually enhance intrinsic motivation and creativity when they confirm competence, provide useful information in a supportive way, or enable people to do something that they were already motivated to do” (p. 581). Extrinsic rewards may reflect both the actual rewards employees received and their perceptions of the rewards (Yoon *et al.*, 2015b). Thus, it is argued that extrinsic rewards enhance employees’ perceptions that they are supported by their organisation which positively affect action for achieving organisational goals and objectives. From the perspective of SET, rewarded employees are likely to reciprocate and to feel that the organisation values their efforts (Eisenberger *et al.*, 1986). Such rewards may result in employees being enthusiastic, happy, energetic, dedicated, focused and proud of what they are doing.

Hypothesis 2. Extrinsic rewards relate positively to POS

2.5 The relationship between POS and work engagement

A group of studies have investigated the relationship between POS and work engagement (Aldabbas *et al.*, 2021b; Khodakarami and Dirani, 2020; Musenze *et al.*, 2022; Rich *et al.*, 2010; Saks, 2006; Xanthopoulou *et al.*, 2009). However, this study considers the link between extrinsic rewards, POS, work engagement and employee creativity which to-date is a significant gap in the literature. Organisation support theory (OST) examines the extent that the organisation values employees' contribution and cares about their well-being (Rhoades and Eisenberger, 2002). Based on OST, we argue that when the organisation cares about employees' well-being it leads to work engagement. Saks (2022) asserts that "Previous research has not explicitly examined the relationship between organisational care and employee engagement" (p. 5). Furthermore, following OST, we claim that when an organisation values employees' contributions it relates positively to work engagement, since employees who feel that the organisation values their contribution become more engaged in work.

A meta-analysis of 112 studies (Ahmed and Nawaz, 2015) revealed that POS had a strong positive influence on engagement, since the organisational support creates an obligation for employees that will positively contribute to organisational performance through high engagement (Musenze *et al.*, 2022). Many organisations periodically review employee engagement and strengthening the link between POS and work engagement is a means of enhancing and promoting engagement and reducing stress (Eisenberger *et al.*, 2020). POS is a powerful and crucial concept for organisational survival and growth with potential for different types of positive outcomes that lead to organisational success.

A longitudinal study conducted by Xanthopoulou *et al.* (2009) concluded that job resources, personal resources, and work engagement are reciprocal over time. Therefore, organisations should ensure employees have access to resources to create a sense of obligation that is returned with greater levels of engagement (Saks, 2006). For example, an empirical study on firefighters and their supervisors found that POS is positively related to job engagement (Rich *et al.*, 2010). Also, research on 2,408 employees working in private and non-profit organisations found that POS is positively and significantly linked with work engagement (Khodakarami and Dirani, 2020). Overall, individuals who perceive support from their organisations are likely to be more engaged in their jobs and feel part of the organisation, motivating them to be more productive than employees who feel less supported. When an organisation values employees' contributions, cares about their well-being and supports them, employee engagement is likely to increase.

Hypothesis 3. POS relates positively to work engagement

2.6 The relationship between work engagement and employee creativity

Bakker *et al.* (2020) argue that when employees are engaged in their work, they are more open to new ideas. However, research studies on the relationship between engagement and creativity are lacking (Ismail *et al.*, 2019). Kahn (1990) specifies that employees who become physically attached to their tasks, whether individually or with other people, are cognitively and sympathetically linked to others in work. More intensively engaged individuals provide high-quality and creative work (Martinez, 2015). Jiang and Yang (2015) similarly argue that employees who are engaged deeply in their work are more likely to be involved in creative and exploratory

cognitive processes. Therefore, it is evident from previous research that engagement is positively related to creativity (Al-Ajlouni, 2020; Aldabbas *et al.*, 2021b; Bakker *et al.*, 2020; Hui *et al.*, 2021; Ismail *et al.*, 2019).

Employee engagement has been researched within SET which offers a strong theoretical background (Saks, 2006, 2019). Employees' dedication and energy is not produced in a vacuum; and often will be influenced by leaders motivating employees to be more engaged in work. When employees are motivated and dedicated to their jobs, they expend extra effort working both more efficiently and creatively. Our argument is that higher levels of engagement create feelings of reciprocity amongst employees who engage in more creative tasks leading to creativity. Al-Ajlouni (2020) argues that employee creativity can be achieved and improved by highly engaged employees. Since creativity is one of work engagement's consequences, we assert that work engagement influences employee creativity. Based on previous arguments, the following hypothesis is proposed:

Hypothesis 4. Work engagement relates positively to employee creativity

2.7 The moderating role of intrinsic motivation

One intended theoretical contribution of this study is assessing intrinsic motivation in moderating the relationship between work engagement and employee creativity. Amabile *et al.* (1994) define intrinsic motivation as the motivation to engage in work primarily for its own sake because the work itself is interesting, engaging or in some way satisfying. Intrinsic motivation occurs when work activities align with personal attitudes, and work activity is meaningful (Delaney and Royal,

2017) and results in high-quality learning and creativity. It is especially important to analyze the factors that engender versus undermine intrinsic motivation (Ryan and Deci, 2000).

