The Role of Performance-based Rewards and Developmental Performance Appraisal in Promoting Innovative Work Behaviour: The Mediating Roles of Affective Commitment and Knowledge Sharing

Motasem Mohammad Thneibat

ABSTRACT

The aim of this paper is to study the role of the motivation-enhancing human resource management practices of performance-based rewards and developmental performance appraisal in fostering innovative work behaviour (IWB). Furthermore, the paper considers the mediating roles of affective commitment and knowledge sharing in this relationship. The data was collected using a survey questionnaire from 235 unit managers working in technological, pharmaceutical, banking and manufacturing firms in Jordan. Structural-equation modeling using AMOS27 was employed to analyze the data. Findings indicated that performance-based rewards and developmental performance appraisal both have significant effects on affective commitment and knowledge sharing and that there is a direct and significant impact of performance appraisal on IWB. Affective commitment was found to mediate the relationship between rewards, performance appraisal and IWB. No support was found for the direct impact of rewards or knowledge sharing on IWB.

Keywords: Human resource management (HRM), Affective commitment, Knowledge sharing, Performance-based rewards, Developmental performance appraisal, Innovative work behaviour.

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تأثير الحوافز المرتبطة بالأداء وتقييم الأداء على تحفيز وتشجيع العمل بطريقة إبداعية: الدور الوسيط للالتزام العاطفي ونشر المعرفة

معتصم محمد تنبيات١

ملخص

تهدف هذه الدراسة إلى معرفة تأثير ممارسات إدارة الموارد البشرية المرتبطة بالتحفيز على العمل الإبداعي لدى المؤسسات على السلوك الإبداعي في العمل. يتفق أكثر، فإن هذه الدراسة تنظر إلى دور كل من إدارة التحفيز المرتبط بالأداء وتقييم الأداء من خلال الدور الوسيط للالتزام العاطفي ونشر المعرفة. تم جمع البيانات في عدة شركات أردنية في قطاعات الصناعات التكنولوجية، والتصنيع، والتجارية. تم استخدام استبان لجمع البيانات وتحليل البيانات بواسطة برنامج SPSS PROCESS باستخدام AMOS V27. نصائح، وأظهرت النتائج أن التحفيز المرتبط بالأداء تقييم الأداء المرتبط بتطوير العمل لهما تأثير إيجابي على الأداء العاطفي ونشر المعرفة، وأظهرت النتائج أن تقييم الأداء له تأثير مباشر على العمل بطريقة إبداعية، وأن الالتزام العاطفي له أثر وسائط في العلاقة بين التحفيز وتقييم الأداء والعمل بطريقة إبداعية.

الكلمات الدالة: إدارة الموارد البشرية، الالتزام العاطفي، نشر المعرفة، الحوافز المرتبطة بالأداء، تقييم الأداء، العمل بطريقة إبداعية.

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The Role of Performance-based Rewards…

1. INTRODUCTION

The psychological sphere of the employment relationship is becoming more complex and dynamic and is conceived to be a critical determinant of employees’ engagement and commitment at work (Allen and Meyer, 1996; Agarwal, 2014; Norris-Watts and Levy, 2004; Volery and Tarabashkina, 2021) and eventually of their performance (Ramamoorthy et al., 2005). A satisfactory psychological contract is likely to predict favourable employee work behaviour and therefore the level of competitiveness and capability of the organization (Jabutay and Rungruang, 2021). An agreed contract between employee and employer is what defines a psychological contract in the employment relationship and is often linked with the exchange relationship (Liu, Chow, Zhang and Huang, 2018). Therefore, the majority of studies concerned with employee work behaviour and the identification of positive behaviours base their frameworks on the social exchange theory (SET) (Balu, 1964).

At the crux of the employer-employee exchange relationship is employees’ innovative behaviour at work, which is conceptualized as a critical valuable behaviour that aims to enhance organizational performance and competitiveness (Bos-Nehles and Veenendaal, 2019; Janssen, 2000; Salazar-Fierro and Bayardo, 2015; Sanders et al., 2010; Volery and Tarabashkina, 2021). IWB refers to discretionary acts and behaviours at work which aim to offer benefits to the organization as well as groups and individuals (Janssen, 2000; Scott and Bruce, 1994). However, competition and the turbulent environment have made it compulsory for organizations to rethink their IWB and not consider it as a voluntary choice. Therefore, identifying the determinants of employees’ IWB and their perceptions towards promoting IWB will generate significant benefits both at the individual and organizational levels.

Consequently, organizations are nowadays seeking more than ever to encourage employees’ IWB in order to advance their competitiveness and capacity to innovate (Bysted and Hansen, 2015; Volery and Tarabashkina, 2021). Central to IWB are organizational arrangements, resources and capabilities and specifically human resource management (HRM) (Bos-Nehles and Veenendaal, 2019; Dorenbosch et al., 2005). HRM practices reflect investment in employees and signal support from their organization, thus fostering IWB (Camelo-Ordaz et al., 2011). Among such practices, rewards represent the pinnacle of recognizing and rewarding employees’ efforts and inputs, as well as motivating them to engage in innovative behaviours (Ramamoorthy et al., 2005). Additionally, a developmental aspect of HRM practices is through performance appraisal, as this aims to provide feedback and show employees how to perform their tasks effectively and achieve organizational goals. Both rewards and performance appraisal belong to the motivation-enhancing HRM practices. However, the mechanism by which HRM practices, specifically rewards and performance appraisal, promote IWB is complex and requires more attention in the literature (Andreeva et al., 2017; Bos-Nehles et al., 2017).

