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Transformational leadership and organisational performance
Three serially mediating mechanisms

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Abstract

Purpose – The purpose of this paper is to investigate the serially mediating mechanisms of organisational justice, organisational trust, and employee reactions in the relationship between transformational leadership and organisational performance.

Design/methodology/approach – The study is based on a national sample of 133 organisations from the public and private sectors in Greece and on data obtained from 1,250 employees at three hierarchical positions. The statistical method employed is structural equation modelling.

Findings – The findings of the study suggest that responsive and supportive transformational leadership behaviour have a positive impact on organisational growth. Additionally, this impact is mediated by organisational procedural justice, organisational trust integrity and dependability, and organisational commitment.

Research limitations/implications – The study does not allow for dynamic causal inferences because the data were collected using a questionnaire at a single point in time. Furthermore, the findings of the study may not generalise across borders, because the study was applied in the Greek context, which is experiencing a severe economic and financial crisis.

Practical implications – The major message of the study to decision makers and practitioners is that leaders should work at fostering organisational commitment by improving perceptions of fairness and trust, consistent with the context where the organisation is activated.

Originality/value – There is hardly any research that has been conducted to examine the serially mediating relationships of justice, trust, and employee reactions using multi-dimensional constructs in investigating the relationship between transformational leadership and organisational performance.

Keywords Employee attitudes, Employee behaviour, Employee relations,
Transformational leadership, General management, Organizational justice, Organizational trust,
Employee reactions, Organizational performance

Paper type Research paper

Introduction

Over the last 30 years a great deal of research has examined the direct effects of leadership on work outcomes such as job performance, creativity, and organisational citizenship behaviour (Zhu *et al.*, 2013). During this period the focus of leadership research has shifted from transactional (i.e. where the leaders provide rewards in return for the followers performance) to transformational (i.e. where the leaders motivate their followers to perform beyond expectations) models of leadership (Judge and Piccolo, 2004; Pillai, 2013). However, although in the last decade scholarly research on the topic of leadership has witnessed an impressive increase, resulting in the development of diverse leadership theories (Dinh *et al.*, 2014), it is only in recent years that research started sorting out the mechanisms that mediate the relationship between transformational leadership and work outcomes (Zhu *et al.*, 2013). One such mechanism has focused on the development of follower trust in the leader (i.e. the belief in the integrity, character, and ability of the leader) (e.g. Jung and Avolio, 2000;

Kark *et al.*, 2003). Another mechanism integrated organisational justice (i.e. perceptions of employees of the fairness of treatment received from the organisation) and trust to mediate the relationship between leadership and employee attitudes and behaviour (e.g. Pillai *et al.*, 1999), as well as trust to mediate the relationship between organisational justice and employee attitudes and behaviour (Aryee *et al.*, 2002). Further, a small number of studies considering that at the bottom line what matters is the contribution of leadership behaviour on organisational performance examined the relationship between transformational leadership and organisational performance (Choudhary *et al.*, 2013; Liao and Chuang, 2007; Piccolo and Colquitt, 2006; Wang *et al.*, 2011).

Although there are numerous empirical studies that have examined justice and trust (for a review, see Lewicki *et al.*, 2005), "the precise association between these constructs has not been fully elaborated" (Lewicki *et al.*, 2005, p. 248) as mediator mechanisms in the leadership – performance relationship (Frazier *et al.*, 2010). Previous empirical studies have found that trust fully mediates the impact of transformational leadership on employee attitudes and behaviour (Jung and Avolio, 2000; Pillai *et al.*, 1999), and other studies found that cognitive trust (i.e. the instrumental evaluation by followers of the characteristics of the leaders) and affective trust (i.e. the emotional ties between followers and leaders) mediate the relationship between transformational leadership and work outcomes (Schaubroeck *et al.*, 2011). However, these studies have typically conceptualised most constructs as being uni-dimensional measures and neglected the fact they may consist of more than one dimension (Zhu *et al.*, 2013).

Given these issues, the primary objective of this study is to develop an integrative model of mechanisms mediating between transformational leadership and organisational performance and differentiating among the effects of sub-dimensions of the constructs involved. Drawing on the social exchange theory, defined as "the voluntary actions of individuals that are motivated by the returns expected to bring and typically do in fact bring from others" (Blau, 1964, p. 91), we aim to extend and refine existing transformational leadership-organisational performance models by assuming that trust plays a central mediating role through which organisational justice affects employees attitudes and behaviour (Blau, 1964), and considering that this mechanism is centrally nested in the general transformational leadership – organisational performance relationship. It is argued that hardly any research has been conducted to examine these serially mediating relationships (Stinglhamber *et al.*, 2006).

Research framework and hypotheses
Figure 1 presents an operational model linking transformational leadership and organisational performance. This model assumes three serially mediating mechanisms which are presented below.

The mediating mechanism of organisational justice
The first mechanism assumes that organisational justice mediates the relationship between transformational leadership and organisational trust. Organisational justice usually describes the role of fairness, as it directly relates to the workplace, and it focuses on the ways employee perceptions about justice influence other outcomes such as organisational trust. When employees perceive that they are participants in an equitable relationship with their leader, transformational leaders may be able to build mutual trust, and thus the perceptions of employees about organisational justice and trust are likely to be enhanced (Pillai *et al.*, 1999). The initiating construct of this

mediating mechanism is leadership, which is recognised as a crucial factor influencing organisational justice (Pillai *et al.*, 1999). Leadership has been described as a process of social influence in which one person can consider the aid and support of others in the accomplishment of common tasks (Chemers, 1997). "Transformational leaders are those who enthuse and inspire their followers and base their relationship on mutual understanding and trust" (Biswas and Varma, 2012, p. 177). Two forms of leadership behaviour are usually well-known; transactional and transformational. Transactional leadership involves an exchange relationship between leaders and followers such that followers receive income rewards or prestige for complying with a leader's wishes (Burns, 1978). In contrast, transformational leaders motivate followers to achieve high levels of performance by transforming followers' attitudes, beliefs and values as opposed to merely gaining obedience (Bass, 1985). In this study we concentrate on transformational leadership taking into consideration that this form of leadership behaviour has been found to be connected with most dimensions of organisational justice (Rhoades and Eisenberger, 2002). Core dimensions of transformational leadership include the responsive, supportive, and developmental leadership. Responsive leadership refers to behaviour such as being an active listener, responding to suggestions, and treating people fairly (Purcell and Hutchinson, 2007). Supportive leadership refers to behaviour that provides emotional, informational, instrumental, and appraisal to followers (House, 1981). Developmental leadership refers to specific behaviour that includes career counselling, careful observation of staff, recording followers' progress and encouraging followers to attend courses (Bass, 1985). However, researchers have tested in various contexts the effect of transformational (e.g. Braun *et al.*, 2013; Carter *et al.*, 2013) and transactional vs transformational leadership (Dai *et al.*, 2013; Pillai *et al.*, 1999) on employee attitudes and behaviour through the mediating role of organisational justice and their findings were conclusive.