We argue that employee creativity is affected by work engagement when intrinsic motivation is high. Intrinsic motivation is positively and significantly related to the dimensions of work engagement namely vigour, dedication and absorption (Putra *et al.*, 2017). These motivational factors mean it is more likely that employees will engage positively in their work. Creating a positive workplace culture and making work more meaningful and interesting enhance employees' intrinsic motivation, which will encourage work engagement (Putra *et al.*, 2017).

According to SET, social exchanges are more likely to be experienced as pleasurable and enabling autonomy when accompanied by high levels of intrinsic motivation (Kuvaas and Dysvik, 2009). When receiving rewards and support from their organisation, employees feel more obliged to engage in their work and be creative. An assumption here is that high intrinsic motivation strengthens the relationship between work engagement and employee creativity. Consequently, increased intrinsic motivation empowers employees to be more engaged and dedicated towards achieving creative tasks. Thus, the following hypothesis is proposed:

Hypothesis 5. Intrinsic motivation moderates the relationship between work engagement and employee creativity, such that this relationship is stronger when employees have higher intrinsic motivation.

3. Research methodology

This empirical study used a quantitative cross-sectional survey to collect data from professional employees in six organisations from three different industries (six organisations). Quantitative methods enable researchers to large numbers of participant employees. In investigating extrinsic rewards for employee creativity by survey methods, we assess the roles of perceived organisational support, work engagement and intrinsic motivation. We selected POS and work engagement as intervening variables in the relationship between extrinsic rewards and employee creativity because we contend that both constructs facilitate creativity. Additionally, we have chosen to examine the impact of intrinsic motivation as due to its significance in the literature on creativity. Furthermore, we seek to investigate how employees' level of intrinsic motivation, whether high or low, may affect the relationship between employee engagement and creativity.

3.1 Research settings and procedures

This study concentrated on six large companies located in the UAE and operating in the services sector of three industries (banking, IT, healthcare).

Our rationale for selecting the UAE for empirical study is it is regarded as one of the most progressive nations in the Arab region. According to WIPO's 2021 report, the UAE ranked 33rd globally and first regionally in terms of creative output. Despite this, there have been relatively few studies conducted in the UAE that examine creativity as a dependent variable (Aldabbas *et al.*, 2022, Almazrouei *et al.*, 2020, Dayan *et al.*, 2013; Politis, 2005). Further, the UAE has

developed its own National Innovation Strategy (NIS) that focuses on three innovation champions (innovative individuals, innovative companies and institutions, and innovative government); however, innovative individuals are considered the main champions of the UAE. The NIS is focused on specific policies intended to enhance innovative individuals, such as developing national talent, promoting a national culture of innovation, introducing innovation-related curricula, sponsoring creative individuals, attracting the best global talent, and launching innovation competitions (NIS, 2015).

A convenience sampling method was used thus involving non-random selection of participants, which is a limitation (Etikan *et al.*, 2016). The data were collected through a weblink shared by a senior manager in each organisation who invited employees to participate in the survey. The survey link was open from December 2019 to February 2020 for approximately 600 employees. A total of 484 surveys were received, however, 101 surveys were incomplete, 4 declined to participate, and 7 respondents were identified as extreme outliers and were omitted from the analysis. Thus 372 valid responses were obtained, giving a response rate of 62%. In detail, male employees comprise 59.95% of the survey returns (n=223) and female employees were 40.05% (n=149). The average age was 35 years, possessing an average job tenure of eight years and the majority held a bachelor's degree 62% (n=229). The industry representation in the sample was 40.6% IT (n=151), healthcare 33.6% (n=125), and banking 25.8% (n= 96).

3.2 Research measurements

This study authentically incorporates the primary variables of the main study, including extrinsic rewards for creativity, POS, work engagement, intrinsic motivation, and employee creativity. These variables were adopted without any modification from reputable scholars and published in high quality academic journals, and these definitions and measurement methods continue to be examined by researchers in various contexts.

Extrinsic rewards for creativity

Eight survey items on extrinsic rewards for creativity on a one-dimensional scale were employed similar to Malik *et al.* (2015); Malik *et al.* (2019); and Yoon *et al.* (2015a). An example item is ‘When I perform creatively, I receive financial rewards, such as incentives or bonuses.’ A 7-point Likert-scale was used ranging from 1 = Strongly disagree to 7 = Strongly agree. The Cronbach’s α for this group of items was .952.

Perceived organisational support

Ten short version survey items were selected and used as recommended by Eisenberger *et al.* (2020), they are all the highly loading items based on the original 36-item scale (Eisenberger *et al.*, 1986). An example is ‘The organisation values my contribution to its well-being.’ A 7-point Likert-scale was deployed ranging from 1 = Strongly disagree to 7 = Strongly agree. The overall Cronbach’s α for the 10 items was .948.

Work engagement

Following Schaufeli *et al.*'s (2006) recommendation, we choose the 9 items of the short version taken from the original 17-items (Utrecht work engagement Scale, Schaufeli *et al.*, 2002). The nine items measure the core dimensions of engagement: vigour, dedication, and absorption. However, work engagement was employed in this study as one construct containing three dimensions (vigour, dedication and absorption). The 9 statements are all about how the employee feels at work, an example item is 'At my work, I feel bursting with energy'. A seven-point Likert scale was used ranging from 0 to 6 (0 = Never to 6 = Always) and the Cronbach's α for the group of nine items was .906.