Two factors have been prominent in relation to promoting employees’ IWB. First, scholars have identified that knowledge sharing is significant in promoting IWB (Andreeva et al., 2017). The related argument is that for employees to be able to engage in innovative behaviours, they require continuous forms of diversified knowledge to facilitate task performance and increase their confidence level (Chedid et al., 2019; Radaelli et al., 2014). Second, employees’ levels of commitment at work are correlated with their performance and willingness to
engage in positive behaviours. In this respect, research has identified affective commitment, which refers to the sense of attachment and loyalty to the organization, as critical for IWB (Jafri, 2010).

Employees’ engagement in IWB requires enhanced levels of commitment and performance, together with the perception that they are being supported. Similarly, knowledge is becoming a crucial resource that can contribute to organizational competitiveness and innovativeness (Martín-Perez and Martín-Cruz, 2015; Darroch, 2005). Accordingly, a growing body of interest in the literature has recognized the relative importance of knowledge sharing and identified its antecedents (Nonaka and Von Krogh, 2009; Andreeva et al., 2017).

Cabrera et al. (2006), in their study of the determinants of employee engagement in knowledge sharing, found that rewards had a positive impact on knowledge sharing. Rewards allow a supportive environment to be established in which employees can share their knowledge. Cabrera et al. (2006) indicated that in order to promote knowledge sharing, rewards need to be aligned with performance appraisal. This entails a greater role and subsequently a higher value, of the importance of considering rewards and performance appraisal in relation to knowledge sharing and affective commitment. Rewards and performance appraisal are probably the two HRM practices that most commonly produce inconsistent research findings in relation to performance. For instance, when measuring performance in terms of employees’ innovativeness, the effect of rewards for IWB has been found to be ambiguous and a clear conclusion is lacking in the literature, as some studies have found a positive impact of rewards on IWB (Ramamoorthy et al., 2005), while others have found a negative one (Sanders et al., 2010). Similarly, the role of performance appraisal, despite being acknowledged as a corrective tool for performance, has been found in previous studies to produce contradictory findings with regard to employee performance. Some studies have reported a negative impact in their findings and explained that employees might feel confused and anxious during appraisal, while others have shown that there is a positive impact of performance appraisal on employees’ performance, productivity and innovation (e.g. Gbadamosi and Ross, 2012; Kuvaas, 2006).

This paper aims to develop the arguments around the potential role of performance-based rewards and developmental performance appraisal in fostering IWB. There is a dearth of studies which considered IWB and its antecedents in Jordan, in particular those related to the behavioural acts of employees; knowledge sharing and affective commitment. Moreover, there is a lack of studies which focused on the impact of rewards that are based on performance of employees and developmental performance appraisal on affective commitment.

With the aim of filling this gap, the key objective of this paper is to explore the relationship between rewards and performance appraisal on IWB. It examines the link between rewards and performance appraisal and considers the mechanisms that might explain the impact of these two HRM practices and IWB, namely, the roles of knowledge sharing and affective commitment as mediators in the relationship. The conceptual model is shown in Figure 1.

The remainder of the paper is structured as follows; a literature review and hypothesis development are first presented. Second, the research method and data collection are discussed, followed by related analysis. Third, a discussion of the research findings and the conclusions are presented. Finally, the limitations of the paper are outlined and paths for future research suggested.
2. Literature Review

2.1 HRM Practices and IWB

For decades, HRM practices have been conceptualized as promoting organizational performance (Alkshali and Alshaer, 2020; Guest, 1997, 2011; Lepak and Snell, 2002; Ostroff and Bowen, 2000; Paauwe, 2009). Themes, such as high performance, high commitment and high involvement work practices, have been used to describe a set of HRM practices that can foster performance. Recently, scholars have shifted their focus towards other favourable organizational outcomes, such as innovation (Shipton et al., 2006), knowledge (Andreeva et al., 2017) and IWB (Ramamoorthy et al., 2005; De Jong Den Hartog, 2010).

IWB refers to discretionary and voluntary behaviours that employees display when performing tasks to enhance organizational performance and benefits for the workplace (Janssen, 2000). Many of the explanations around IWB are based on SET (Alfes et al., 2013; Bos-Nehles and Veenedaal, 2019), in which a give-and-take relationship is established. SET proposes that employees will make substantial efforts and respond with positive behaviours and attitudes if their organization shows that they are valued and supported (Blau, 1964). The literature has identified that HRM practices reflect organizational investment in employees and represent organizational resources that are aimed at developing employees’ performance, capabilities and skills and promoting positive perceptions and support (Bos-Nehles et al., 2017; Janssen, 2000; Mohammad et al., 2018).