The core construct of this mediating mechanism, which is organisational justice, refers to the concerns about fairness in the workplace (Colquitt *et al.*, 2005; Greenberg, 1990). It usually consists of distributive justice (i.e. the fairness of outcomes employees receive such as pay and promotion), procedural justice (i.e. the procedures such as level of employee voice by which decisions are made), and interactional justice (i.e. the interpersonal treatment in how employees are treated in the organisation such as personal needs and rights). In terms of procedural justice, when an unfavourable outcome is matched with the perception of an unfair decision (e.g. layoff) employees are
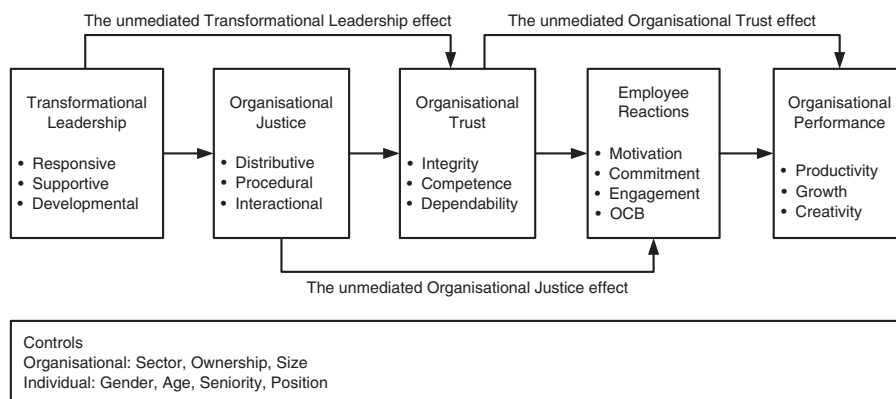

Figure 1.
The transformational
leadership –
organisational
performance
relationship

likely to feel bitter towards the organisation and its leadership. When employees perceive distributive injustice, they might harm the organisation to make the outcome/input ratio less negative from their perspective. When an employee perceives interactional injustice, he/she is predicted to negatively react to the person that was unfair (Cohen-Charash and Spector, 2001). Hopkins and Weathington (2006) state that there is value in examining the effects of the various dimensions of justice specifically in organisations that undergo severe layoffs.

The ending construct of this mediating mechanism is trust. Trust and justice are central constructs in management research with well-known benefits for the effective functioning of organisations (Holtz, 2013; Wong et al., 2006). Trust within an organisation refers to the overall evaluation of an organisation's trustworthiness as perceived by the employee (Puusa and Tolvanen, 2006). We usually distinguish trust at the individual level, involving the daily interactions between supervisors and employees, and trust at the organisational level, involving the relations with a variety of important groups in the organisation. Little empirical research exists distinguishing between the two levels of trust (DeConinck, 2010). However, considering that individual trust is the main determinant of organisational trust (Mishra, 1996), we will not make any specific distinction between the two in this study.

Within organisations trust is influenced by employees' perceptions of justice implying that justice is an integral part of trust (Brockner and Siegel, 1996). Empirical research supports the assumption that there is a positive relationship between organisational justice and organisational trust (Aryee and Chen, 2004; Aryee et al., 2002; Stinglhamber et al., 2006). Particularly, meta-analytic studies indicate that all three dimensions of organisational justice (i.e. distributive, procedural, and interactional justice) influence both levels of trust (i.e. at the individual and organisational level) (Cohen-Charash and Spector, 2001; Colquitt et al., 2001; Dirks and Ferrin, 2002). On the whole, the stream of research that examined the links between organisational justice and trust in the workplace focused mainly on trust in the supervisor (Aryee et al., 2002). Later, researchers have, however, recognised the importance of examining the development of trust in the whole organisation (Stinglhamber et al., 2006). On the other hand, Wong et al. (2006) support the view that although organisational justice and trust are closely related, previous research on the effects of organisational justice on trust has produced mixed results. Accordingly, the traditional argument that trust develops slowly based on favourable interactions with an exchange partner started being challenged (Holtz, 2013). Therefore, considering the dominant research paradigm suggesting that the effects of transformational leadership behaviour are often indirect and mediated through constructs of fairness and trust (Pillai et al., 1999), we assume:

H1. Organisational justice is mediating the positive relationship between transformational leadership behaviour and organisational trust.

The mediating mechanism of organisational trust
The second mechanism assumes that organisational trust mediates the relationship between organisational justice and employee reactions. This mechanism advocates that social exchange in an employment relationship may be initiated by an organisation's fair treatment of its employees. This fair treatment on the part of the organisation causes an obligation on the part of employees to reciprocate the justice of the organisation (Aryee et al., 2002). However, organisational trust, being an important aspect of interpersonal relationships (Butler, 1991), plays a central role in the emergence and maintenance of the social exchange relationship (Blau, 1964). Although we have

presented previously some concepts related to trust, recent developments in the literature guide research on two types of trust; affective and cognitive (Atkinson, 2007; Zhu *et al.*, 2013). Affective trust refers to emotional ties between two parties in a relationship, say leaders and their followers. Cognitive trust refers to an instrumental evaluation by one party (say the followers) of the characteristics of the other party (say the leaders). It is generally agreed that affective trust is an exchange-based process, considering that it measures the extent to which both parties in a relationship engage in the reciprocated exchange of care and concern. On the other hand, cognitive trust is character-based in nature influencing attitudes of one party by making it feel more confident by considering the qualifications of the other party to guide its task performance (Schaubroeck *et al.*, 2011). In addition, if the leader is able to achieve fulfilment of their vision, this may improve the perceptions amongst followers that their leader is a competent, trustworthy and dependable person who can accomplish organisational goals smoothly, which will consequently create cognitive trust (Schaubroeck *et al.*, 2011). In this study we will concentrate on cognitive trust, assuming that the qualifications of the leaders within the organisation reflect organisational trust, which in turn has an influence on employee attitudes and behaviour. Although there are many components of organisational trust, it is supported that integrity, competence and dependability significantly contribute to organisational trust (Schoorman *et al.*, 2007). Integrity (i.e. the belief that the organisation is fair and just); competence (i.e. the belief that the organisation has the ability to do what is says it will do); and dependability (i.e. the belief that the organisation will do what it says it will do). Perceptions of outcomes will influence the trust employees have for their organisation. When employees perceive justice to be at low levels in the organisation, the more likely it is that a negative impact on trust will occur (Hopkins and Weathington, 2006). Therefore, there is value in examining the role of organisational trust as a mediator in the relationship between the various components of organisational justice and employee reactions.

The ending construct of this mechanism is employee reactions within an organisation that are usually categorised into four types: motivation, organisational commitment, work engagement, and organisational citizenship behaviour. Motivation is defined as "a set of energetic forces that originates both within as well as beyond an individual's being, to initiate work-related behaviour, and to determine its form, direction, intensity, and duration" (Pinder, 1998, p. 11). Organisational commitment describes the extent of an employee's identification with and attachment to an organisation (Meyer and Allen, 1991). Work engagement or satisfaction is often defined as "a positive, fulfilling, work-related state of mind that is characterized by vigour, dedication, and absorption" (Schaufeli *et al.*, 2002, p. 74). Organisational citizenship behaviour refers to work-related behaviour that goes above and beyond that which is dictated by organisational policy and one's job description (Organ, 1988).

The findings of meta-analytic studies (e.g. Colquitt *et al.*, 2007; Dirks and Ferrin, 2002) support the assumption that employee reactions such as job satisfaction and organisational citizenship behaviour are associated with trust at the individual level, while organisational commitment is related with organisational trust (Cook and Wall, 1980; DeConinck, 2010). Additionally, other studies (e.g. Gupta and Kumar, 2012) suggest a significant positive association between distributive and informational justice and employee engagement. Organisational trust has been demonstrated to be an important predictor of organisational citizenship behaviour (van Dyne *et al.*, 2000), while perceptions of organisational justice stimulate trust in the organisation that will improve employee reactions (Cropanzano *et al.*, 2002; Katou, 2013; Restubog *et al.*, 2009).

In summary, considering that organisational justice has an established reputation as predicting a wide range of employee outcomes including, but not limited to, motivation, organisational commitment, work engagement, and organisational citizenship behaviour (Strom *et al.*, 2014; Suliman and Al Kathairi, 2013), we assume:

> *H2.* Organisational trust is mediating the positive relationship between organisational justice and employee reactions.

