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Knowledge-sharing behaviour as a mediator of the relationship between organisational justice and organisational performance in the UAE

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Abstract: There have been a number of studies about the relationship between organisational justice and organisational performance. These studies, however, may not be relevant in the Middle Eastern context, and particularly in the UAE. This research therefore explores the relationships between organisational justice, organisational performance and knowledge-sharing in the UAE. Data were collected from 247 field employees of the only company working in prehospital care in Abu Dhabi and Northern Emirates, using a questionnaire. Relationships were examined using hierarchical linear regression. We found that organisational justice has a strong positive significant relationship with both organisational performance and knowledge-sharing behaviour. Knowledge-sharing behaviour partially mediated the relationship between organisational justice and an internal process perspective.

Keywords: organisational justice; knowledge-sharing; organisational performance; balanced scorecard; BSC; structural equation modelling; United Arab Emirates; UAE; Middle East.

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1 Introduction

The concept of organisational justice is widely used in explanatory organisational research (e.g., Abu Elanain, 2010; Atalay and Özler, 2013; Nojani et al., 2012; Tziner and Sharoni, 2014). It is used to explain perceptions of fairness and equality, and resulting reactions (Jordan et al., 2009; Shalhoop, 2004), and is considered to be a governing fact of life (De Cremer, 2005). Organisational justice has been conceptualised into three dimensions (Folger and Konovsky, 1989). Distributive justice relates to the balance of work input and outcomes, such as compensation and payment based upon work accomplished. Procedural justice is whether employees perceive that the tools, policies and procedures used to distribute the benefits of the organisation are fair, while interactional justice concerns the treatment of individuals during the implementation of policies and procedures (Folger and Konovsky, 1989).

There have been very few comprehensive studies in the Middle East that have considered the relationship between the dimensions of organisational justice, knowledge-sharing behaviour, and operational and financial organisational performance (e.g., Allen and Meyer, 1996; Bajaj and Krishnan, 2016; Cohen-Charash and Spector, 2001; Colquitt et al., 2001; Konovsky and Cropanzano, 1991; Masterson et al., 2000). Several authors have, however, raised concerns about the dangers of generalising Western justice theories to other cultures (Abu Elanain, 2010). Lam (2000) claimed that the field of organisational justice lacks studies that can be generalised across cultures. Ibragimova (2006) noted that it is difficult to create a knowledge-sharing climate among professionals. Creation of the right workplace environment therefore plays a crucial role in supporting knowledge-sharing behaviour among employees, and so will improve the financial and operational performance of the organisation (Ibragimova, 2006). Justice research therefore needs to be revisited in the Arab region in general and the Middle East in particular, to build generalisability.

There have been numerous studies investigating perceptions of organisational justice including distributive, procedural, and interactional justice, and the relationships between these and job satisfaction, organisational commitment, and organisational performance

(e.g., Cohen-Charash and Spector, 2001; Colquitt et al., 2001; Inamdar, 2014; Konovsky and Cropanzano, 1991; Loi et al., 2006). Few studies, however, have focused on the effect of organisational justice on knowledge-sharing behaviour and financial and operational organisational performance (e.g., Aryee et al., 2004; Ibragimova, 2006; Javalagi and Bhushi, 2011). The nature of the relationship between these elements is therefore fundamentally unknown, although it is suggested that organisational justice leads to improved organisational performance. The role of knowledge-sharing behaviour as a mediating factor has also been insufficiently researched, especially in the Middle East.

This research extends previous work in various ways. First, it will translate the Western theoretical framework into a Middle Eastern context, enhancing generalisability. Secondly, it is the first study in the Middle East of which we are aware that attempts to understand and explain the correlation between organisational justice and organisational performance, considering the mediation effect of knowledge-sharing behaviour. Third, this research contributes to organisational performance from a balanced scorecard (BSC) perspective by examining the relationship between types of organisational justice (distributive, procedural, and transactional) and organisational performance. Finally, it tests the mediating effect of actual knowledge-sharing behaviour on this relationship.

2 Theoretical background

2.1 Organisational Justice

Organisational justice is associated with employee perceptions of how fairly and equitably the organisation treats them (Greenberg, 1986). It is usually separated into three main categories, distributive, procedural, and interactional justice (Cohen-Charash and Spector, 2001). Organisational justice was first clearly identified by Adams (1965), and the concepts of distributive, procedural, and interactional justice are highlighted throughout the classical management literature (e.g., Bies and Moag, 1986; Leventhal, 1980; Thibaut and Walker, 1975). Distributive justice is related to the perceived balance of work inputs and outcomes, in other words, the perceived fairness of the allocation of organisational resources, such as compensation and payment based on work achievement and performance (Alexander and Ruderman, 1987; Leventhal, 1980). Leventhal (1976) noted that individuals perceived justice as both the 'right' allocation of organisational outcomes, and the 'right' procedure leading to such allocations, which focused attention on procedural justice. Procedural justice describes the 'right' tools (processes, policies, and procedures) used to distribute benefits among employees (e.g., Alexander and Ruderman, 1987; Greenberg and Folger, 1983; Korsgaard et al., 1995). Interactional justice is the human part of fairness embodied in the communication between organisational superiors and subordinates (e.g., Bies and Moag, 1986; Leventhal, 1980; Thibaut and Walker, 1975).