Evidence shows that ability-motivation-opportunity (AMO) practices promote IWB. A recent systematic literature review by Bos-Nehles et al. (2017) on studies looking at the HRM-IWB link found that training, reward, job demand, feedback and job security were significant for IWB. However, despite the attention that HRM practices have gained in respect to IWB, research on rewards and performance appraisal is still scant and inconsistent (Canet-Giner et al., 2020). Recent studies on HRM and IWB have indicated that rewards and performance appraisal produce mixed findings and are in fact rarely considered (Bos-Nehles et al., 2017; Seeck and Diehl, 2017). In relation to rewards, research has failed to offer a consistent line of findings and conclusions, as a number of studies have found a negative impact of rewards on IWB (e.g. Bysted and Hansen, 2015; Dorenbosch et al., 2005), while others have found a positive role (Ramamoorthy et al., 2005). Moreover, such studies are rare and therefore, there is a need for the exploration of the nature of the mechanism that underpins such a relationship, which this paper aims to offer. Similarly, findings regarding performance appraisal are ambiguous and mixed (Seeck and Diehl, 2017).

In line with employees’ behaviour at work, a number of factors have been identified in the literature as antecedents of IWB which influence employees’ behaviour in developing their IWB, such as motivation (Sanders et al., 2010), procedural justice and trust (Agarwal, 2014), supervisor support (Prieto and Pérez-Santana, 2014) and knowledge sharing (Radaelli et al., 2014). However, little is known about performance-based rewards, developmental performance appraisal and affective commitment in promoting IWB. Equally, the link between rewards, appraisal and knowledge sharing and IWB has received little attention.

Prominently, two phases of IWB are identified in most studies: idea generation and implementation (Ramamoorthy et al., 2005; Alfes et al., 2013; Sanders et al., 2010). Since IWB comprises various phases, employees are expected to contribute at any phase. Consequently, continuous motivation and support are expected to increase their potential for positive behaviours.
2.2 Rewards, Knowledge Sharing and IWB

A large part of employees’ behaviours and willingness to share their knowledge relies on reciprocity relationships. In this sense, organizations use reward mechanisms to encourage employees to engage in knowledge-sharing behaviours (Malik, Froese and Sharma, 2020). However, the process of knowledge sharing is not spontaneous (Andreeva et al., 2017; Donnelly, 2019) or identified in people’s job descriptions. Rather, it depends on employees’ behaviours and attitudes and their willingness to share knowledge (Ipe, 2003).

Employees engaging in IWB or seeking to develop it must regularly obtain, combine and translate knowledge so that they can foster such behaviours (Nonaka, 1995; Radaelli et al., 2014). Rewards motivate employees to share their knowledge by creating a knowledge-sharing culture in the organization (Szulanski, 1996) and they can also sustain the development of new knowledge and support knowledge management processes. Recent studies on knowledge management have continued to emphasize the importance of rewards and incentives for knowledge-sharing (Malik et al., 2020). Employees will be more likely to engage in knowledge sharing behaviours if they know that they will receive rewards for doing so (Wang et al., 2014; Foss et al., 2009). For employees to be able to engage in innovative behaviours, knowledge is critical in fostering such behaviours as it helps reduce task complexities and save time (Asare, Whittington and Walsh, 2020; Scarbrough, 2003).

Employees will behave in a way that is consistent with what they receive from their organization and how they are treated. That is to say, if organizations seek to promote their employees’ positive behaviours such as IWB, they should offer incentives to trigger them (Andreeva et al., 2017). Therefore, positive behaviours are expected to be promoted when organizations provide support and care for employees. Additionally, as proposed by the social cognitive theory, outcome expectations which refer to the consequences of certain behaviours are likely to determine the extent to which one can engage in them (Bandura, 1997; Jabutay and Rungruang, 2021). Employees’ behaviours will therefore lead to favourable outcomes and results, since they will behave in a positively reciprocal manner and work innovatively according to SET (Hsu et al., 2007).

Knowledge sharing does not only imply passing on knowledge and information to others, but entails elaborating and translating clear and simplified forms of knowledge to others so that they are able to use it more effectively (Bouraghda and Dris, 2015; Radaelli et al., 2014). In this way, employees who share their knowledge will enhance their innovative capacity and consequently their IWB. Moreover, knowledge forms a source of power which explains why employees might feel reluctant to share theirs, although it becomes diluted with time if not shared. According to Szulanski (1996), the reluctance to share knowledge is due to the fear of losing superiority and power through its possession, together with issues of social status, anxiety and concerns over not being rewarded adequately. Accordingly, employees will need to feel satisfied with what they believe they will receive in return for sharing their knowledge. Therefore, to improve knowledge-sharing prospects and positive behaviours towards it, organizations need to develop specific ways of fostering it, which may take the form of rewards and incentives (Bartol and Srivastava, 2002).
2.3 Rewards, Affective Commitment and IWB

According to SET (Blau, 1964), affective commitment is conceptualized as a reciprocal exchange of commitment, loyalty and efforts for rewards (Eisenberger et al., 1990). Coyle-Shapiro et al. (2002) found that perceptions of rewards and profit sharing in terms of organizational investment in employees were positively associated with affective commitment. Coyle-Shapiro et al. argued that collective pay schemes can promote affective commitment, as they reflect the organizational intent towards broad reward sharing with employees, not only to the benefit of managers and shareholders.