The mediating mechanism of employee reactions
The third mechanism assumes that employee reactions mediate the relationship between organisational trust and organisational performance. Having presented previously the initiating construct (i.e. organisational trust) and the mediating construct (i.e. employee reactions) of this mechanism, what is left is the ending construct that is organisational performance. Researchers in the employment relationship have categorised organisational outcomes into three primary groups (Jiang *et al.*, 2012): Employee outcomes such as employee attitudes and employee behaviour; operational outcomes such as productivity, growth and creativity; and financial outcomes such as sales growth, return on equity, and return on assets. Some scholars argue that the relationships between employee outcomes and operational or financial outcomes are either not clear (e.g. Buller and McEvoy, 2012) or statistically weak (e.g. Paauwe, 2009). In contrast, some other scholars support the view that these relationships are empirically rather robust (e.g. Combs *et al.*, 2006). This is because varying sample characteristics, research designs, and outcome measures used have led findings to vary considerably, making the size of the whole effect difficult to estimate (Combs *et al.*, 2006).

Five decades ago, Argyris (1964) argued that organisational trust is important for organisational outcomes. Since then, organisational trust has been demonstrated to be an important predictor of employee reactions (e.g. Colquitt *et al.*, 2001; DeConinck, 2010; Dirks and Ferrin, 2002), organisational effectiveness, and productivity (Laschinger *et al.*, 2000). The link between trust and employee reactions is usually explained by the social exchange theory, which is based on the belief that the perception of trust by the members of an organisation shapes the relationship between the organisation and its employees (Ugwu *et al.*, 2014). Employees tend to reciprocate the treatment they receive from the organisation in a manner they perceive to be fair (Blau, 1964). Additionally, the findings of other studies (e.g. Boselie *et al.*, 2005; Jiang *et al.*, 2012) support the assumption that employee reactions are related with organisational performance. Therefore, considering that organisational trust positively influences employee reactions, including motivation (Mayer and Gavin, 2005; Yang and Mossholder, 2010), organisational commitment (Dai *et al.*, 2013; Dirks and Ferrin, 2002), employee engagement (Lee and Teo, 2005), and organisational citizenship behaviour (Colquitt *et al.*, 2007; Dirks and Ferrin, 2002; Lester and Brower, 2003; Settoon and Mossholder, 2002), which in turn have an impact on organisational performance (Boselie *et al.*, 2005), we hypothesise:

> *H3.* Employee reactions are mediating the positive relationship between organisational trust and organisational performance.

Method
Sample
Data for this research were collected in October-November 2011 by help of a questionnaire survey, which was administered with the employees of public and private

organisations in the manufacturing, services and trade sectors covering the whole of Greece. The samplers were 100 individuals pursing management degrees at a Greek business school who helped to collect data from their organisations and also from their contact organisations. The survey instrument was distributed to 400 organisations with more than 20 employees. The questionnaires were filled with the help of the samplers who followed a specific seminar for this purpose. Following Gerhart *et al.* (2000) who suggest that the reliability of perceived measures will be increased by using five to ten respondents per firm, the samplers were asked to concentrate on eight respondents from each organisation; two at senior management level (one from the HRM/Personnel Department and one from the Finance Department if possible), two at middle management level (including line managers) and four at other employees' level, i.e. 3,200 questionnaires altogether. In total, 1,250 usable questionnaires were returned from the employees in 133 organisations, a response rate of 33.25 per cent at the organisation level, and 39.06 per cent at the employee level.

Of the sample of 133 organisations, 51.9 per cent had 20-100 employees, 27.8 per cent had 101-200 employees, and 20.3 per cent had more than 200 employees; 18.8 per cent belonged to the public and 81.2 per cent to the private sector; 24.1 per cent were from the manufacturing sector, 42.9 per cent were from the services sector, and 33.1 per cent were from the trade sector. Of the sample of 1,250 respondents, 60.5 per cent were male and 39.5 per cent were female. Their average age was 38.21 (± 9.81) years old, and the average seniority (i.e. the years working in the organisation) was 10.39 (± 8.03) years. Finally, 22.2 per cent of the respondents were senior managers, 23.4 per cent were middle managers, and 54.4 per cent belonged to the other category such as non-managerial staff and junior managers.

Measures
The table in the Appendix summarises the measuring instruments with respect to the constructs used in the study, the authors who initially developed the instruments, the subscales used, the items used in each subscale, the factor loadings of all items, and the consistency and aggregation indices of all constructs. Specifically:

Transformational leadership comprised of three subscales; responsive leadership (Purcell and Hutchinson, 2007), supportive leadership and developmental leadership (Rafferty and Griffin, 2006). The items for each subscale were measured on a scale ranging from 1 = very little to 5 = very much. Example items included "How good do you feel managers are at keeping everyone up to date with proposed changes?" (responsive), "How good do you feel managers are at ensuring that the interests of employees are considered when making decisions?" (supportive), and "How good do you feel managers are at encouraging staff to improve their work- related skills?" (developmental).

Organisational justice comprised of three subscales; distributive justice, procedural justice and interactional justice (Niehoff and Moorman, 1993). The items for each subscale were measured on a Likert scale ranging from 1 = totally disagree to 5 = totally agree. Examples of the items included "Employees consider promotions as fair in this organization" (distributive justice), "All job decisions are applied consistently across all affected employees" (procedural justice), and "The general manager offers adequate justification for decisions made about my job" (interactional justice).

Organisational trust comprised of three subscales; integrity, competence and dependability (Paine, 2003). The items for each subscale were measured on a Likert scale ranging from 1 = totally disagree to 5 = totally agree. Examples of the items

included "This organization treats people like me fairly and justly" (integrity), "This organization has the ability to accomplish what it says it will do" (competence), and "This organization can be relied on to keep its promises" (dependability).

Employee reactions comprised four subscales – motivation (Lockwood, 2010), organisational commitment (Allen and Meyer, 1990), work engagement (Schaufeli *et al.*, 2002) and organisational citizenship behaviour or OCB (Niehoff and Moorman, 1993). Each subscale included a number of sub-subscales. Particularly, motivation comprised of three sub-subscales – recognition, incentives, and relations. Organisational commitment comprised of three sub-subscales – affective commitment, continuance commitment, and normative commitment. Work engagement comprised of three sub-subscales – vigour, dedication, and absorption. OCB comprised five sub-subscales – altruism, courtesy, sportsmanship, conscientiousness and civic virtue. The items for each sub-subscale were taken from the cited research and were measured on a Likert scale ranging from 1 = totally disagree to 5 = totally agree. Examples of the items included "I feel motivated when the organization personally congratulates me for my excellent work" (recognition), "I feel proud to tell people who I work for" (affective commitment), "When I am working, I forget everything else around me" (absorption), and "I am helping others who have very heavy work loads" (altruism).

Organisational performance is a multifaceted concept, which is usually indicated by respondents' perceptions measured by the help of three subscales – productivity, growth, and creativity (Delaney and Huselid, 1996). The productivity subscale includes the items of effectiveness (if the organisation meets its objectives), and efficiency (if the organisation uses the fewest possible resources to meet its objectives). The growth subscale includes the items of development (if the organisation is developing in its capacity to meet future opportunities and challenges), and satisfaction of all participants (stakeholders, employees, customers). The creativity subscale includes the items of innovation (for products and processes), and quality (percentage of products of high quality). The items were measured on a scale ranging from 1 = very bad to 5 = very good. Example items included "How would you rate *effectiveness* (i.e. if the organization meets its objectives) in your organization?" and "How would you rate *development* (i.e. if the organization is developing in its capacity to meet future opportunities and challenges) in your organization?". For all questions referring to organisational performance dimensions a specific definition was assigned to produce a better focus in responses.