Intrinsic motivation

Four items on intrinsic motivation were adopted from Grant's (2008) work. It commences with the statement, 'I go to work every day. . .' and then asks respondents to rate their motivation level and an example item is 'Because I enjoy the work itself'. A 7-point Likert-scale was deployed ranging from 1 = Strongly disagree to 7 = Strongly agree and the Cronbach's α for these four items was .905.

Employee creativity

Five items on employee creativity were adopted from Coelho and Augusto (2010). They explained that these items were adapted from Ganesan and Weitz (1996) and Scott and Bruce (1994). An

example item is ‘I try to be as creative as I can in my job’. A 7-point Likert-scale was deployed ranging from 1 = Strongly disagree to 7 = Strongly agree and the Cronbach’s α for this group of items was .887.

Self-reported data inevitably have potential for measurement error due to common method variance (CMV) (Richardson *et al.*, 2009). Collecting supervisor ratings complicates ethical considerations of confidentiality (Shalley *et al.*, 2009). And some scholars prefer to rely on ‘self-ratings’ of individual creativity because employees are more personally aware of their own creative ideas and suggestions than are their line managers (Ng and Feldman, 2012). Sometimes, employees may also be in a better position than line managers or colleagues to determine which novel ideas are creative (Ng and Feldman, 2012). Moreover, self-reports on creativity might identify creative behaviour more precisely than supervisor ratings (Tsai *et al.*, 2015).

Control variables

This study controlled for five demographic variables (gender, age, educational level, job tenure, and industry type) since these demographic characteristics could potentially influence employee creativity. Previous studies measuring creativity in the workplace, used gender, work tenure, and education (e.g., Amabile *et al.*, 2005; Tse *et al.*, 2018). A recent study controlled for five demographic variables, gender, education, tenure, position, and type of organisation (Hui *et al.*, 2021).

Gender was measured as a dummy variable coded as 1 for male and 0 for female. Age was captured in the form of a categorical variable (1 = under 30 years; 2 = 31 - 40 years; 3 = 41 years and above). Education was calculated by highest level of qualification attained (1 = College/high school; 2= Bachelor's degree; 3 = Master's degree and above). Job tenure with the current organisation was also estimated based on a categorical variable (1= under two years; 2= 2 to 7 years; 3= 8 years and above) and Industry was represented as one out of three available types (1=Banking; 2= IT; 3= Healthcare).

3.3 Analysis

Structural equation modelling (SEM) is a collection of statistical methods that enable a set of correlations between one or more independent variables, in addition to allowing the research question to be addressed involving multiple regression analyses of variables (Ullman and Bentler, 2012). Further, SEM is a highly effective multivariate methodology. It is a specialized form of other analysis methods that allows researchers to quantify direct and indirect effects, run test models with many dependent variables, and use several regression equations concurrently (Alavifar *et al.*, 2012). Additionally, SEM has greater flexibility related to model specification and operationalising missing data, moreover it has strong capability to estimate for random measurement error, specifically, when estimating related influences including latent constructs (Hayes *et al.*, 2017). Moreover, four features are supported by SEM but are not supported by partial least squares (PLS) or regression. The first is the ability of SEM to incorporate into the research framework the specific and error variance of the observed variables, and the second is the statistical capability to conduct CFA, and the third is to compare several confirmatory factor analysis models, and the fourth is the capability of SEM to enable comprehensive analysis of variance components

(common, specific, and error) of observed variables (Gefen *et al.*, 2000). In detail, Gefen *et al.*, (2000), summarise a list of capabilities by comparing SEM, PLS-SEM, and regression based on its capabilities (Table I). Finally (SEM) has facilitated the development of novel relationships using modification indexes that are theoretically sound and more widely accepted than other approaches (Cheng, 2001). Based on the advantages of SEM over other methods such as regression and PLS-SEM, the authors decided to use SEM

Insert Table I about here

3.3.1 Common method variance

Since all constructs are measured through employee self-reports, we conducted two tests of CMV to assess reliability (Podsakoff *et al.*, 2003). Same source data collection may cause CMV, therefore specific measurements were used in the questionnaire design to minimize the impact of CMV.

First, following Harman's Single-Factor Test (Podsakoff *et al.*, 2003), the aim was to extract the total variance through an unrotated factor method to ensure that variation was below 50% in order to conclude that CMV is not a major issue for concern. Following Harman's Single-Factor Test, the extracted total variance with an unrotated factor method produced five factors with the first factor accounting for 46.642%

Second, confirmatory factor analysis (CFA) technique was used by loading all items into one factor, the results indicated a one factor model as recommended by Malhotra *et al.* (2006); where all indicators of extrinsic rewards, POS, work engagement, intrinsic motivation, and employee creativity) were $X^2= 4498.279$, $df= 495$, $CFI= 0.619$, $TLI= 0.593$, $SRMR= 0.105$, $RMSEA= 0.147$, which has acceptable goodness of fit. Therefore, we assert that CMV is not a problem in this particular study sample (Podsakoff *et al.*, 2003).

3.1.2 Exploratory factor analysis

The KMO is .958, indicating that the sample is adequate ($KMO > 0.70$), because anything close to 1 indicates that the items are adequately related to their respective factor. In addition, we measured Bartlett's test of sphericity, which is significant at 0.001. After considering .70 as a cutoff, we eliminated 1 item from POS, and two items from work engagement. Therefore, 33 out of 36 items were retained for further analysis after deletion of these three items, and all of the remaining factors aligned closely with the main constructs of our study. Further, the average loading for extrinsic rewards, POS, work engagement, intrinsic motivation, and employee creativity is .862, .841, .782, .860, .829, respectively.