Affective commitment is a reciprocation of organizational care, support and the feeling of being valued (Khandakar and Pangil, 2021). Employees tend to be attached and committed to their organization in return for rewards, as these signal support and recognition of their efforts and performance (Jabutay and Rungruang, 2021; Mowday, Porter and Steers, 1982). Affective commitment results in lower turnover rates, increased loyalty and a greater level of discretionary acts and behaviours (Para-González et al., 2019). Therefore, organizations need to find ways to foster such commitment. However, the question of what can promote affective commitment and allow organizations to maintain it at desirable levels among employees remains unanswered in the literature (Camelo-Ordaz et al., 2011; Martín-Pérez and Martín-Cruz, 2015).

Rewards have been linked with valuable organizational outcomes that support competitiveness and performance, such as knowledge sharing, IWB, innovation, engagement and motivation (Bos-Nehles and Veenedaal, 2019). Rewards can direct employees’ behaviours and actions at work and motivate them to invest more of their energy and time in achieving organizational goals (Martín-Pérez and Martín-Cruz, 2015), which in turn can fuel employees’ IWB.

This is explained by the notion of exchange framed by SET, because employees will feel that they have to repay their organizations when their needs are satisfied and fulfilled (Meyer and Allen, 1997). Affective commitment is largely influenced by behaviours and attitudes at work, which are linked to and stimulated by rewards (Martín-Pérez and Martín-Cruz, 2015). Affective commitment, therefore, is a result of rewards for performing jobs; it should therefore be fostered among employees in order to develop organizational performance and competitiveness (Nonaka et al., 2001). Affective commitment can lead to higher engagement and involvement at work, which lead to enhanced IWB. Reward mechanisms generate positive perceptions among employees of organizational support and trust, which can foster affective commitment and
engagement in innovative behaviours (Camelo-Ordaz et al., 2011).

IWB entails increased job demands and efforts, which as a result require employee commitment. Furthermore, affective commitment can reduce turnover and encourage knowledge sharing as a result of developing organizational performance, which can then sustain IWB. Studies have established a positive link between rewards and affective commitment (e.g. Camelo-Ordaz et al., 2011; Martín-Pérez and Martín-Cruz, 2015). Research has also indicated that pay levels and equitable reward distribution (Dubinsky and Levy, 1989) have positive effects on affective commitment.

A positive link between affective commitment and IWB is also supported in the literature. Xerri and Brunetto (2013), for example, found a positive and significant relationship. IWB entails performing tasks in an innovative manner and in some cases dealing with complex issues (Atitumpong and Badir, 2018). In this respect, rewards can stimulate self-development, which can promote employees’ capabilities and increase their contribution and motivation at work (Kuvaas, 2006), thus promoting IWB. Moreover, when organizations reward employees for certain behaviours and levels of performance, it is likely that such behaviours will be reinforced and repeated (Kuvaas, 2006).

Reward systems that are perceived as signalling organizational support for employees and valuing them are likely to establish a mutually purposeful and reinforced employer-employee relationship, which can lead to higher motivation and contribute to achieving organizational goals by encouraging discretionary behaviours, such as affective commitment and knowledge sharing (Eisenberger et al., 1999; Collins and Smith, 2006; Camelo-Ordaz et al., 2011). Rewards can also support engagement in extra-role behaviours, such as IWB.

Therefore, based on the above discussion, the following hypotheses are developed:

**H1:** Performance-based rewards positively affect: (a) IWB, (b) knowledge sharing and (c) affective commitment.

**H2:** Knowledge sharing mediates the relationship between performance-based rewards and IWB.

**H3:** Affective commitment mediates the relationship between performance-based rewards and IWB.

### 2.4 Performance Appraisal, Knowledge Sharing and IWB

Appraisal acts as a guidance for better performance and productivity and how employees should perform their tasks (Schuh et al., 2018). It directs employees’ efforts to collaborate and find efficient ways to work. Feedback will lead to the search for better methods to perform tasks, which demands knowledge from colleagues and supervisors. Additionally, appraisal allows employees to enjoy better opportunities and work methods (Prieto and Pérez-Santana, 2014). Parallel to demonstrating to employees how to perform their tasks better in supporting IWB, knowledge sharing can also be stimulated by appraisal (Schuh et al., 2018). Furthermore, it can be included and assessed as a part of performance appraisal (Bartol and Srivastava, 2002), which can help in sustaining IWB. While rewards can sometimes be contingent to knowledge-sharing behaviours, performance appraisal is likely to promote knowledge sharing for a substantial period of time, especially when it is a part of the appraisal process (Schuh et al., 2018). IWB consists of various phases and requires inputs from different units. This process can be supported through performance appraisal, as it can promote informal interactions for knowledge-sharing between employees, thus widening knowledge sharing channels and allowing various employees to make contributions (Bartol and Srivastava, 2002), which will eventually result in enhanced IWB. For instance, knowledge sharing can be included in the 360-degree
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appraisal tool and annual review in the form of performance questions and assessment of how actively employees are engaged in knowledge-sharing behaviours (Andreeva et al., 2017). This will encourage employees to engage in IWB, as they are provided with developmental feedback, guidance and sharing of their knowledge. Therefore, developmental performance appraisal is expected to influence knowledge-sharing behaviours and IWB.