Several additional organisational and individual variables were controlled for in order to rule out alternative explanations of the findings (Turnley and Feldman, 2000). Specifically, we used the organisational controls of sector, ownership, and size, and the individual controls of gender, age, seniority, and position. Each of the controls was treated in estimation as a single latent variable.

Consistency and validity of the survey instrument
Construct internal consistency was investigated by evaluating the computed Cronbach α's. The figures in Table I indicate that the survey instrument is reliable for testing the model presented in Figure 1, as all Cronbach α's are higher than 0.70. Construct validity was examined by evaluating the percentage of the total variance explained for each dimension, obtained by applying confirmatory factor analysis (CFA) with varimax rotation and the selection criterion that the eigenvalue should be > 1. The percentage of total variance explained values reported in Table I, are higher than 50.0 per cent

| Constructs | Means (SD) | Cronbach α | Consistency indices | | | Aggregation indices | | | Correlation coefficients | | | | |
			Percent of variance explained	Average variance extracted	Construct reliability	ICC (1)	ICC (2)	RWG (J)	Leadership behaviour	Organisational justice	Organisational trust	Employee reactions	Organisational performance
Leadership behaviour	3.347 (0.907)	0.889	82.037	0.766	0.932	0.237	0.911	0.811	1				
Organisational justice	3.333 (0.894)	0.883	81.342	0.813	0.929	0.318	0.880	0.818	0.830**	1			
Organisational trust	3.590 (0.876)	0.920	86.194	0.791	0.949	0.256	0.924	0.828	0.797***	0.786***	1		
Employee reactions	3.610 (0.663)	0.856	70.846	0.700	0.906	0.266	0.964	0.934	0.709***	0.695***	0.743***	1	
Organisational performance	3.804 (0.789)	0.881	80.748	0.820	0.926	0.259	0.789	0.869	0.609**	0.641**	0.677***	0.676***	1

Notes: $*p < 0.05$; $**p < 0.01$

Table 1.
Means, standard deviations, consistency indices, aggregation indices and correlation coefficients of the constructs used in the study

indicating acceptable survey instrument construct validity (Hair *et al.*, 2008). In addition, construct validity was further examined by evaluating the average variance extracted (AVE) for each dimension, obtained by applying CFA. The AVE values reported in Table I are higher than 0.50 indicating acceptable survey instrument construct validity (Hair *et al.*, 2008). Construct composite reliability was assessed by examining the calculated composite reliability scores. The figures in Table I indicate that the degree of construct composite reliability is acceptable, since reliability scores exceed 0.90 (Pavlou and Gefen, 2005). Construct discriminant validity was assessed by examining whether the square root of each factor's AVE is larger than its correlations with other factors. The correlation coefficients reported in Table I are smaller than the square root of each factor's AVE, providing thus evidence for separate constructs (Hair *et al.*, 2008). For the detailed indices concerning the consistency and validity of all the dimensions in all constructs used in the study see the table in the Appendix.

Common method bias
To reduce the common method bias threat in the survey design, we asked multiple respondents from each organisation to answer the questions of the questionnaire (Lindell and Whitney, 2001). However, taking into consideration that some correlation coefficients were rather high, Harman's (1967) single factor test was also used to examine the likelihood of common method bias threat. According to this test the simultaneous loading of all items in a factor analysis, revealed five factors, and not just one, with the first factor covering 32.156 per cent of total variance explained, indicating thus that the common method bias in the data were rather limited. Additionally, we tested whether multicollinearity, due possibly to common method bias, among the constructs is of serious concern. The relevant tests of condition index (largest $CI = 17.511$ less than 30), tolerance values (smallest $TOL = 0.311$ greater than 0.10), and variance inflation factors (largest $VIF = 3.218$ less than 10) did not suggest evidence of significant multicollinearity (Kleinbaum *et al.*, 1988).

Data aggregation properties
Considering that the dataset refers to perceptions of employees at three different levels in the organisational hierarchy (i.e. senior managers, middle managers, and other employees), and the data refer both to individual level (i.e. employee reactions) and to organisational level (i.e. organisational performance), before any estimation the aggregation properties of the survey data on perceptions of employees into meaningful constructs were assessed. To examine the aggregation properties of the variables three indices were used. These indices were the ICC(1) and ICC(2) intra-class correlation coefficients, which describe how strongly units in the same group resemble each other, and the RWG(J) inter-ratter agreement measure, i.e. the extent to which a group of ratters will rate an attribute in the same way (see Bliese, 2000; Klein *et al.*, 2000). In particular, from the figures presented in Table I it is seen that the values of RWG(J) are > 0.70, justifying strong aggregation, and the values of ICC(2) are above 0.70 in all cases and the values of ICC(1) are all significant, justifying analysis of large statistical power (Klein *et al.*, 2000). Accordingly, the values of the three indices justified the use of constructs to model ratter effects (Bliese, 2000). Particularly, for each construct the items were combined into first-order and/or second-order subsystem scores and then combined these in one aggregate system measure (Hartog *et al.*, 2012). We did not further aggregate these scores to organisational level to be able to consider ratter

effects (Anand *et al.*, 2010). For the detailed indices concerning the aggregation properties of all the dimensions in all constructs used in the study see the table in the Appendix.

Statistical analysis
To test the hypotheses developed for the proposed framework, the methodology of structural equation models (SEM) and the maximum likelihood estimation (MLE), was used via LISREL. SEM is effective when testing models that are path analytic with mediating variables, and include latent constructs that are being measured with multiple items. We used MLE because tests of departure from normality, skewness and kurtosis for most variables used were (except for controls) within acceptable statistical limits (see Jöreskog and Sörbom, 2004). We assessed the overall model fit following Bollen's (1989) recommendation to examine multiple indices, since it is possible for a model to be adequate on one fit index but inadequate on many others. We used the χ^2 test (with critical significant level $p > 0.05$) and the normed-χ^2 ratio (with critical level 1-3, 3-5, and 5-7 for very large samples and high correlations, to indicate excellent, good, or mediocre fit, respectively), the goodness of fit index or GFI (with critical level not lower than 0.80, or 0.70 for complex models), the normed fit index or NFI (with critical level not lower than 0.90), the comparative fit index or CFI (with critical level not lower than 0.90), the root mean squared error of approximation or RMSEA (with critical level not more than 0.05, 0.08, or 0.10 to indicate excellent, good, or mediocre fit, respectively), and the standardised root mean squared residual or SRMR (with critical level not more than 0.05, 0.08, or 0.10 to indicate excellent, good, or mediocre fit, respectively) (for details see Hair *et al.*, 2008).

Results
Before testing the hypotheses a series of CFAs were performed to ensure construct validity. First, the hypothesised model was tested, referring to five distinctive constructs. Analyses showed acceptable fit for the hypothesised structure ($\chi^2 = 745.43$, df $= 94$, p-value $= 0.000$, normed-$\chi^2 = 7.93$, RMSEA $= 0.074$, NFI $= 0.95$, CFI $= 0.96$, GFI $= 0.98$, SRMR $= 0.094$). However, taking into consideration that correlations between some factors were high, at levels similar to other studies (e.g. Hartog *et al.*, 2012; Takeuchi *et al.*, 2007; Wu and Chaturvedi, 2009), another CFA was performed referring to one construct representing the whole model. This model was found to fit worse than the hypothesised model ($\chi^2 = 1288.62$, df $= 104$, p-value $= 0.000$, normed-$\chi^2 = 12.39$, RMSEA $= 0.094$, NFI $= 0.92$, CFI $= 0.93$, GFI $= 0.96$, SRMR $= 0.140$). Then, alternative models with combinations of fewer constructs (between one and five) were tested (Anand *et al.*, 2010) suggesting that the proposed hypothesised model fit the data better.