3.1.3 Convergent and discriminant validity

Convergent validity is based on the average variance extracted (AVE) and composite reliability (CR). The AVE is as follows, extrinsic rewards is 0.746; POS is 0.708, work engagement is 0.518, intrinsic motivation is 0.740, and employee creativity is 0.688, all constructs exceeded .50. The

results for CR of the five constructs are: 0.970 for extrinsic rewards, 0.956 for POS, 0.937 for work engagement, 0.919 for intrinsic motivation, and 0.917 for employee creativity. These findings are greater than 0.70, and we conclude that convergent validity has been established. Furthermore, the AVE's square root is greater than are the correlations with other variables (e.g., the AVE's square root of extrinsic rewards is 0.863, POS is 0.842, work engagement is 0.720, intrinsic motivation is 0.860, and employee creativity is 0.829). Therefore, we conclude that discriminant validity is established.

3.1.4 Confirmatory factor analysis

Measurement Model: CFA revealed the following results: $\chi^2 [485] = 1240.217, p < 0.001$, CFI=.928; TLI=.922; SRMR=0.046; RMSEA=.065. The results demonstrate a good model fit. CFA provides a good indicator for how much the measurement model accounts for covariance regarding the study sample (Straub *et al.*, 2004). The comparative fit index (CFI) for the measurement model is greater than .90. The closer CFI is to 1, the more it reflects perfect fit (Cheung & Rensvold, 2002). The Tucker-Lewis index (TLI) has a cut-off close to .95 which is a good result according to Hu and Bentler (1999). The standardized root mean square (SRMR) is below .050 and can be considered a good fit (Hu and Bentler, 1999). The root mean square error of approximation (RMSEA) should be less than 0.08, thus it is accepted and considered a reasonable degree of error according to Chen *et al.*, (2008). Moreover, the chi-square (χ^2) test is significant $p < 0.001$ demonstrating model data fit (Shi *et al.*, 2018).

Hypothesized Model: The CFA revealed the following results: $\chi^2 [471] = 978.182, p < 0.001$, CFI=.952; TLI=.946; SRMR=.078; RMSEA=0.054. Thus, the results confirm that all indicators have acceptable levels of fit.

4. Results

4.1 Descriptive statistics

Table II. presents the mean, standard deviation, skewness, kurtosis and the correlation. Based on Pearson's correlation (r) test, the five main constructs in the study are correlated positively and significantly at .01. The highest correlation is between work engagement and intrinsic motivation ($r=.707, p < 0.01$), followed by POS and intrinsic motivation ($r=.689, p < 0.01$) and the lowest correlation result is between POS and employee creativity ($r=.486, p < .01$).

Insert Table II about here

4.2 Hypotheses testing

Structural equation modelling was used to examine the hypothesized model (Figure 1). Hypothesis 1 states that there is a direct relationship between extrinsic rewards and employee creativity. Our results provide evidence for this assertion ($\beta = .133, z=4.790, p < 0.001$) which support Hypothesis 1. The second hypothesis states that the relationship between extrinsic rewards and POS is positive and significant; the results ($\beta = .383, z=10.930, p < 0.001$) support this assertion. Thirdly, the relationship between POS and work engagement is positive and significant ($\beta = 0.579, z=10.860,$

$p < 0.001$) therefore Hypothesis 3 is also supported. Hypothesis 4 states that the relationship between work engagement and employee creativity is positive and significant and the results ($\beta = .574, z=8.190, p < 0.001$) support Hypothesis 4. Interestingly, POS and work engagement serially mediate the relationship between extrinsic rewards and employee creativity ($\beta = .127, z=6.460, p < 0.001$).

Finally, Hypothesis 5 states that intrinsic motivation moderates the relationship between work engagement and EC, such that this relationship is stronger for employees with higher levels of intrinsic motivation. The interaction of work engagement and intrinsic motivation had a positive and significant effect on employee creativity ($\beta = 0.107, z=3.300, p < 0.01$). The relationship between work engagement and employee creativity across three levels of intrinsic motivation was as follows: at the lower level ($B = 0.396, SE = 0.058, t = 6.851, p > 0.001$), at mean level ($B = 0.532, SE = 0.059, t = 9.085, p > 0.001$), and at the higher level ($B = 0.609, SE = 0.069, t = 8.799, p > 0.001$). The plot, we interpret, shows that the impact of work engagement on employee creativity is higher when intrinsic motivation is high than when it is low or at mean levels (Figure 2).

Insert Figure 1 about here

Insert Figure 2 about here

5. Discussion

This study investigated the relationship between extrinsic rewards, POS, work engagement, intrinsic motivation, and employee creativity. Our survey sample consisted of employees working

in the banking, IT and healthcare industries in the UAE. The first hypothesis investigates the direct relationship between extrinsic rewards and employee creativity and the findings reveal that extrinsic rewards have a significant impact on employee creativity. This result is consistent with a group of studies in the literature which report a significant relationship between extrinsic rewards and employee creativity (Lin *et al.*, 2022; Malik *et al.*, 2019; Malik *et al.*, 2015; Nigusie and Getachew, 2019; Shaheen *et al.*, 2020; Sulistiyani and Rahardja, 2018; Sung and Choi, 2009; Yoon *et al.*, 2015b). All the past studies support the linkage between extrinsic rewards and employee creativity, however, our results are not consistent though with some studies reported in the literature, for example, clarity about reward allocation did not result in any noteworthy impact on the enhancement of intrinsic motivation and creativity (Saether, 2020).