Scholars have suggested that when people have a negative perception of organisational justice, they tend to show poor performance (e.g., Cowherd and Levine, 1992; Konovsky and Cropanzano, 1991), high turnover and absenteeism (e.g., Hamlett, 2014; Hulin, 1991), low commitment (Allen and Meyer, 1996; Colquitt et al., 2001; Masterson et al., 2000), and minimal citizenship behaviours (e.g., Hooi, 2012; Konovsky and Pugh, 1994; Meyer and Ohana, 2009; Moorman, 1991). Huseman et al. (1987)

claimed that when employees perceive unfairness, they start to adjust their behaviour to restore equity. Empirical research has confirmed that employees decrease work performance or input (including effort, ability, loyalty, tolerance, integrity, flexibility, and reliability) when they are underpaid, and improve it to produce more input when they feel they are overpaid (Adams and Freedman, 1976; Greenberg, 1982).

Employees' perceptions of justice in the workplace are significant for several reasons. Perceptions are largely derived from employees' judgement about their work environment, which is an important predictor of job satisfaction, organisational citizenship behaviour, organisational performance, withdrawal behaviour, and counterproductive work behaviour (Ibragimova, 2006). Throughout history, the concept of justice in the Middle East has changed over the years because of issues of social cohesion, or *Asabiyya* in Arabic (Darling, 2007). A recent study in the area found a positive relationship between the three dimensions of organisational justice and organisational citizenship behaviour and turnover intention (Al Afari and Abu Elanain, 2014). Abu Elanain (2010) found that procedural justice and distributive justice correlated with organisational commitment, a finding consistent with Western-based studies. Another study also supported Abu Elanain's (2010) research, concluding that justice is significantly related to job satisfaction and organisational commitment in Saudi Arabia (Elamin, 2012). A study from the banking sector in the Middle East found that distributive justice and interactional justice, but not procedural justice, affect the loyalty and emotions of customers (Dayan et al., 2008). Fernandes and Awamleh (2006) segregated their results by nationality. They found that there was a positive relationship between organisational justice and job satisfaction and self-reported performance for Emirati employees, but for international employees the relationship existed only between justice and satisfaction, not self-reported performance.

Key literature related to organisational justice is shown in Table 1.

Table 1 Literature review summary – key literature on organisational justice

<i>Author/year</i>	<i>Research design</i>	<i>Results and conclusions</i>
Greenberg (1986)	Observation of human interaction	Human beings will make a judgement based on what they gain/loss. For example, employees who are getting good benefits from the organisation will repay that debt by improved performance.
Cowherd and Levine (1992)	A sample of 102 corporate business units across various regions including the USA, Europe, and Japan	When employees had a negative perception of justice in the organisation, their performance tended to be poorer.
Huseman et al. (1987)	Quantitative research	Employees who are either over- or under-rewarded will experience stress, leading them to adjust their behaviour to restore equity.
Ibragimova (2006)	Quantitative research investigating the relationship between organisational justice and organisational performance	There is a positive relationship between organisational justice and organisational performance.

2.2 Organisational performance

Organisational performance is defined as an organisation's ability to achieve competitive advantage and sustainability (Hussein et al., 2014). Several researchers have classified the measurement of organisational performance into two categories. The classical category of organisational performance is financial, including net profit, return on assets (ROA), return on investment (ROI), return on equity (ROE), and growth rate (Liu and He, 2014; Ramirez and Hachiya, 2008). This type of measure has been criticised because it is very short-term oriented, and a narrow way to measure such a large construct. Decision-makers have therefore looked for wider-ranging measures to assess the long-term evolution of the organisation, including both operational and financial performance (Chen and Liang, 2011). Lee and Choi (2003) proposed four approaches to measuring organisational performance including tangible benefits, intangible benefits, intellectual capital, and financial results. Kaplan and Norton (1992) proposed a widely accepted method which they called the BSC. This measures organisational performance across four key dimensions: learning and growth, internal process, customer, and financial perspectives.

The major advantage of the BSC method is that it draws on both financial and operational measures (Kaplan and Norton, 1992). It also shows the cause and effect relationships between different perspectives and their relationships with the overall strategy and business vision in a very specific, measurable, attainable, realistic, and time-based (SMART) way. Such benefits are unlikely to accrue from using Lee and Choi's (2003) tangible and intangible benefits, and intellectual capital approaches. Chen and Liang (2011) noted that it is more appropriate to use BSC methodology in knowledge management and justice research, because these measures examine the entire organisation. Using the BSC also helps to measure both short- and long-term performance.