Results in Table I show strong, positive and significant correlations between all structural constructs, thus, supporting the hypotheses of the study. However, results based on correlations, although interesting, may be misleading due to the interactions between several variables. Therefore, in order to isolate the possible links between the variables involved in the operational model presented in Figure 1, alternative models have been estimated. These models were allowing each time the inclusion of an unmediated link (i.e. a direct link), or a combination of unmediated links, with respect to the mediating constructs of organisational justice, organisational trust, and employee reactions. Two extreme cases were distinguished. From one side, the model was

reflecting full mediation in all mechanisms, where no unmediated link in Figure 1 was present. From the other side, the model was reflecting partial mediation in all mechanisms, where all unmediated links in Figure 1 were present. The structure of all other alternative models was between those two extreme cases.

The goodness-of-fit indices ($\chi^2 = 2088.88$, df $= 209$, p-value $= 0.000$, normed-$\chi^2 = 9.99$, RMSEA $= 0.085$, NFI $= 0.97$, CFI $= 0.97$, GFI $= 0.87$, SRMR $= 0.048$) confirmed the validity of the full mediation model. The goodness-of-fit indices ($\chi^2 = 1994.63$, df $= 206$, p-value $= 0.000$, normed-$\chi^2 = 9.68$, RMSEA $= 0.083$, NFI $= 0.97$, CFI $= 0.97$, GFI $= 0.88$, SRMR $= 0.045$) confirmed also the validity of the partial mediation model. The goodness-of-fit indices (not presented for brevity) of the alternative in-between models were also confirmed the validity of those models. It must be noted here that for all models although the χ^2 statistics are significant and inflated due to the very high sample size, by considering that all other fit indices are acceptable, the validity of the models were considered to be satisfactory. However, because the fit indices of the full mediation model, and the other alternative models, were inferior compared to the indices of the partial mediation model, in what it follows we will concentrate on the estimated partial mediation model presented in Figure 2. The circles represent the related latent variables and the bold arrows indicate the structural relationships between the corresponding variables. The numbers that are assigned to each arrow show the estimated standardised coefficients.

Findings

The major findings of this study are now summarised. First, organisational justice positively and partially mediates the relationship between transformational leadership and organisational trust, thus supporting *H1*. Specifically, considering the levels of the standardised coefficients in Figure 2, it is seen that the influence of responsive and supportive transformational leadership behaviour is greater than the influence of developmental transformational leadership behaviour on organisational justice. Additionally, the impact of procedural justice is greater than the impact of interactional
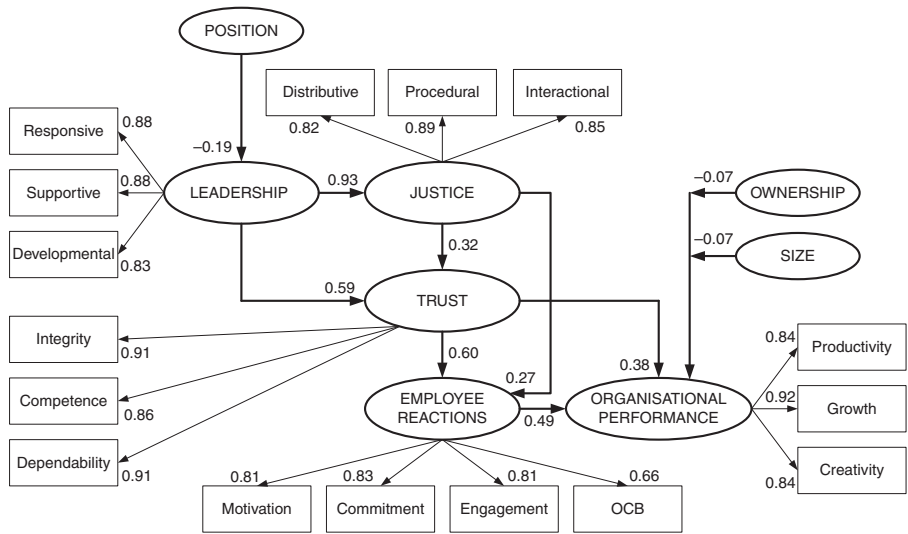

Figure 2.
Estimates of the operational model

and distributive justice on organisational trust, which is mainly represented by integrity and dependability. This finding extends the results of Pillai *et al.* (1999) who indicated that procedural justice mediates the transformational leadership – trust relationship. This is because it shows that the other two dimensions of organisational justice (i.e. interactional and distributive) also mediate this relationship, although with a smaller impact than procedural justice. Moreover, the finding with respect to organisational trust is interesting because it indicates that organisational trust, even in periods of economic crisis such as the one that the Greek economy is experiencing, it is determined predominantly by integrity and dependability than by competence.

Second, organisational trust positively and partially mediates the relationship between organisational justice and employee reactions, thus supporting *H2*. Specifically, procedural organisational justice influences more strongly than interactional and distributive justice organisational trust integrity and dependability, which in turn have a higher positive effect on organisational commitment. This finding supports Aryee *et al.* (2002) who found that procedural justice influences organisational trust more than distributive and interactional justice, and Pillai *et al.* (1999) who found that trust mediates the relationship between procedural justice and job satisfaction, OCB and organisational commitment. Therefore, this study finds that procedural justice is an important predictor of organisational commitment through the mediating role of trust integrity and dependability, partially supporting McFarlin and Sweeny (1992) and Hopkins and Weathington (2006), who investigated the mediating role of trust in the relationship between procedural justice and employee attitudes in downsizing organisations, resembling currently the Greek organisations that drastically layoff employees. Moreover, the findings of the study indicate that commitment being the outcome of the whole organisation demonstrates a stronger relationship of procedural justice than with distributive justice (McFarlin and Sweeny, 1992). These findings may also be extended to cover motivation and employee engagement since their standardised coefficients are close enough to that of organisational commitment. However, considering the rather low standardised coefficient of OCB, the findings of the study are not entirely consistent with Organ's (1990) perspective that social exchange theory provides a stronger conceptual framework for understanding OCB than organisational commitment (Pillai *et al.*, 1999). Anyhow, OCB is more related to trust in supervisor than trust in organisation, as it is assumed in this study (Aryee *et al.*, 2002).

Third, employee reactions positively and partially mediate the relationship between organisational trust and organisational performance, thus supporting *H3*. Specifically, organisational trust integrity and dependability influence more strongly than competence organisational commitment, which in turn have a higher positive effect on organisational growth. This finding is also significant because it indicates, to the extent that trust is a manifestation of social exchange (Aryee *et al.*, 2002; Konovsky and Pugh, 1994), that for an organisation to survive in the long-term it depends on organisational commitment.

With respect to the controls, we see that the negative coefficient of ownership reveals that private organisations have lower performance than public organisations. This finding reflects the fact that private organisations faced much more severe problems during the economic and financial crisis that Greece is experiencing (Katsimi and Moutos, 2010). The negative coefficient of size reveals that organisational performance does not follow the economies of scale rule, as it is usually hypothesised. The individual controls do not seem to influence the leadership – performance relationship. The only significant result is that of position, indicating that the leadership

behaviour of managers is much more important than the behaviour of other employees at lower levels at the hierarchy, as it was rather expected.