2.5 Performance Appraisal, Affective Commitment and IWB

In their meta-analysis study, Meyer et al. (2002) showed that what employees experience at work is strongly related with affective commitment. In addition, the sense of attachment and belonging which reflects their affective commitment is likely to be fostered by a supportive management and work environment (Delić et al., 2017; Eisenberger et al., 1990). When applied effectively, HRM practices, specifically performance appraisal, aimed at developing employee performance, will signal organizational support and develop positive perceptions of feeling supported and encouraged to perform tasks effectively. Employees will therefore reciprocate by displaying positive behaviours. Guiding employees to develop their performance and abilities will lead to increased confidence levels and skills, which will support their IWB (Xerri and Brunetto, 2013). In their study of HRM practices and affective commitment, Gilbert et al. (2011) found that performance appraisal has a significant relationship with affective commitment.

Performance appraisal has been linked with employee development and organizational performance (Daley, 2018). Similarly, affective commitment is significant for employees’ performance and work outcomes (Norris-Watts and Levy, 2004). It has also been linked with supervisor support, management actions towards employee development, organizational support and employee dependency (Allen and Meyer, 1996; Bernardin et al., 2016). Such factors are rooted in and are components of, performance appraisal.

The higher the level of developmental performance appraisal, the more likely it is that employees’ affective commitment will be promoted (Daley, 2018). Employees who perceive that performance appraisal is being implemented to support them in performing tasks are expected to reciprocate with higher affective commitment (Canet-Giner et al., 2020; Norris-Watts and Levy, 2004), consequently reducing their anxiety and confusion regarding appraisal and increasing their potential engagement in IWB.

According to the organizational support theory, which is rooted in SET, employees will perform their tasks and reciprocate in a similar fashion to the way they have been treated (Jabutay and Rungruang, 2021; Mohammad et al., 2021). Performance appraisal that is aimed at developing employees’ performance and which offers constructive feedback is likely to generate higher levels of motivation and affective commitment. Saridakis et al. (2013) argued that performance appraisal can promote affective commitment when applied collectively and when it is group-oriented. Furthermore, skills and abilities are not the only enablers of enhanced performance; employees’ motivation and engagement, which are essential for IWB directed through performance appraisal, will also help employees perform tasks effectively and are crucial for enhancing competitiveness and the capacity to innovate (Bernardin et al., 2016; Carmeli et al., 2006). It is therefore logical to predict that performance appraisal can foster affective commitment and as a result IWB. Therefore, and based on the above discussion related to developmental performance appraisal, the
following hypotheses are proposed:

**H4:** Developmental performance appraisal positively affects: (a) IWB, (b) knowledge sharing and (c) affective commitment.

**H5:** Knowledge sharing mediates the relationship between developmental performance appraisal and IWB.

**H6:** Affective commitment mediates the relationship between developmental performance appraisal and IWB.

3. Methodology

A purposive sampling technique was used for data collection, since targeted participants are those working in firms characterized of being innovative. The participants surveyed in relation to human resource management (HRM) and innovative work were unit managers in technological, pharmaceutical, banking and manufacturing firms in Jordan. The rationale behind this selection is to collect data from participants working in innovative industries as identified by Jordan Investment Commission. Additionally, previous research looking at IWB collected data from different industries and offered robust results (e.g. Prieto and Pérez-Santana, 2014; Schuh et al., 2018). Characteristics of respondents are displayed in Table 1. A survey questionnaire was used to collect data. A cover letter and a sample of the questionnaire were sent to the general relations manager in each firm to explain the nature of the research. Once approval was granted, the questionnaire was forwarded via email to the contact person in each firm. A total of 235 unit managers participated in the study, with a response rate of 41%. Follow-up calls were made twice to check the status of questionnaire completion and to ask whether any issues required clarification.

| Table (1) Features of respondents |
|---------------------------------|---|
| **Gender** | % |
| Male | 59 |
| Female | 41 |
| **Age** | |
| <30 | 4 |
| 31-40 | 26 |
| 41-50 | 34 |
| 51-60 | 25 |
| >60 | 11 |
| **Length of service** | |
| <5 years | 7 |
| 5-10 years | 24 |
| 11-15 years | 31 |
| >20 years | 38 |
| **Level of Education** | |
| Non-university degree | 0 |
| Bachelor’s degree | 62 |
| Master’s degree | 33 |
| PhD | 5 |