The usefulness of the perspectives of the BSC can be shown in an example from Kaplan's et al. (2010) research. Employees who were well-trained in quality management implementation (learning and growth perspective) helped to shorten the process cycles and decrease the number of defective products. This led to improvement in delivery times, faster customer service, and fewer defects (internal process perspective). Better customer service, higher quality products, and shorter process time meant high customer satisfaction, loyalty, retention and spending (customer perspective), which finally led to higher profits (financial perspective). BSC perspectives are therefore all linked through cause and effect relationships, from investing in employees and enhancing the internal process, through better customer perceptions, to higher financial performance. The first three perspectives are defined as leading indicators, because they drive financial performance.

Although financial performance and customer satisfaction are very important variables for the organisation, they were not included in this research. The company studied requested that financial and customer perspectives should not be examined, as the data were too sensitive as well as being confidential. We therefore used just two BSC perspectives of organisational performance, learning and growth, and internal process, as dependent variables.

Key literature related to organisational performance is shown in Table 2.

Table 2 Literature review summary – key literature on organisational performance

<i>Author/year</i>	<i>Research design</i>	<i>Results and conclusions</i>
Kumar et al. (1995)	Quantitative research using data gathered from the USA and Netherlands	Distributive and procedural justice plays a crucial role in maintaining performance of automobile dealers.
Wang et al. (2010)	Quantitative study conducted in China	Organisational justice has an indirect relationship with organisational performance. Of the three types of justice, interactional justice is the best predictor of organisational performance.
Erdogan (2002)	Quantitative	Organisational justice affects all aspects of company performance, including operations and the learning curve of employees.

2.3 Knowledge-sharing behaviour

Knowledge management considers how people tackle problems using information and experience (Ibragimova, 2006). The significance of knowledge is not limited to individuals. It also covers improving the daily operation of the business, prediction of future events, and understanding why and how certain events happen. Organisations are considered to be ‘warehouses’ of knowledge where hundreds or thousands of employees integrate their knowledge to develop processes to produce products or services (Grant, 1996; Kogut and Zander, 1992). Technologies play a crucial role in shaping knowledge management systems, leading to the transfer of knowledge embedded or stored within people (Gold et al., 2001).

The aim of knowledge management is to improve organisational performance through a sustainable and growing culture, communication, structure, financials, and learning of individuals within the organisation (Damodaran and Olphert, 2000). Knowledge-sharing proactively leads to creation of knowledge, because constructive dialogue between employees often leads to new discoveries about relationships between variables (Nonaka, 1994). Lam (2000) claimed that knowledge-sharing provides companies with best practice that leads to new products or services. Using and applying knowledge efficiently is more practical than attempting to master a vast quantity of information (Styhre, 2002). Most organisations try to facilitate knowledge capture and sharing by building technical infrastructure, and having policy and procedures that support global operations (Szulanski, 1993). The automation of knowledge management systems allows organisations to focus on collective experience to solve any problem, regardless of time or geographical location (Seng et al., 2002). People tend, however, to access knowledge through human relationships and physical interactions, rather than via a knowledge management system (KMS), and they tend not to use such systems unless guided by an expert (Lesser and Storck, 2001). The degree of constructive interaction leading to knowledge-sharing depends upon whether the overall culture of the organisation is helpful and fair (Denison, 1996). As long as the organisational norms and practices satisfy the requirements for constructive interaction between individuals across business units, then such interaction will probably lead to knowledge-sharing (Ibragimova, 2006).

Dissemination of knowledge among individuals within the organisation becomes spontaneously problematic for several reasons (Brock et al., 2005). Individuals become more reluctant to share knowledge, because they feel that as they distribute their knowledge, they also distribute their respect and power. Knowledge-sharing requires time and effort, so individuals feel that to promote it, other responsibilities should be removed (Seng et al., 2002). An unfair work environment is one crucial reason why employees suspend knowledge-sharing behaviour (Skarlicki and Folger, 1997). The three dimensions of organisational justice therefore have a theoretical impact on knowledge-sharing behaviour and organisational performance.

Collaborative knowledge embedded in individuals serves as a key enabler in producing new products or services (Grant, 1996; Kogut and Zander, 1992). Storing knowledge within a limited number of individuals prevents the organisation from achieving its goals and objectives, because it stops it from being effective and efficient in production, and suspends the process of new knowledge generation and opportunities (Brown and Woodland, 1999). This study therefore tests whether actual knowledge-sharing behaviour plays a significant role in mediating the relationship between organisational justice and organisational performance.

3 Hypothesis development

3.1 Organisational justice and organisational performance

Unlike other forms of organisational justice, distributive justice is more correlated with reaction to particular individual outcomes than the overall organisation (Folger and Konovsky, 1989). Distributive justice represents individual judgements about the fairness to them of outcomes received from the organisation. The scale of fairness varies between individuals, but the most common rule is Adams' equity theory (Cohen-Charash and Spector, 2001). To evaluate the fairness of the work environment, individual employees compare their inputs and receipts from the organisation with those of other employees, the reference point (Adams, 1963). Inequity tends to be perceived when there is inconsistency in the following equation: Individual Input/Individual Output = Other Input/Other Output (Greenberg, 1982).