Finally, from the results in Figure 2 the total standardised impacts of each construct on organisational performance can be calculated as the sum of the consecutive products of the coefficients belonging in all possible paths linking the specific construct with organisational performance. We see that the total standardised impact on organisational performance of transformational leadership is equal to 0.68, of organisational justice is 0.33, of organisational trust is 0.63, and of employee engagement is 0.49. This finding indicates that transformational leadership and organisational trust are two core constructs that influence organisational performance the most.

Discussion
Conclusion
Research into transformational leadership has been drastically grown in volume over the past three decades or so. Despite this, researchers have only started to pay attention to the mediating mechanisms through which transformational leadership translates into organisational performance (Zhu *et al.*, 2013). The present study supports the view that transformational leadership behaviour has a positive effect on organisational performance through the serially mediating roles of organisational justice and trust, and employee reactions. Particularly, leaders should carefully concentrate on their responsive and supportive behaviour, which through improved procedural justice will influence mostly organisational trust integrity and dependability, that in turn by influencing mostly organisational commitment, will ultimately have a significant impact on organisational growth. Thus, based on social exchange theory the proposed model contributes to the existing literature by highlighting the importance of justice and trust in explaining why transformational leadership is able to make employees to exhibit greater commitment, which in turn positively influences organisational growth. Taking further into consideration that the data used refer to Greece that is experiencing a severe economic and financial crisis the model connecting transformational leadership and organisational performance seemed to work rather well, indicating that this theory can be extended to unique contexts like this of Greece.

Theoretical implications
The strongest theoretical implication that may be drawn from this study is that transformational leadership positively influences organisational performance through the three serially mediating mechanisms of organisational justice, organisational trust, and employee reactions. Specifically, responsive and supportive leadership is related to organisational trust integrity and dependability, both directly and indirectly, through procedural justice; procedural justice is related to organisational commitment, both directly and indirectly, through organisational trust integrity and dependability; and organisational trust integrity and dependability is related to organisational growth, both directly and indirectly, through organisational commitment. Consequently, our findings are largely in accordance with the theory regarding the leadership – performance relationship and through the proposed integrative model extend empirical results that link leadership with effectiveness and productivity (e.g. Barbuto and Burbach, 2006; Judge and Piccolo, 2004; Strom *et al.*, 2014).

Particularly, the proposed model presents theoretical and research implications on two dimensions.

Serially mediating mechanisms: drawing on theoretical mechanisms relating to social and economic exchange the model proposes three mechanisms that explain the serially associating relationships between transformational leadership, organisational justice, organisational trust, employee reactions, and organisational performance. Thus, in sum, the model extends theory by assuming that transformational leadership behaviour predicts organisational performance through the centrally nested mediation relationship of organisational justice – organisational trust – employee reactions.

Differential findings on construct dimensions: although the proposed model works satisfactory and supports its hypotheses, there are notable differences when considering the impact of the individual dimensions constituting each construct on the related constructs. Specifically, responsive and supportive leadership accounts the most between dimensions for transformational leadership, procedural justice for organisational justice, integrity and dependability for organisational trust, organisational commitment for employee reactions, and growth for organisational performance. Thus, the proposed methodology extends research agendas by not treating constructs uni-dimensionally.

Limitations
This study has three main limitations that might be addressed in future empirical research. First, the data were collected using a questionnaire at a single point in time. As a result, the study does not allow for appropriately investigating dynamic causal inferences. Second, all variables were self-reported, giving rise to concerns about common method bias. Although data were collected using three actors (i.e. senior managers, middle managers, and other employees) and multiple respondents, this does not necessarily completely eliminates this source of bias. Third, considering that Greece is experiencing a severe economic and financial crisis, the findings from this unique context may not generalise across borders. Future research should consider including other countries such as Cyprus, Portugal, Spain, and Ireland that are experiencing similar economic and financial crises.

Implications for research
This study is mainly focused on whether organisational justice, organisational trust and employee reactions serially mediate the relationship between transformational leadership and organisational performance. Other organisational and individual characteristics were considered as controls. Therefore, bearing also in mind the limitations of the study, our findings should be interpreted with the caution that the relationships studied may contain other mediated or moderated relationships. This eclectic choice of variables may be responsible for the so-called omitted variables bias. Huselid and Becker (1996) argue that omitted variables bias is likely the major statistical challenge in HRM and outcomes research.

Future research should consider multi-path, multi-dimension, and multi-level investigation designs. In terms of a multi-path investigation future research should consider constructs of transformational and transactional leadership and the stages of their involvement (Graen and Uhl-Bien, 1995) to assess the strength of their differential impact on justice, trust, and employee reactions (Pillai *et al.*, 1999; Zhu *et al.*, 2013). In terms of multi-dimension investigation the constructs adopted should not follow the additive approach, in order to avoid the treatment of equal influence on the dependent variables under investigation, and thus, explore the differential effects of the different components of these measures (Jiang *et al.*, 2012). It is argued that different dimensions

of a construct may impact the same dependent variable in a heterogeneous way (see, e. g. Batt and Colvin, 2011; Gardner *et al.*, 2011). In terms of multi-level investigation careful screening of theories and measures should be followed, using for example performance at organisational level and team level, employee reactions at individual level, and trust in both organisational and individual levels (Aryee *et al.*, 2002; Braun *et al.*, 2013). Further, it would be interesting to investigate whether the integrated model presented in this study work in different contexts; such that of economies experiencing economic and financial crisis.

Implications for practice

It has been said previously that this study supports the view that the different components of transformational leadership behaviour exert effects of different strength on the mediating components of organisational justice, trust, and employee reactions, which in turn have a differential impact on the components of organisational performance. At the practical level, a consequence of these findings is that decision makers and other practitioners need to be trained at recognising the different types of transformational leadership and their consequences (Stinglhamber *et al.*, 2006), and they would profit from implementing experiential combined training and coaching approaches based on the transformational leadership concept (Braun *et al.*, 2013). Thus, in terms of leadership development, an organisation can cultivate transformational leaders in the workplace to make a stronger connection between organisational fairness and commitment, motivation, and engagement. From the organisation development perspective, it is important decision makers and other practitioners to create an organisational climate or culture for transformational leadership, organisational justice, and trust in which employees have a positive feeling about their organisation (Song *et al.*, 2012). Furthermore, considering the usual assumption that OCB is one of the most powerful factors to improve organisational performance (Organ *et al.*, 2006), practitioners should try to increase collaboration between employees in the organisation and by decreasing the possible "distrust" or the "discouragement" of employees working in the unstable and insecure Greek business environment, will enhance employee morale, thereby enhancing an organisation's performance (Song *et al.*, 2012).

Therefore, a major message of the study to decision makers and practitioners is that in an attempt to link employee reactions to the bottom line performance of the organisation, it might be useful to carefully examine the various antecedents of these employee reactions. If leaders want to increase organisational performance they should work at fostering organisational commitment among their employees, by improving perceptions of justice and trust. Particularly, in the context of the current trend of layoffs in Greek businesses, due to the economic and financial crisis, employees who survived layoffs reacted more negatively when outcomes were also perceived to be negative. This reaction of employees happens usually when procedural justice is perceived to be low (Brockner *et al.*, 1994). Thus, leaders in the light of the negative reactions of employees should try to communicate to employees that the downsizing effort was justified and fair and by building trust the organisation will improve and survive the crisis. Additionally, leaders might be able to build up organisational commitment and motivation and employee engagement through demonstrating interactional justice, by treating employees with dignity and respect and by providing explanations for decisions and events that affect them (Fassina *et al.*, 2008).

References

Allen, N.J. and Meyer, J.P. (1990), "The measurement and antecedents of affective, continuance, and normative commitment to the organization", *Journal of Occupational Psychology*, Vol. 63 No. 1, pp. 1-18.