Our second hypothesis concerns the relationship between extrinsic rewards and POS. The survey results are consistent with the argument that rewards such as pay, a better job, and promotion help employees to feel that their organisation appreciates them for improving work performance, which enhances their POS (Eisenberger *et al.*, 1986; Rhoades and Eisenberger, 2002). The third hypothesis addresses the relationship between POS and work engagement and the results are consistent with a set of empirical studies assessing the relationship between POS and work engagement (Aldabbas *et al.*, 2021b; Aldabbas *et al.*, 2022; Khodakarami and Dirani, 2020; Musenze *et al.*, 2022; Rich *et al.*, 2010; Saks, 2006; Xanthopoulou *et al.*, 2009). Simply stated, when an organisation recognizes employee contributions, it has a positive impact on work engagement because individuals who believe that their contribution is valued by the organisation are more involved in their jobs. For instance, external education programmes and ongoing professional development can be strong signals from the organisation's higher management that

they support employees' individual and career development which may increase employee engagement and improve performance (Pinnington *et al.*, 2022).

For the fourth hypothesis examining the relationship between work engagement and employee creativity, the survey's findings are consistent with previous studies which found work engagement is positively and significantly related to creativity (Al-Ajlouni, 2020; Aldabbas *et al.*, 2021b; Aldabbas *et al.*, 2022; Bakker *et al.*, 2020; Hui *et al.*, 2021; Ismail *et al.*, 2019). Consequently, these key findings are aligned with our argument that higher levels of engagement create feelings of reciprocity amongst employees who then will engage in more creative tasks leading to creativity.

The last hypothesis investigated the moderating role of intrinsic motivation in the relationship between work engagement and employee creativity. These results are consistent with Malik *et al.*'s (2019) research who conclude that the relationships between intrinsic motivation on radical and incremental creativity are more positive for the group of employees possessing higher learning goal orientation. Several published studies support our assumption that intrinsic motivation plays a moderating role in the relationship between work engagement and employee creativity. For instance, Putra *et al.*, (2017) found a positive and significant relationship between intrinsic motivation and work engagement. An explanation for this relationship would be that intrinsic motivation is enhanced when a job is meaningful for the employee (Delaney and Royal, 2017). As a result, intrinsic motivation will increase the likelihood that employees will engage in productive behaviour at work that fosters creativity.

Theoretical contribution

This study contributes to the body of knowledge by testing extrinsic rewards, POS, work engagement, intrinsic motivation and employee creativity. We find that extrinsic rewards enhance creativity. This finding cannot be generalised across diverse conditions and individuals (Malik and Butt, 2017), however, the reinforcement of creativity by physical and socioemotional rewards increases creative motivational direction (Eisenberger and Rhoades, 2003). Moreover, the results of this study reaffirm the results of previous studies examining the reciprocal nature of the employee-organisation relationship, thus contributing to SET (Attridge, 2009; Yin, 2018). This result is consistent with Eisenberger and Rhoades' explanation (2003) that rewards enhance creativity when an employee assumes that creativity will generate rewards. Thus, individuals can produce different levels of desired outcomes depending on their psychological perception that work engagement leads to organisational rewards (Yin, 2018). The results revealed that the link between extrinsic rewards and employee creativity cannot be explained without a process mechanism (e.g., POS and work engagement) and conditional boundary (e.g., intrinsic motivation). Further, we find that extrinsic rewards do not diminish intrinsic motivation. The fact that rewards can, under well-specified conditions, yield detrimental effects on intrinsic motivation does not mean that self-determination theory advises against all rewards, as some researchers claim (Ryan and Deci, 2017). Following the conclusions of Ryan and Deci, these results confirm that extrinsic rewards with a defined objective and direction towards creativity will stimulate intrinsic motivation and creativity rather than diminish it. Extrinsic rewards, POS, work engagement, and intrinsic motivation in this study's conceptual framework are antecedents of employee creativity, which is indeed an outcome that many organisations aim to achieve. Finally, we find that intrinsic

motivation is an important moderator explaining when intrinsic motivation enhances the relationship between work engagement and creativity.

Some scholars have argued that “there has been surprisingly little research about whether intrinsic and extrinsic motivations are substitutes or complements” (Kuvaas *et al.*, 2017, p. 246). This research contributes to the literature on what matters in employee creativity: intrinsic motivation or extrinsic rewards, or both simultaneously. The evidence of the findings of this study confirm that *intrinsic motivation and extrinsic rewards should be investigated simultaneously in future research*. Even if the principal research interest is intrinsic motivation, for instance, extrinsic rewards should then be controlled, and vice versa. This recommended approach is more likely to produce rigorous empirical findings. Therefore, this study contributes to knowledge for the school of thought that claims intrinsic motivation and extrinsic rewards can work equivalently without extrinsic rewards possessing a negative relationship with intrinsic motivation and creativity (Eisenberger and Cameron, 1996; Hammond *et al.*, 2011; Yoon *et al.*, 2015a; Yoon *et al.*, 2015b). Further, this research contributes to knowledge the finding that when employees are intrinsically motivated and extrinsically rewarded, they are also more expected to be engaged and creative. Finally, this study advances scholarly understanding about how extrinsic rewards, POS, work engagement can enhance employee creativity when intrinsic motivation is high.