Note: n= 235
3.1 Measures

The study variables were measured using scale items from previous studies. Two criteria were followed in the selection process of these scales. First, they had to demonstrate good reliability and validity in previous research and second, they had to have been used in a number of studies in the fields of HRM, IWB and innovation, yielding robust findings. All items were measured using a five-point Likert scale ranging from 1 to 5, where 1= strongly disagree and 5= strongly agree and for IWB ranging from 1= never to 5= always. To measure performance-based rewards, a total of five items were taken from the work of Riordan et al. (2005); a sample item was, “There is a strong link between how well my team performs and the likelihood of receiving a pay raise.” Developmental performance appraisal was measured using items adopted from Lepak and Snell (2002). This performance-appraisal scale comprised three items, such as, “Performance appraisal includes developmental feedback.” The knowledge-sharing scale used three items from Schulz (2001), such as “Our company has processes for sharing information among all parties involved in the decisions.” Affective commitment was measured using four items adopted from the work of Shore et al. (1995), as based on the work of Meyer and Allen (1984), with a sample item being “Employees appear to be highly committed to the organization.” IWB was measured using six items from Scott and Bruce (1994), a sample item being “Employees promote and champion ideas to others”.

4. Results

The data was run and analyzed using AMOS27 structural equation modeling. The validity and internal item consistency were tested first. Validity was tested using average variance extracted (AVE) and reliability was assessed based on composite reliability (CR). The AVE for all the scales was above the threshold of 0.5 and lower than CR (Hair et al., 2010). The results were as follows: performance-based rewards (AVE= 0.713), developmental performance appraisal (AVE= 0.701), knowledge sharing (AVE= 0.524), affective commitment (AVE= 0.700) and IWB (AVE= 0.511).

Regarding CR, all the scales demonstrated appropriate values of >0.7. The CR and AVE scores are presented in Table 2. In addition, AVEs were higher than the squared correlations between the constructs, confirming appropriate discriminant validity, as shown in Table 3.

Model fitness was assessed using a number of indicators identified in the literature (Hair et al., 2010). Scores for the normed chi-square (CMIN/df), goodness-of-fit index (GFI), adjusted goodness-of-fit index (AGFI), comparative fit index (CFI), Tucker-Lewis index (TLI), normed fit index (NFI), incremental fit index (IFI) and root mean square error of approximation (RMSEA) were assessed to measure the fitness of the model. The initial model showed inappropriate scores for all the indicators, as shown in Table 4; so, model purification was performed to obtain suitable model-fit indices. Model purification was performed by deleting items with weak loadings. Subsequently, the fit-index scores were significantly improved, as follows: CMIN/df= 1.434, GFI= 0.940, AGFI= 0.907, CFI= 0.979, TLI= 0.970, NFI= 0.934, IFI= 0.979 and RMSEA= 0.043. Table 4 summarizes the fit indices for both the initial and purified models.
Table (2)
CR and AVE scores

<table>
<thead>
<tr>
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<th>CR</th>
<th>AVE</th>
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<tbody>
<tr>
<td>Performance-based rewards</td>
<td>0.879</td>
<td>0.713</td>
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<tr>
<td>Developmental performance appraisal</td>
<td>0.875</td>
<td>0.701</td>
</tr>
<tr>
<td>Knowledge sharing</td>
<td>0.808</td>
<td>0.524</td>
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<tr>
<td>Affective commitment</td>
<td>0.874</td>
<td>0.700</td>
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<tr>
<td>IWB</td>
<td>0.723</td>
<td>0.511</td>
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Table (3)
Discriminate validity

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<th>3</th>
<th>4</th>
<th>5</th>
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<tbody>
<tr>
<td>1. Affective commitment</td>
<td>0.837</td>
<td></td>
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<tr>
<td>2. Performance-based rewards</td>
<td></td>
<td>0.844</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>3. Developmental performance appraisal</td>
<td>0.395</td>
<td>0.495</td>
<td>0.837</td>
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<tr>
<td>4. IWB</td>
<td>0.561</td>
<td>0.360</td>
<td>0.468</td>
<td>0.715</td>
<td></td>
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<td>5. Knowledge sharing</td>
<td>0.369</td>
<td>0.201</td>
<td>0.432</td>
<td>0.251</td>
<td>0.724</td>
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Note: The diagonal scores in bold show the square roots of AVE. The other scores are for correlations between constructs.

Table (4)
Fit indices

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<tr>
<th>Fit indices</th>
<th>Cut-off point</th>
<th>Initial model</th>
<th>Purified model</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMIN/df</td>
<td>≤3.00</td>
<td>3.569</td>
<td>1.434</td>
</tr>
<tr>
<td>GFI</td>
<td>≥0.90</td>
<td>0.688</td>
<td>0.940</td>
</tr>
<tr>
<td>AGFI</td>
<td>≥0.80</td>
<td>0.642</td>
<td>0.907</td>
</tr>
<tr>
<td>CFI</td>
<td>≥0.95</td>
<td>0.762</td>
<td>0.979</td>
</tr>
<tr>
<td>TLI</td>
<td>≥0.90</td>
<td>0.754</td>
<td>0.970</td>
</tr>
<tr>
<td>IFI</td>
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<td>0.721</td>
<td>0.979</td>
</tr>
<tr>
<td>NFI</td>
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<td>0.780</td>
<td>0.934</td>
</tr>
<tr>
<td>RMSEA</td>
<td>≤0.08</td>
<td>0.105</td>
<td>0.043</td>
</tr>
</tbody>
</table>

4.1 Hypothesis Testing

Table 5 shows the model summary. Overall, full support for the majority of the hypothesized relationships was obtained. The mediation effect was performed using PROCESS v3.5 by Hayes (2017), running a bootstrap for a sample of 5,000. Additionally, 95% of the confidence level for intervals was tested. If the effect score is above zero and no zero score crosses the lower (LL) and upper (UL) intervals, the mediation (indirect) effect is significant at the 95% confidence level (Hayes, 2017). Mediation results are shown in Table 6.