Anand, S., Vidyarthi, P.R., Liden, R.C. and Rousseau, D.M. (2010), "Good citizens in poor-quality relationships: idiosyncratic deals as a substitute for relationship quality", *Academy of Management Journal*, Vol. 53 No. 5, pp. 970-988.

Argyris, C. (1964), *Integrating the Individual and the Organization*, Wiley, New York, NY.

Aryee, S. and Chen, Z.X. (2004), "Countering the trend towards careerist orientation in the age of downsizing: test of a social exchange model", *Journal of Business Research*, Vol. 57 No. 4, pp. 321-328.

Aryee, S., Budhwar, P.S. and Chen, Z.X. (2002), "Trust as a mediator of the relationship between organizational justice and work outcomes: test of a social exchange model", *Journal of Organizational Behavior*, Vol. 23 No. 3, pp. 267-285.

Atkinson, C. (2007), "Trust and the psychological contract", *Employee Relations*, Vol. 29 No. 3, pp. 227-246.

Barbuto, J.E. Jr and Burbach, M.E. (2006), "The emotional intelligence of transformational leaders: a field study of elected officials", *Journal of Social Psychology*, Vol. 146 No. 1, pp. 51-64.

Bass, B.M. (1985), *Leadership and Performance Beyond Expectations*, Free Press, New York, NY.

Batt, R. and Colvin, A.J.S. (2011), "An employment systems approach to turnover: HR practices, quits, dismissals, and performance", *Academy of Management Journal*, Vol. 54 No. 4, pp. 695-717.

Biswas, S. and Varma, A. (2012), "Antecedents of employee performance: an empirical investigation in India", *Employee Relations*, Vol. 34 No. 2, pp. 177-192.

Blau, P. (1964), *Exchange and Power in Social Life*, Wiley, New York, NY.

Bliese, P.D. (2000), "Within-group agreement, non-independence, and reliability: implications for data aggregation and analysis", in Klein, K.J. and Kozlowski, S. (Eds), *Multilevel Theory, Research, and Methods in Organizations*, Jossey-Bass, San Francisco, CA, pp. 349-382.

Bollen, K.A. (1989), *Structural Equations with Latent Variables*, Wiley, New York, NY.

Boselie, P., Dietz, G. and Boon, C. (2005), "Commonalities and contradictions in HRM and performance research", *Human Resource Management Journal*, Vol. 15 No. 3, pp. 67-94.

Braun, S., Peus, C. Weisweiler, S. and Frey, D. (2013), "Transformational leadership, job satisfaction, and team performance: a multilevel mediation model of trust", *The Leadership Quarterly*, Vol. 24 No. 1, pp. 270-283.

Brockner, J. and Siegel, P. (1996), "Understanding the interaction between procedural and distributive justice: the role of trust", in Kramer, R. and Tyler, T. (Eds), *Trust in Organizations: Frontiers of Theory and Research*, Sage, Thousand Oaks, CA, pp. 390-413.

Brockner, J., Konovsky, M., Cooper-Schneider, R., Folger, R., Martin, C. and Bies, R. (1994), "Interactive effects of procedural justice and outcome negativity on victims and survivors of job loss", *Academy of Management Journal*, Vol. 37 No. 2, pp. 397-409.

Buller, P.F. and McEvoy, G.M. (2012), "Strategy, human resource management and performance: sharpening line of sight", *Human Resource Management Review*, Vol. 22 No. 1, pp. 43-56.

Burns, J.M. (1978), *Leadership*, Harper & Row, New York, NY.

Butler, J.K. (1991), "Toward understanding and measuring conditions of trust: evolution of a conditions of trust inventory", *Journal of Management*, Vol. 17 No. 3, pp. 643-663

Carter, M.Z., Armenakis, A.A., Field, H.S. and Mossholder, K.W. (2013), "Transformational leadership, relationship quality, and employee performance during continuous incremental organizational change", *Journal of Organizational Behavior*, Vol. 34 No. 7, pp. 942-958.

Chemers M. (1997), *An Integrative Theory of Leadership*, Lawrence Erlbaum Associates Publishers, Hillsdale, NJ.

Colquitt, J., Greenberg, J. and Zapata-Phelan, C.P. (2005), "What is organisational justice? A historical overview", in Greenberg, J. and Colquitt, J. (Eds), *Handbook of Organisational Justice*, Lawrence Erlbaum Associates, Mahwah, NJ, pp. 3-56.

Colquitt, J.A., Conlon, D.E., Wesson, M.J., Porter, C.O.L.H. and Ng, K.Y. (2001), "Justice at the millennium: a meta-analytic review of 25 years of organizational justice research", *Journal of Applied Psychology*, Vol. 86 No. 3, pp. 425-445.

Colquitt, J.A., Scott, B.A. and LePine, J.A. (2007), "Trust, trustworthiness, and trust propensity: a meta-analytic test of their unique relationships with risk taking and job performance", *Journal of Applied Psychology*, Vol. 92 No. 4, pp. 909-927.

Combs, J., Liu, Y., Hall, A. and Ketchen, D. (2006), "How much do high-performance work practices matter? A meta-analysis of their effects on organisational performance", *Personnel Psychology*, Vol. 59 No. 3, pp. 501-528.

Cook, J. and Wall, T.D. (1980), "New work attitude measures of trust, organizational commitment and personal need non-fulfillment", *Journal of Occupational Psychology*, Vol. 53 No. 1, pp. 39-52.

Choudhary, A.J., Akhtar, S.A. and Zaheer, A. (2013), "Impact of transformational and servant leadership on organizational performance: a comparative analysis", *Journal of Business Ethics*, Vol. 116 No. 2, pp. 433-440.

Cohen-Charash, Y. and Spector, P.E. (2001), "The role of justice in organizations: a meta-analysis", *Organizational Behaviour and Human Decision Processes*, Vol. 86 No. 2, pp. 278-321.

Cropanzano, R., Prehar, C.A. and Chen, P.Y. (2002), "Using social exchange theory to distinguish procedural from interactional justice", *Group and Organization Management*, Vol. 27 No. 3, pp. 324-351.

Dai, Y.-D., Dai, Y.-Y., Chen, K.-Y. and Wu, H.-C. (2013), "Transformational vs transactional leadership: which is better? A study on employees of international tourist hotels in Taipei city", *International Journal of Contemporary Hospitality Management*, Vol. 25 No. 5, pp. 760-778.

DeConinck, J.B. (2010), "The effect of organizational justice, perceived organizational support, and perceived supervisor support on marketing employees' level of trust", *Journal of Business Research*, Vol. 63 No. 12, pp. 1349-1355.

Delaney, J.T. and Huselid, M.A. (1996), "The impact of human resource management practices on perceptions of organisational performance", *Academy of Management Journal*, Vol. 39 No. 4, pp. 949-969.

Dinh, J.E., Lord, R.G., Gardner, W.L., Meuser, J.D., Liden, R.C. and Hu, J. (2014), "Leadership theory and research in the new millennium: current theoretical trends and changing perspectives", *The Leadership Quarterly*, Vol. 25 No. 1, pp. 36-62.

Dirks, K.T. and Ferrin, D.L. (2002), "Trust in leadership: meta-analytic findings and implications for research and practice", *Journal of Applied Psychology*, Vol. 87 No. 4, pp. 611-628.

Fassina, N.E., Jones, D.A. and Uggerslev, K.L. (2008), "Relationship clean-up time: using meta-analysis and path analysis to clarify relationships among job satisfaction, perceived fairness, and citizenship behaviors?", *Journal of Management*, Vol. 34 No. 4, pp. 161-188.