Implications and Recommendations

Relationship to *extrinsic rewards–tangible rewards*, the literature is very rich in ideas and methods of enhancing employee motivation through extrinsic rewards. However, managers have to know about the reasons for providing extrinsic rewards, for example, this study is concerned about

extrinsic rewards specifically directed towards employee creativity. In this scenario, managers are recommended to reward employees extrinsically through using the optimal type and approach to rewards. For monetary rewards, such as financial rewards, incentive programs often attend to the number and quality of creative ideas usually by focusing on the quality of ideas. Managers should endeavour to understand various alternative types of extrinsic rewards (such as monetary, recognition, and social) before selecting, combining and utilizing them to encourage creativity in their organisations (Malek *et al.*, 2020).

In the case of *extrinsic rewards–intangible rewards*, in this scenario managers rely on intangible rewards, such as social acceptance, verbal appreciation, and recognition by colleagues or management, all of which are examples of intangible rewards (Yoon *et al.*, 2015b). In addition, managers can use non-monetary policies for motivating and rewarding employees extrinsically, such as letters of thanks and appreciation from the head of the organisation in annual gatherings. Consequently, management should seek to understand employees' needs and work context to decide which method is most beneficial for all or some groups of employees and their organisation.

The three industries (banks, IT, healthcare) in the UAE report that 24% of the sample is highly supported by their organisations, while 50% is moderately supported, and 26% is almost not supported. To enhance the POS, Akgunduz *et al.* (2018) argued that successful employees should be rewarded, and POS can be enhanced in this case when the work is meaningful and employee creativity is increased. Moreover, organisations should acknowledge employees' contributions and respond proactively to their suggestions (Kremer *et al.*, 2019). Organisations should attempt to create a fair and flexible work environment to enhance employees' perception of the level of

support. Kremer *et al.* (2019) stated that the organisation should motivate common support practices for managers and employees throughout the entire organisation. Second, the organisation has to consider employees' objectives, goals and values, for employees to sense that their organisation cares about them. One recommended approach here is to regularly ask employees for suggestions and feedback (Kremer *et al.*, 2019). Third, the supervisor should always offer employees help whenever needed. For example, if the employee faces an issue with a specific role in her/his work, the employee should feel that the supervisor is trying to resolve the issue. Fourth, employees have to believe that well-being and health is very important for the organisation (Saks, 2022). Individual stressors specific to local situations can be helpfully managed by supervisors to minimize the impact of work stress leading on to burnout, and in cases where an employee faces mental health problems, then counselling service are needed (Wang, 2022).

The average score for the three industries (banks, IT, healthcare) was 77% in terms of work engagement, thus, IT and healthcare are above the average as a benchmark for the three selected industries while banks are located under average. It is recommended that the banking industry in the UAE gives more attention to HR programs (such as coaching and training) to foster employee engagement for the benefits of the organization and the industry. In comparison, recent global employee engagement reports state 68% as an average engagement score; while the Middle East and North Africa (MENA) report 72% (Adair, 2020). That means that the UAE employee engagement score is greater than the global average. HR managers in the three selected industries should determine improvements in the policy and practices for measuring and encouraging increased levels of employee engagement. This will likely include measurement at the individual, team, and workgroup or departmental levels for engagement (e.g. low, moderate, high). Based on

these results, HR managers can then devise appropriate HR interventions and new management practices.

Managers in the three industries (banks, IT, healthcare) have to understand employees' needs, and actively inquire about how to most effectively motivate different groups of employees. Managers should be concerned to ensure that employees are intrinsically motivated by seeking to know and understand employees as individuals and by focusing on creating an enjoyable work atmosphere including where tasks are repetitive and routine. Managers should involve employees in deciding how to undertake the work and ensure sufficient task variety and individual or team autonomy, whenever possible. Fundamentally, managers must do whatever they can to maintain good working relationships characterised by support, trust and respect; this includes aiming to make work enjoyable and fun by attending to job demands, work design and the overall work environment (Gu *et al.*, 2020). In cases of high job demands in the organisation, it is proposed that managers identify ways that the work environment can be made more tolerable and enjoyable wherever there is significant task pressure and possible work stress. Clearly, this requires creating a work environment that properly supports employees and the achievement of organisational goals (Gu *et al.*, 2020). Finally, to let employees enjoy this environment, common hobbies and common area of interests should be created. Even so, Olynick and Li (2020) conducted an empirical study for 193 employees in a university in Canada, finding that clan culture and family-oriented organisations have the highest level of enjoyment at work (compared with adhocracy, hierarchy, and market culture).

Finally, to enable and encourage employees to think creatively, extrinsic rewards, organisation support, work engagement, and motivation each play a crucial role in generating new ideas, and management should motivate employees in this direction, especially given our finding that 61% of variation in this study emanates from these particular concepts.