The hypotheses related to the impact of performance-based rewards on IWB (H1a; \( \beta = -0.027, p= 0.776 \)) and the impact of the mediating role of knowledge sharing (H2; \( \beta = 0.064, p= 0.628 \); LL= -0.0115, UL= -0.0542) were rejected. The results, however, indicated support for the impact of performance-based rewards on affective commitment
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(H1c; $\beta = 0.234, p < 0.001$) and support for the notion that affective commitment mediates the relationship between performance-based rewards and IWB ($\beta = 0.841, p < 0.001$; LL = 0.1109, UL = 0.3031); therefore, H3 was accepted. The results indicated that developmental performance appraisal (H4a) is significant for IWB ($0.335, p < 0.001$). In addition, results confirmed H4b, which suggested a positive relationship between developmental performance appraisal and knowledge sharing ($\beta = 0.190, p < 0.001$). The results also confirmed the positive effect of developmental performance appraisal on affective commitment (H4c; $\beta = 0.081, p < 0.05$), thus confirming H4c. However, the mediating role of knowledge sharing between developmental performance appraisal and IWB (H5) was not supported ($\beta = 0.064, p = 0.628$; LL = -0.0451, UL = 0.0378). H6, which proposed that affective commitment mediates the relationship between developmental performance appraisal and IWB, was supported ($\beta = 0.841, p < 0.001$; LL = 0.0507, UL = 0.1945).

Table (5)

<table>
<thead>
<tr>
<th>Hypothesis testing</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Estimate</strong></td>
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<tr>
<td>KS $\leftarrow$ RW</td>
</tr>
<tr>
<td>KS $\leftarrow$ APS</td>
</tr>
<tr>
<td>AFC $\leftarrow$ RW</td>
</tr>
<tr>
<td>AFC $\leftarrow$ APS</td>
</tr>
<tr>
<td>IWB $\leftarrow$ KS</td>
</tr>
<tr>
<td>IWB $\leftarrow$ AFC</td>
</tr>
<tr>
<td>IWB $\leftarrow$ RW</td>
</tr>
<tr>
<td>IWB $\leftarrow$ APS</td>
</tr>
</tbody>
</table>

Note: KS= Knowledge sharing, RW= Performance-based rewards, APS= Developmental performance appraisal, AFC= Affective commitment, IWB= Innovative work behaviour.

Table (6)

<table>
<thead>
<tr>
<th>Mediation results</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Indirect effects</strong></td>
</tr>
<tr>
<td><strong>Estimate</strong></td>
</tr>
<tr>
<td>Performance-based rewards $\rightarrow$ Knowledge sharing $\rightarrow$ IWB</td>
</tr>
<tr>
<td>Performance-based rewards $\rightarrow$ Affective commitment $\rightarrow$ IWB</td>
</tr>
<tr>
<td>Developmental performance appraisal $\rightarrow$ Knowledge sharing $\rightarrow$ IWB</td>
</tr>
<tr>
<td>Developmental performance appraisal $\rightarrow$ Affective commitment $\rightarrow$ IWB</td>
</tr>
</tbody>
</table>

5. Discussion and Conclusions

Prior research on the role of HRM practices in promoting IWB, when framed around SET and the behavioural dimensions of employment relationships, provides insights and supportive conclusions regarding the value of HRM practices for organizational competitiveness and innovativeness (Seeck and Diehl, 2017). However, research on two
specific HRM practices – performance-based rewards and developmental performance appraisal – has obtained mixed results and failed to offer conclusive findings. This study’s key objective was to study the impact of these two practices on IWB, considering the contextual factors of affective commitment and knowledge sharing as mechanisms explaining this hypothesized relationship. This study is of unique importance, because it aims to examine the role of rewards and performance appraisal, two motivation-enhancing HRM practices that have been argued to have a mixed impact on IWB. The paper also aims to clarify prior research on the topic using mediators that differed from those used in other studies.

This study found that affective commitment has the most significant impact on IWB. This may be because affective commitment represents enhanced levels of attachment, loyalty and engagement that encourage employees in their extra-role efforts such as IWB (Camelo-Ordaz et al., 2011). This study also found – in agreement with other current studies – that performance-based rewards increase this commitment. Offering rewards based on performance signals care and support for organizational members and can also improve the psychological context of the employment relationship (Camelo-Ordaz et al., 2011), which may then be reciprocated by affective commitment and consequently, IWB. This study also found affective commitment to be an excellent bridge between developmental performance appraisal and IWB. This finding was expected, because developmental performance appraisal allows employees to work more effectively and offers them guidance on their tasks, making them more likely to develop affective commitment and reciprocate by engaging in challenging tasks such as IWB. This significant impact of developmental performance appraisal on IWB is of unique importance for two reasons: (a) mainstream studies linking performance appraisal with positive behavioural outcomes have neglected IWB and (b) the dominant variable previously studied in the link between performance appraisal and possible outcomes inside the organization was feedback from supervisors rather than performance appraisal.