Early theorists suggested that improving customer perceptions through fairness was vital to enhancing overall company performance (e.g., Dwyer et al., 1987; Frazier, 1983). The relationship between companies and customers is not limited to the economic transaction, but also includes social and human interactions (Cousins and Menguc, 2006). The internal process perspective is the channel in which the transaction occurs, so by enhancing the sequential relationship between internal processes and customers, the organisation can grow its financial performance (Dwyer et al., 1987; Frazier et al., 1988). Ongoing investigation of distributive, procedural and interactional justice confirms that those dimensions are crucial to organisational performance. Kumar et al. (1995) concluded that distributive, procedural and interactional justice enhance the quality of the relationship from a customer perspective. Griffith et al. (2006) claimed that internal fairness of input/output, procedure and relationship led to enhancement of company-customer relationships.

There is ambiguity around the degree of the relationship between different dimensions of organisational justice and various aspects of performance (Wang et al.,

2010). Erdogan (2002) proposed that distributive justice is very obvious, so would affect operation or task performance. Konovsky and Cropanzano (1991) highlighted that job performance is positively influenced by distributive justice. Surprisingly, some empirical research has concluded that employees amend their behaviour to restore equity when they perceive that they are under or overpaid, which is consistent with Adams' equity theory (Adams and Freedman, 1976). Adams' theory provides clarification on how distributive justice affects performance. Some researchers, however, have argued that distributive justice is not broad enough (Campbell, 1990), and others have attempted to investigate the relationship between procedural and interactional justice and performance (e.g., Konovsky and Cropanzano, 1991; Lind and Tyler, 1988; Masterson et al., 2000; Skarlicki and Folger, 1997). Those studies revealed that procedural justice and performance are correlated. Aryee et al. (2004) tested the relationship between organisational justice and performance, by looking at organisational politics and procedural justice. They concluded that a fair environment leads to improved task and contextual performance. Cohen-Charash and Spector (2001) examined the relationship between organisational justice and performance in a meta-analysis. They concluded that organisational justice affects the operational performance of the business, giving a higher weight to procedural justice, then interactional and distributive justice. We therefore hypothesise:

H₁ There is a significant positive relationship between organisational justice and the internal process perspective of performance.

Researchers have paid little attention to the relationship between distributive justice and knowledge-sharing (Folger and Cropanzano, 1998; Konovsky and Cropanzano, 1991). Leventhal (1980) suggested that fair procedures were consistent, unbiased, accurate, correctable, representative and ethical. Studies have claimed that improvement in the relationship between distributive, procedural, and interactional justice will improve firm performance (e.g., Griffith et al., 2006; Liu et al., 2012; Narasimhan et al., 2009, 2013). Fairness of process will also enrich the voice of the stakeholder, and therefore the overall performance of the firm (Folger, 1977). Social economics researchers suggest that people want to invest in relationships characterised by fairness of input and output (Blau, 1964). Rousseau (1990) claimed that there is a crucial difference between fair payment and procedures, and fair treatment of employees, so it is possible to have no violations in procedure but still have inappropriate treatment. Interactions between employees may therefore have a negative effect on their learning process, the essential component of building any organisation (Cross and Baird, 2000). We therefore hypothesise:

H₂ There is a significant positive relationship between organisational justice and the learning and growth perspective of organisational performance.

3.2 Knowledge-sharing behaviour as mediator

The relationship between organisational justice and knowledge-sharing behaviour is a strong potential research area (e.g., Cropanzano et al., 2007; van den Hooff and de Ridder, 2004; Wang et al., 2010). Empirical evidence demonstrates a positive relationship between justice and knowledge-sharing (e.g., Demirel and Seçkin, 2011). Fu et al. (2004) found a positive relationship between distributive justice and explicit knowledge-sharing behaviour. Chieh-Peng (2007) reported an indirect positive correlation between distributive justice and tacit knowledge-sharing behaviour, mediated