6. Limitations and future studies

The study has several limitations. First, the survey used convenience sampling, which limits its generalizability. Future studies could investigate the same framework by using random sampling techniques. Second, this research is a cross-sectional survey, with all data collected and measured during the same time. Therefore, these findings do not provide a valid basis for making causal interpretations about variable relationships (Stone-Romero and Rosopa, 2008). Thus, a time-lag or longitudinal study design would be useful for future research examining the same constructs to test how the five main variables in the current study examined associations disclosed over time. Thirdly, while CMV is not a problem in the current study, self-report measures still raise concerns about possible CMV. Therefore, the demonstrated construct validity of the measures and all results confirmed that CMV is not an issue in the current study (Conway and Lance, 2010). However, supervisor rating, peers rating, and third-party rating for employee creativity, will benefit the creativity literature. Furthermore, the same framework might be used at the team or group level in order to comprehend the impact from a broader viewpoint on individual and team-based rewards. Fourthly, the framework for this study analyzes only the positive effects of extrinsic rewards, support, engagement and motivational factors on employee creativity without considering any of

the job demands (e.g., stress, burnout), or other factors likely to have negative outcomes (e.g., turnover intention, absenteeism). Furthermore, the current study investigates four different variables related to employee creativity, which is considered stage one in theoretical models of innovative work behaviour. In future studies, the same four variables could be investigated to understand the processes and their effects on innovative behaviour. Additionally, since the role of leadership is not covered in this study, future research might examine how different leadership styles, such as transformational, transactional, empowering, and distributed, may influence the level of motivation of employees and their creativity. Fifthly, the same framework can be tested in different contexts that will add to the body of knowledge on whether or not extrinsic rewards diminish intrinsic motivation. Thus, in future studies, the identical variables encompassing other Middle Eastern countries that have comparable economic strategies to the UAE (e.g. Saudi Arabia, Qatar). Sixthly, this study solely adopted survey methods to gather data; case studies and focus groups may be used in future research to examine participants' perceptions, opinions and explanations. Finally, the current study examines extrinsic rewards for motivating employee creativity in services sector organisations and future research may explore different sectors, such as primary or secondary (e.g. manufacturing) industries.

7. Conclusions

The study examined the effects of extrinsic rewards on employee creativity through POS and work engagement. Moreover, it examined the moderating roles of intrinsic motivation in the relationship between work engagement and employee creativity; in six organisations operating in the services sector in the UAE. The study sheds light on the effect of extrinsic rewards on employee creativity

through the different roles of POS, work engagement and intrinsic motivation in the workplace, making a significant contribution to the literature on extrinsic rewards and employee creativity by offering insights on *how* and *when* extrinsic rewards enhance employee creativity. The findings reveal that extrinsic rewards influence employee creativity through POS and work engagement. Furthermore, intrinsic motivation moderates the relationship between work engagement and employee creativity.

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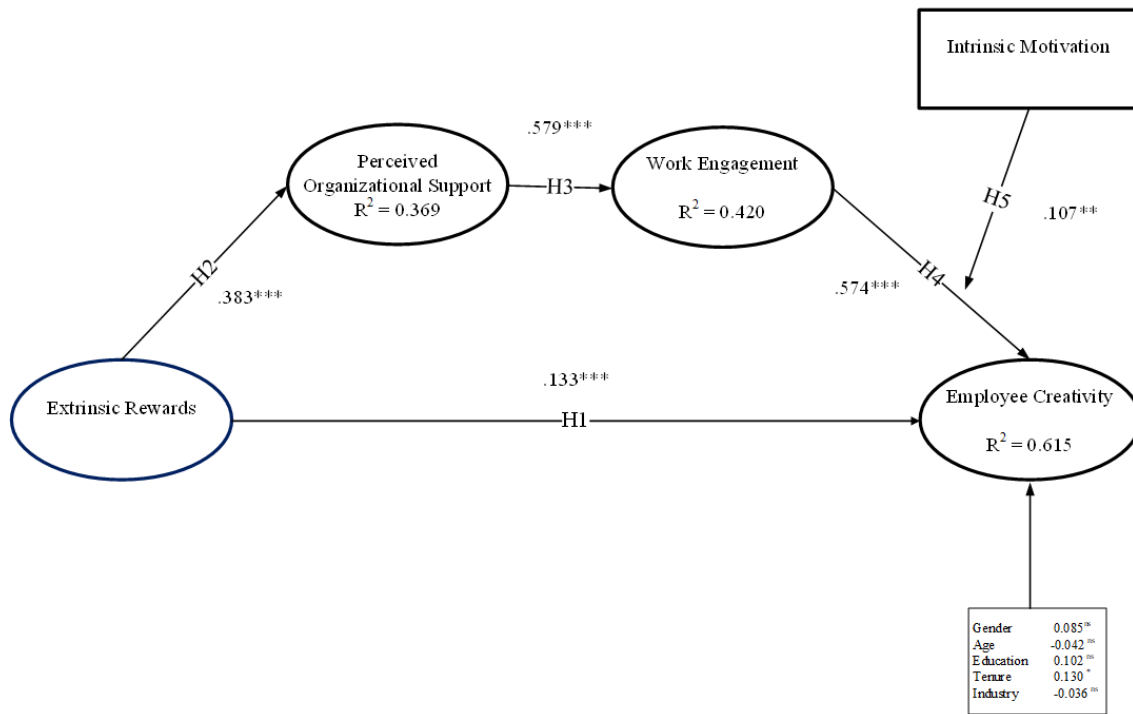


Fig. 1 Structural equation modelling and moderator results. NS: not significant; * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$.