Findings also indicated that performance appraisal and performance-based reward schemes support knowledge sharing. Knowledge sharing reflects a behavioural response to satisfactory employment relations and a willingness to make knowledge available to others in the workplace. The connection with rewards and performance appraisal was expected, because both allow for a supportive environment in the workplace that recognizes favourable behaviours and in turn can facilitate positive interactions. Developmental performance appraisal also entails clarification to employees of how to better accomplish their tasks, acting as a corrective tool that shows how tasks should be performed and encourages organization members to share their knowledge with others to help with their task performance. Moreover, knowledge sharing is largely dependent upon knowledge provider behaviours (Szulanski, 1996): when offered incentives and developmental performance appraisal that encourage positive behaviours, it is more likely that employees will engage in knowledge sharing.

Interestingly, however, despite the fact that both performance-based rewards and developmental performance appraisal have been found to be significant for knowledge sharing, there is surprisingly no support for the mediating role of knowledge sharing in promoting IWB. This is probably due to employees’ need – before they can engage in IWB – to acquire new types of knowledge beyond their traditional field, making knowledge sharing within an organization less immediately effective.
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Previous research has also failed to offer consistent findings about the link between rewards and IWB. This study, which found that performance-based rewards have no impact on IWB, contributes to that research stream. The findings were particularly interesting, however, given that the majority of existing research has indicated a negative role of rewards on IWB (e.g. Bysted and Hansen, 2015; Bysted and Jespersen, 2014; Sanders et al., 2010). Moreover, as mentioned, the findings showed that when affective commitment is developed through performance-based rewards, the link between rewards and IWB is established and positive. This finding is a distinctive contribution for this study in comparison with extant research.

The insignificant impact of rewards on IWB as found in this study can be potentially explained due to the fact that, in this study, rewards were analyzed only for their effect on performance rather than the simple availability of reward systems as indicated in similar studies. This can be explained as performance-based rewards might make employees anxious about engaging in activities that entail higher job demands, such as IWB.

Importantly, prior to this study, the literature had also failed to specifically consider the impact of developmental performance appraisal on affective commitment. Rather, the majority of studies have reported on supervisor feedback and the effect it has on affective commitment and IWB. Empirically, the present study found that developmental performance appraisal is significant for affective commitment, as shown above. This finding was expected and can be explained by the fact that performance appraisal feedback can develop employees’ capacity to work effectively and be more productive, allowing for enhanced levels of psychological satisfaction reflected by the desired levels of affective commitment.

According to this study’s findings, if, in practice, managers wish to promote employee IWB, consideration of a performance-based reward system and developmental performance appraisal should help foster it. Moreover, organizations should pay more attention to employees’ social and psychological wellbeing in order to support their IWB. The design and introduction of a reward system perceived to be fair, equitable and motivational for employees is likely to encourage their commitment, loyalty and knowledge sharing. Likewise, performance appraisal should be designed around the facilitation of employee development in order to generate positive behaviours. For instance, knowledge sharing could be included in employees’ annual appraisals to emphasize its value.

While HRM practices are conceptualized as organization-specific factors, they can still be imitated by competitors; factors such as affective commitment and knowledge sharing are less likely to be copied and are linked to employee-specific attributes which can lead to the generation of greater value for the organization. It is imperative for managers to enhance these employee-specific factors that can promote innovative behaviour. In addition, managers should aim to signal to their employees that they are valued and supported, in order to foster positive behaviour at work and increase employees’ innovative capacity.

6. Limitations and Suggestions for Future Research

In addition to offering new insights and contributions, this research contained some limitations. First, the study was cross-sectional, as the data was collected all at once. A longitudinal study might offer more in-depth explanations of the rewards–IWB and performance appraisal–IWB relationships. Second, while this study explained the roles of performance-based rewards and developmental performance appraisal in developing
affective commitment and knowledge sharing (and thus promoting IWB), future research could consider additional HRM practices and contextual factors that can promote the development of IWB (e.g. health and safety and absence management) and could also be a part of a more comprehensive list of HRM practices. Third, it would be worth considering the potential impact of the HRM practices that have been identified as promoting innovation and to establish whether they can foster IWB (e.g. Shipton et al., 2006; Jiang et al., 2012). Fourth, in examining the relationship hypothesized by this research, all the data was collected from unit managers; future research could include employees, as well. In widening the survey group, the gap between perceived and planned organizational arrangements and HRM practices could be identified, which would allow suggestions to be made on how this gap could be minimized, how critical HRM practices such as rewards and performance appraisal could be effectively implemented and what kind of explanations might be offered for the black box of HRM.

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