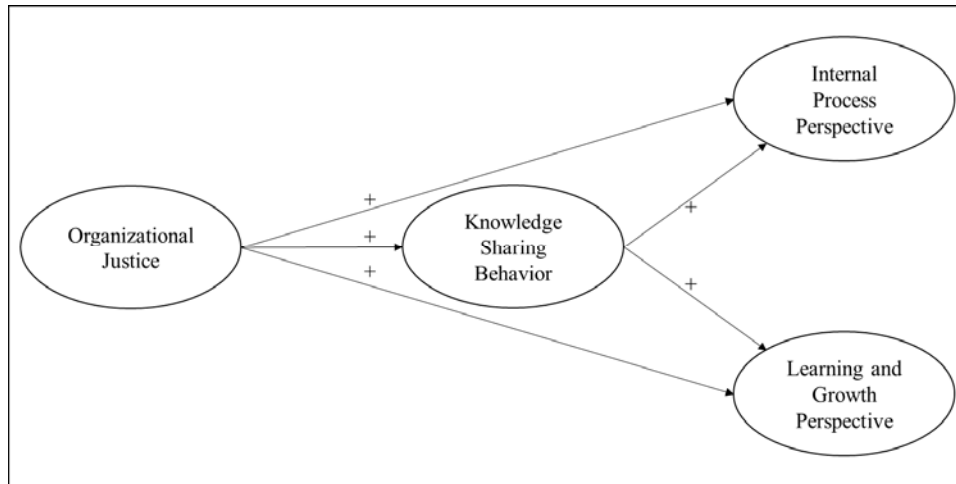
by organisational commitment and trust. Gallivan (2001) examined the relationship between knowledge dissemination and organisational performance in IT. The study concluded that knowledge dissemination plays an important role in shaping performance measures from the BSC perspectives. Another study argued that company vision, including competitive advantage, external and internal customer relationships, and operational excellence, required proper knowledge-sharing and learning processes (Swanson and Ramiller, 2004).

The mediation effect of knowledge-sharing behaviour on the relationship between organisational justice and performance has not been studied very much, although it is considered important (Lind, 1993). Ibragimova (2006) claimed that if individual performance is judged by group performance, then hard-working employees will reduce their performance to restore equity, and therefore reduce knowledge-sharing and organisational citizenship behaviour. Researchers therefore recommend building fair, unbiased, and consistent procedures to gradually increase knowledge-sharing and organisational performance (Tepper and Taylor, 2003). Knowledge management essentially focuses on cultivating continuous learning in organisations, so it will directly improve learning and growth of employees, and positively affect the upper perspectives of the BSC (Ruiz-Mercader et al., 2006). Many studies also indicate the importance of the mediating role of knowledge-sharing in improving the overall performance of the organisation (Gold et al., 2001; Lee and Choi, 2003; Tanriverdi, 2005).

Employees learning from others are a crucial indicator of an environment that facilitates high performance (Cross and Baird, 2000). When employees feel that the majority of interactions within the organisation are based upon respect, dignity and fairness, then they will view their work environment as equitable and fair, and both their loyalty (Staley, 2002) and knowledge-sharing behaviour (Umphress et al., 2003) will increase. Wu et al. (2010) investigated the correlation between knowledge-sharing and two types of performance, operational efficiency and market performance, in firms in the supply chain management industry. They concluded that different types of firms may have different effects on the relationship between knowledge diffusion and internal performance. Wu and Chen (2014) concluded that the BSC is a proper method to measure financial and operational performance, and highlights that there is a significant relationship in actual knowledge-sharing behaviour and organisational performance at different stages. We therefore hypothesise:

- H₃ There is a significant positive relationship between organisational justice and knowledge-sharing behaviour.
- H₄ Knowledge-sharing behaviour mediates the relationship between organisational justice and the learning and growth perspective of organisational performance.
- H₅ Knowledge-sharing behaviour mediates the relationship between organisational justice and the internal process perspective of organisational performance.

The study model is shown in Figure 1.

Figure 1 Study model

4 Methodology

4.1 Participants and procedures

This research drew on employees working in the National Ambulance, a semi-government company providing pre-hospital care to government and private clients in all the United Arab Emirates except Dubai. The company is committed to quality, and has a good reputation, supported by international accreditation including ISO 9001 for quality, ISO 14001 for environmental management, and OHSAS 18001 for occupational health and safety (National Ambulance, 2014).

A self-administered questionnaire was developed in English to measure organisational justice, knowledge-sharing behaviour, the learning and growth perspective, and the internal process perspective. The questionnaire had 35 items, and each item was measured on a five-point Likert scale from one (strongly agree) to five (strongly disagree). The questionnaire was randomly distributed among employees around the Emirates by visiting researchers. The company has a multinational workforce, especially for its field operations.

In total, 550 questionnaires were distributed among a population of 800 employees, across all company offices and sites, and 247 questionnaires were returned with completed and valid answers, a response rate of 45%. Of these 247 respondents, 46% were female and the average age was 29.5 years old ($SD = 0.84$). Respondents' average experience within the organisation was 2.5 years ($SD = 0.81$).

4.2 *Measures*

4.2.1 *Organisational Justice*

Organisational justice was measured and quantified using a 20-item scale developed by Niehoff and Moorman (1993). This construct covered all three dimensions of organisational justice, with five items for distributive justice, six for procedural justice and nine for interactional justice.

4.2.2 *Knowledge-sharing behaviour*

Knowledge-sharing behaviour was measured and quantified using a seven-item scale adapted from van den Hooff and de Ridder (2004). It was considered to be a unidimensional construct in this study.

4.2.3 *Learning and growth perspective*

The learning and growth perspective was measured and quantified using a four-item scale developed by Kaplan and Norton (1996). This variable is considered to be part of the BSC.