Source: Authors own work

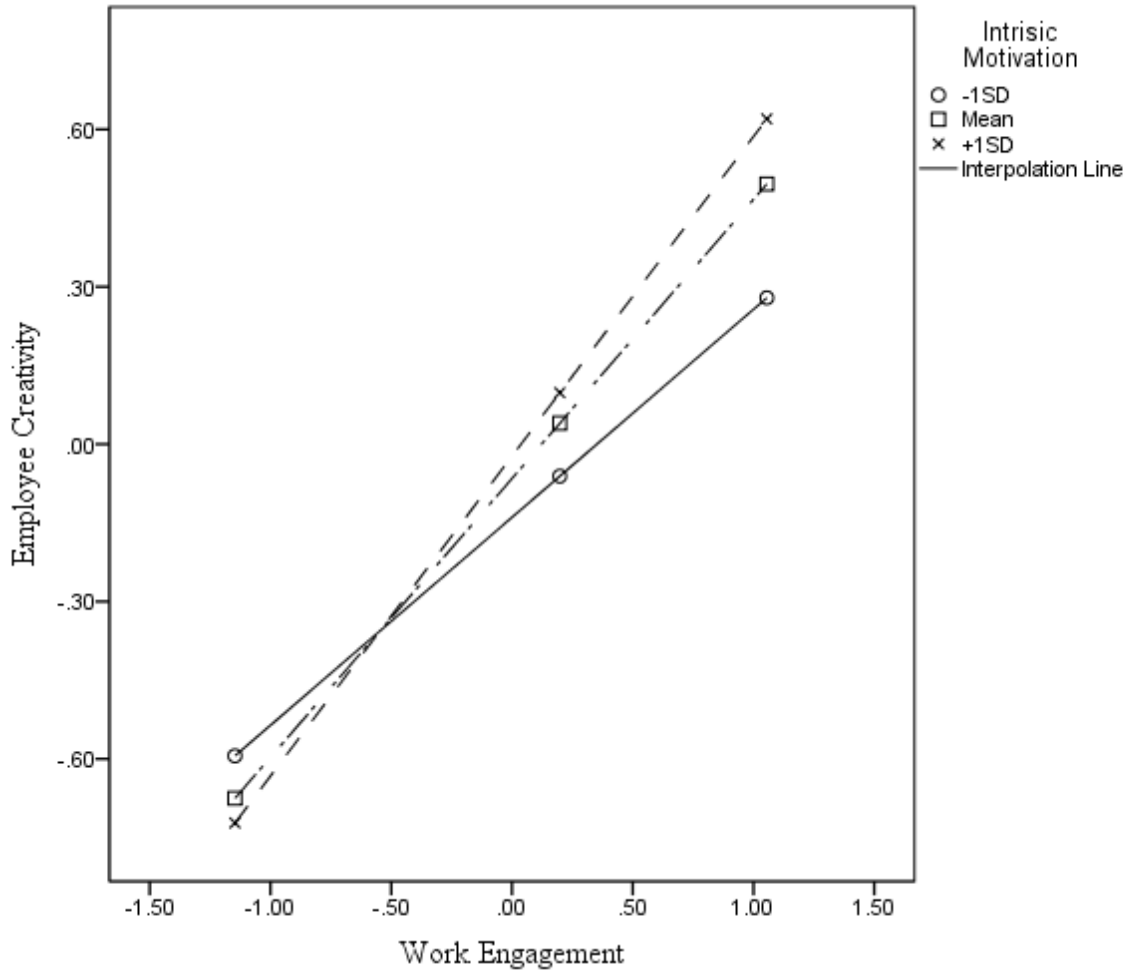


Fig. 2. The effect of work engagement on employee creativity at values of the moderator intrinsic motivation

Source: Authors own work

Table I Methods comparison

Features - Capabilities	SEM	PLS	Regression
The research model incorporates the specific and error variance of the observed variables	Supported	Not supported	Not supported
Enables comprehensive analysis of variance components (common, specific, and error) of observed variables	Supported	Not supported	Not supported
Capability of conducting confirmatory factor analysis (CFA)	Supported	Not supported	Not supported
Provide a statistical measure for comparing alternative models of confirmatory factor analysis	Supported	Not supported	Not supported

Notes: SEM, Structural equation modelling (SEM); PLS, Partial least square (PLS).

Source: Adapted from Gefen *et al.* (2000)

Table II Mean, Standard deviation, Skewness, Kurtosis and the Pearson correlations (r)

Main Variables						Std.			
	1	2	3	4	5	Mean	Deviation	Skewness	Kurtosis
1. Extrinsic rewards	1					4.268	1.723	-.071	-1.005
2. POS	.578**	1				5.325	1.310	-.844	-.055
3. Work engagement	.547**	.591**	1			5.483	1.168	-.685	.035
4. Intrinsic motivation	.518**	.689**	.707**	1		5.149	1.464	-.914	.277
5. Employee creativity	.567**	.486**	.648**	.512**	1	5.308	1.117	-.209	-.654

Notes: $N = 372$. * $p < .05$, ** $p < .01$. POS: perceived organisational support

Source: Authors own work