4.2.4 *Internal process perspective*

The internal process perspective was measured and quantified using a four-item scale developed by Kaplan and Norton (1996). This variable was also considered part of the BSC.

4.3 *Analysis*

To examine the relationship between organisational justice and the two organisational performance (BSC) constructs, which were the dependent variables, each of the two performance constructs were regressed individually on to organisational justice. Organisational justice was then regressed against knowledge-sharing behaviour. Knowledge-sharing behaviour was regressed against each of the dependent variables to reflect all of the hypotheses in this study except the mediation impact of knowledge-sharing behaviour.

Several researchers have highlighted the conditions required to test mediation impact (e.g., Aiken et al., 1991; Baron and Kenny, 1986):

- 1 the independent variable (in this study, organisational justice) must be related to the dependent variable (here, learning and growth and internal process perspectives)
- 2 the independent variable (organisational justice) must be related to the mediator (knowledge-sharing behaviour)
- 3 the mediator (knowledge-sharing behaviour) must be related to the dependent variables (learning and growth and internal process perspectives).

There are two types of mediation impact, partial and full. Partial mediation requires two conditions. The regression analysis must show that each independent variable and the mediator significantly predict the dependent variable. Second, the regression coefficient

should decrease when the mediator is added. Full mediation is when the relationship moves from significant to non-significant when the mediator is added.

Models were created using principle component factor analysis, and fitness was measured using confirmatory factor analysis (CFA). All analyses used PASW Statistic 18 and IBM SPSS Amos 23.

5 Results

Principle component factor analysis showed that the total variance explained by the four constructs was 70.6%, with alpha level ranging from 0.74 to 0.96. Organisational justice was supported by the CFA test as one combined construct including distributive justice, procedural justice, and interactional justice ($\chi^2 = 56.21$, $df = 50$, $\chi^2/df = 1.12$, GFI = 0.97, CFI = 1, RMSEA = 0.02), rather than three separate dimensions ($\chi^2 = 72.36$, $df = 53$, $\chi^2/df = 1.36$, GFI = 0.96, CFI = 0.99, RMSEA = 0.39, $\Delta\chi^2 = 16.15$, $\Delta df = 3$, $p < 0.05$). The organisational justice construct was therefore maintained as a single-dimension construct. In contrast, organisational performance constructs, including both learning and growth perspective and internal process perspective, showed better model fitness as multiple constructs ($\chi^2 = 12.33$, $df = 4$, $\chi^2/df = 3.1$, GFI = 0.98, CFI = 0.99, RMSEA = 0.09) than unidimensional constructs ($\chi^2 = 57.78$, $df = 5$, $\chi^2/df = 11.56$, GFI = 0.92, CFI = 0.91, RMSEA = 0.20, $\Delta\chi^2 = 45.45$, $\Delta df = 1$, $p < 0.001$).

The research hypothesised a four-factor model (organisational justice, knowledge-sharing behaviour, internal process perspective, and learning and growth perspective). The model fitness with the observed covariance matrix was good ($\chi^2 = 291.53$, $df = 220$, $\chi^2/df = 1.33$, GFI = 0.92, AGFI = 0.88, CFI = 0.99, RMSEA = 0.04, P-Close = 0.98). The model was also compared with five different theoretical alternatives (see Table 3). Model 1 (four-factor model with a common latent factor, or CLF) was the best in terms of model fitness. It was significantly better than model 3 (one-factor model) ($\Delta\chi^2 = 73.13$, $p < 0.001$), 4 or 5. Model 1 with CLF was therefore selected because it fitted the data well (RMSEA = 0.04) and reflected the hypothesised model.

Descriptive analysis, reliability examination, and the correlation matrix for all constructs are set out in Table 4. All alpha levels were greater than the acceptable threshold (Cronbach's $\alpha > 0.7$). Organisational justice as one combined variable covering distributive justice, procedural justice, and interactional justice was positively correlated with organisational performance, including both the internal process perspective ($r = 0.49$, $p < 0.01$) and learning and growth perspective ($r = 0.57$, $p < 0.01$). Knowledge-sharing behaviour was positively correlated with both the internal process perspective ($r = 0.43$, $p < 0.01$) and learning and growth perspective ($r = 0.38$, $p < 0.01$). There was a strong positive correlation between learning and growth and internal process perspectives ($r = 0.88$, $p < 0.01$), supporting the theoretical framework of Kaplan and Norton (1992). These findings support our hypothesis.

After the linearity test, hierarchical regression analysis showed that organisational justice effectively predicted both organisational performance perspectives. Organisational justice explained an average variance of 33% of the learning and growth perspective and 24% of the internal process perspective. Organisational justice has a significant

functional impact on the learning and growth ($\beta = 0.57, p < 0.001$) and internal process perspectives ($\beta = 0.49, p < 0.001$). Hypotheses H_1 and H_2 were therefore fully supported.

Table 3 Comparison of alternative models

Model no.	Des.	χ^2	Df	χ^2/df	GFI	CFI	RMSEA	$\Delta\chi^2$	Δdf
Model 1	4-factor model with CLF ^a	291.53	220	1.33	0.92	0.99	0.04		
Model 2	4-factor model ^b	364.66	245	1.49	0.90	0.98	0.05	73.13*	25
Model 3	1-factor model ^c	417.18	248	1.68	0.88	0.97	0.05	125.65*	28
Model 4	2-factor model ^d	419.49	249	1.69	0.88	0.97	0.05	127.96*	29
Model 5	3-factor model ^e	366.89	247	1.49	0.89	0.98	0.04	75.35*	27

Notes: ^aFive-factor model: organisational justice (IV), knowledge-sharing behaviour (MV), learning and growth perspective (DV1), internal process perspective (DV2); a common latent factor (CLF) was added to address common method bias in our organisational justice construct; (* $p < 0.001$).

^bFour-factor model: organisational justice (IV), knowledge-sharing behaviour (MV), learning and growth perspective (DV1), and internal process perspective (DV2).

^cOne-factor model: organisational justice (IV), knowledge-sharing behaviour (MV), and organisational performance (DV) as one combined factor.

^dTwo-factor model: organisational justice (IV), knowledge-sharing behaviour (DV1), and organisational performance (DV2) as one combined factor.

^eThree-factor model: organisational justice (IV), knowledge-sharing behaviour (DV1), learning and growth perspective (DV2), internal process perspective (DV3).

Table 4 Mean, standard deviation, and correlations among variables

	<i>M</i>	<i>SD</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>
1 Internal process	2.06	0.71	(0.74)			
2 Learning and growth	2.18	0.75	0.88**	(0.88)		
3 Knowledge-sharing behaviour	2.09	0.69	0.43**	0.38**	(0.93)	
4 Organisational justice	2.15	0.70	0.49**	0.57**	0.71**	(0.96)

Note: ** $P < 0.01$ level, all are two-tailed; reliability test (Cronbach's α) shown in brackets.

The mediating role of knowledge-sharing behaviour between organisational justice and both dimensions of organisational performance was statistically tested using Baron and Kenny's (1986) suggested approach. This has two steps. First, to investigate the mediating role of knowledge-sharing behaviour, analysis should demonstrate a significant effect of organisational justice on knowledge-sharing behaviour (H_3), as well as organisational performance (H_1 and H_2). Secondly, when testing the regression model of the two organisational performance dimensions on organisational justice and knowledge-sharing behaviour, the latter should have a significant effect on the organisational performance dimensions (H_4 and H_5), and the effect of organisational justice must become less significant or insignificant (H_1 and H_2).

Table 5 shows the analysis of the mediating role of knowledge-sharing behaviour. Step 1 was the regression analysis between organisational justice as independent variable and knowledge-sharing behaviour, and internal process and learning and growth

perspectives as separate dependent variables. In line with expectations, organisational justice successfully explained 50% of the variance in knowledge-sharing behaviour. The testing also showed a significant positive relationship between organisational justice and knowledge-sharing behaviour ($\beta = 0.71, p < 0.001$) and the other two dimensions of organisational performance. The combination of these results fulfils the requirements of possible mediation. In step 2, the knowledge-sharing behaviour construct was added to each regression model. The results show that there was a significant effect on the internal process perspective ($\beta = 0.16, p < 0.05$), but not on learning and growth ($\beta = -0.05$). The beta coefficient of the relationship between organisational justice and internal process perspective was still significant, but lower ($\beta = 0.37, p < 0.05$). The learning and growth perspective beta coefficient also remained significant but was higher ($\beta = 0.61, p < 0.001$). Knowledge-sharing behaviour therefore partially mediates the relationship between organisational justice and the internal process perspective, but not between justice and learning and growth. Both ΔR^2 and F for ΔR^2 support the results. H_5 , but not H_4 , is therefore supported.

Table 5 Hierarchical regression result and mediation impact of knowledge-sharing behaviour

	<i>Knowledge-sharing behaviour</i>	<i>Internal process perspective</i>	<i>Learning and growth perspective</i>
<i>Step 1</i>			
Organisational justice	0.71*	0.49*	0.57*
Adjusted R ²	0.50	0.24	0.33
F-value	248.57*	76.53*	119.61*
<i>Step 2</i>			
Organisational justice		0.38*	0.61*
Knowledge-sharing behaviour		0.16**	-0.05
Adjusted R ²		0.24	0.32
F-value		4.06	59.93*

Note: * $p < 0.001$, ** $p < 0.05$ (beta standardised regression coefficient is reported along with the adjusted R² and F-value); $n = 247$.

6 Discussion

In line with previous studies (e.g., Earley and Lind, 1987; Konovsky and Cropanzano, 1991; Lind, 1993; Masterson et al., 2000), this study found positive relationships between organisational justice and the two dimensions of organisational performance. This suggests that organisational justice is a vital organisational behaviour variable that will predict the learning and growth and internal process perspectives of a company's BSC. Organisations that are high in justice are likely to achieve better results in term of learning and growth and internal processes.

We suggest that employees who are treated fairly are more likely to work harder and improve internal processes, which in turn is likely to improve performance. These conclusions are consistent with earlier studies in other settings. Erdogan (2002), for example, carried out empirical research and found that employees who are treated fairly have better operational or task performance. One possible explanation for this

relationship is that when employees fail to perceive equity in the organisation, they reduce their engagement and operational performance to restore equity, which will negatively affect the organisation's financial performance. This study therefore concludes that organisational justice, consisting of distributive, interactional, and procedural justice, is an important predictor of operational performance in organisations.

Our findings suggest that organisational justice predicts organisational performance from the learning and growth perspective. The most likely explanation for this relationship is that once employees feel that there is equality in terms of performance appraisal, work integration, fair interaction, equitable procedure, and payment, they are more likely to absorb information and knowledge and increase efforts to learn. The collaborative performance of employees as a result of good organisational justice could significantly increase learning and growth.

This study's other major contribution to the literature is to reveal the relationship between knowledge-sharing behaviour and organisational performance in the UAE. Knowledge-sharing behaviour has different predictive power for different organisational performance dimensions. It affects both examined dimensions of the BSC, which is consistent with the literature. This could be because improving the internal processes and learning and growth of employees can only be done through an internal party; this is supported by the literature (e.g., Chen and Liang, 2011).

Finally, the study makes a contribution around knowledge-sharing behaviour and its mediation impact. The regression model revealed that knowledge-sharing behaviour partially mediates the relationship between organisational justice and internal processes but not between organisational justice and learning and growth. The definition of knowledge-sharing behaviour is the embedded ability to troubleshoot problems. Logically, years of experience cannot be passed on in a single course, but require more practical and hands-on experience. The learning and growth perspective focuses more on the learning required to manage certain jobs or processes. Organisations wishing to improve internal processes should focus on enhancing organisational justice and knowledge-sharing behaviour.

7 Limitations and future studies

This research has several limitations. First, the research design is cross-sectional, and does not measure variations in individuals over time. Future longitudinal research is needed to address this limitation. Second, the role of controlling variables was not addressed. Future studies should include controlling variables like age, gender, tenure, and cultural variables. Third, this research does not consider the two other dimensions of organisational performance on the BSC, financial and customer perspective. That was because of the sensitivity of these areas: the company concerned requested that they should not be examined. These should be included in future studies. Fourth, the study used just one company in the UAE, because there are barriers to accessing other UAE companies for research purposes. This means that the findings may not be generalisable. Similar studies could be conducted around the globe and with more companies. Fifth, this study considers actual knowledge-sharing behaviour only. Future studies could address more aspects related to different types and stages of knowledge-sharing.

8 Implications

This research has several implications. From the organisational point of view, it shows that managers need to treat employees fairly, drawing on all elements of organisational justice (procedural, interactional, and distributive justice) to improve performance in learning and internal processes. Organisations that are high in organisational justice should expect better organisational performance. Knowledge-sharing behaviour is positively related to both dimensions of organisational performance. If managers facilitate and motivate knowledge-sharing behaviour among employees, employees will be more committed to achieving the required performance. This research also found that knowledge-sharing behaviour partially mediates the relationship between organisational justice and internal processes. This means that if managers need to increase performance of internal processes, they should focus more on justice and knowledge-sharing in the workplace. Providing employees with the necessary training will allow them to run processes, but if the organisation wishes to increase employees' ability to solve practical problems, it should introduce deeper training, to support knowledge-sharing behaviour. Finally, understanding this research will enhance management ability to develop an overall strategy for the organisation by knowing how changes will affect operations.

9 Conclusions

This is the first time, to our knowledge, that these relationships have been examined in the Middle East, and particularly in the UAE. The study revealed the direction and strength of the relationship between organisational justice, as a combined variable, and organisational performance, as well as the mediation effect of knowledge-sharing behaviour on the relationships. There was a significant positive relationship between organisational justice and both dimensions of organisational performance, as well as knowledge-sharing behaviour. Knowledge-sharing behaviour also had a significant positive relationship with organisational performance, and mediated the relationship between organisational justice and the internal process perspective.

These relationships should make the management of any organisation think about performance beyond basic financial measurements and increasing shareholder wealth. In our view, the study raises questions about employees as a strategic resource that facilitates the achievement of organisational vision. It also raises questions that need to be answered by any leader. For example, how fair are we to our employees? How does such fairness affect the overall performance of the organisation? How does justice lead to knowledge-sharing in this organisation? How does facilitating knowledge-sharing affect performance? How could we quantify the effect of fairness on knowledge-sharing behaviour and organisational performance from various perspectives at different managerial levels?

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