Frazier, M.L., Johnson, P.D., Gavin, M., Gooty, J. and Snow, D.B. (2010), "Organizational justice, trustworthiness, and trust: a multifoci examination", *Group & Organization Management*, Vol. 35 No. 1, pp. 39-76.

Gardner, T.M., Wright, P.M. and Moynihan, L.M. (2011), "The impact of motivation, empowerment, and skill-enhancing practices on aggregate voluntary turnover: the mediating effect of collective affective commitment", *Personnel Psychology*, Vol. 64 No. 2, pp. 315-350.

Gerhart, B., Wrigth, P.M., McMaham, G.C. and Snell, S.A. (2000), "Measurement error in research on human resources and firm performance: how much error is there and how does it influence effect size estimates?", *Personnel Psychology*, Vol. 53 No. 4, pp. 803-834.

Graen, G.B. and Uhl-Bien, M. (1995), "Development of LMX theory of leadership over 25 years: applying a multi-level multi-domain perspective", *Leadership Quarterly*, Vol. 6 No. 2, pp. 210-247.

Greenberg, J. (1990), "Organisational justice: yesterday, today, and tomorrow", *Journal of Management*, Vol. 16 No. 2, pp. 399-432.

Gupta, V. and Kumar, S. (2012), "Impact of performance appraisal justice on employee engagement: a study of Indian professionals", *Employee Relations*, Vol. 35 No. 1, pp. 61-78.

Hair, F., Anderson, R., Tatham, R. and Black, W. (2008), *Multivariate Data Analysis with Readings*, Prentice-Hall, London.

Harman, H.H. (1967), *Modern Factor Analysis*, University of Chicago Press, Chicago, IL.

Hartog, D.N.D., Boon, C., Verburg, R.M. and Croon, M.A. (2012), "HRM, communication, satisfaction, and perceived performance: a cross-level test", *Journal of Management*, Vol. 39 No. 6, pp. 1637-1666.

Holtz, B.C. (2013), "Trust primacy: a model of the reciprocal relations between trust and perceived justice", *Journal of Management*, Vol. 39 No. 7, pp. 1891-1923.

Hopkins, S.M. and Weathington, B.L. (2006), "The relationships between justice perceptions, trust, and employee attitudes in a downsized organization", *The Journal of Psychology*, Vol. 140 No. 5, pp. 477-498.

House, J.S. (1981), *Work Stress and Social Support*, Addison-Wesley, Reading, MA.

Huselid, M.A. and Becker, B.E. (1996), "Methodological issues in cross-sectional and panel estimates of the human resource management – firm performance link", *Industrial Relations*, Vol. 55 No. 5, pp. 400-422.

Jiang, K., Lepak, D.P., Hu, J. and Baer, J.C. (2012), "How does human resource management influence organisational outcomes? a meta-analytic investigation", *Academy of Management Journal*, Vol. 55 No. 6, pp. 1264-1294.

Jöreskog, K.G. and Sörbom, D. (2004), *LISREL 8.7 for Windows [Computer Software]*, Scientific Software International Inc., Lincolnwood, IL.

Judge, T.A. and Piccolo, R.F. (2004), "Transformational and transactional leadership: a meta-analytic test of their relative validity", *Journal of Applied Psychology*, Vol. 89 No. 5, pp. 755-768.

Jung, D. and Avolio, B. (2000), "Opening the black box: an experimental investigation of the mediating effects of trust and value congruence on transformational and transactional leadership", *Journal of Organizational Behavior*, Vol. 21 No. 8, pp. 949-964.

Katou, A.A. (2013), "Justice, trust and employee reactions: an empirical examination of the HRM system", *Management Research Review*, Vol. 36 No. 7, pp. 674-699.

Kark, R., Shamir, B. and Chen, G. (2003), "The two faces of transformational leadership: empowerment and dependence", *Journal of Applied Psychology*, Vol. 88 No. 2, pp. 246-255.

Katsimi, M. and Moutos, T. (2010), "EMU and the Greek crisis: the political economy perspective", *European Journal of Political Economy*, Vol. 26 No. 4, pp. 568-576.

Klein, K.J., Bliese, P.D., Kozlowski, S.W.J., Dansereau, F., Gavin, M.B., Griffin, M.A., Hofmann, D.A., James, L.R., Yammarino, F.J. and Bligh, M.C. (2000), *Multilevel Theory, Research, and Methods in Organizations*, Jossey-Bass, San Francisco, CA, pp. 512-551.

Kleinbaum, D.G., Kupper, L.L. and Muller, K.E. (1988), *Applied Regression Analysis and Other Multivariate Methods*, PWS-Kent, Boston, MA.

Konovsky, M.A. and Pugh, S.D. (1994), "Citizenship behavior and social exchange", *Academy of Management Journal*, Vol. 37 No. 3, pp. 656-669.

Laschinger, H.K.S., Heather, K., Finegan, J., Shamian, J. and Casier, S. (2000), "Organizational trust and empowerment in restructured health care settings: effects on staff nurse commitment", *Journal of Nursing Administration*, Vol. 30 No. 9, pp. 413-425.

Lee, G. and Teo, A. (2005), "Organizational restructuring: impact on trust and work satisfaction", *Asian Pacific Journal of Management*, Vol. 22 No. 1, pp. 23-39.

Lester, S.W. and Brower, H.H. (2003), "In the eyes of the beholder: the relationship between subordinates' felt trustworthiness and their work attitudes and behavior", *Journal of Leadership and Organizational Studies*, Vol. 10 No. 2, pp. 168-179.

Lewicki, R.J., Wiethoff, C. and Tomlinson, E.C. (2005), "What is the role of trust in organizational justice?", in Greenberg, J. and Colquitt, J.A. (Eds), *Handbook of Organizational Justice*, Lawrence Erlbaum, Mahwah, NJ. pp. 247-270.

Liao, H. and Chuang, A. (2007), "Transforming service employees and climate: a multilevel, multisource examination of transformational leadership in building long-term service relationships", *Journal of Applied Psychology*, Vol. 92 No. 4, pp. 1006-1019.

Lindell, M.K. and Whitney, D.J. (2001), "Accounting for common method variance in cross-sectional research designs", *Journal of Applied Psychology*, Vol. 86 No. 1, pp. 114-121.

Lockwood, N.R. (2010), *Motivation in Today's Workplace: The Link to Performance*, Research Quarterly, Society for Human Resource Management, Berea, OH.

McFarlin, D. and Sweeny, P. (1992), "Distributive and procedural justice as predictors of satisfaction with personal and organizational outcomes", *Academy of Management Journal*, Vol. 35 No. 3, pp. 626-638.

Mayer, R.C. and Gavin, M.B. (2005), "Trust in management and performance: who minds the shop while the employees watch the boss?", *Academy of Management Journal*, Vol. 48 No. 5, pp. 874-888.

Meyer, J.P. and Allen, N.J. (1991), "A three-component conceptualization of organizational commitment", *Human Resource Management Review*, Vol. 1 No. 1, pp. 61-89.

Mishra, A.K. (1996), "Organizational responses to crisis: the centrality of trust", in Kramer, R.M. and Tyler, T.R. (Eds), *Trust in Organizations: Frontiers of Theory and Research*, Sage, Thousand Oaks, CA, pp. 261-287.

Niehoff, B.P. and Moorman, R.H. (1993), "Justice as a mediator of the relationship between methods of monitoring and organizational citizen behaviour", *Academy of Management Journal*, Vol. 36 No. 3, pp. 527-556.

Organ, D.W. (1988), *Organizational Citizenship Behavior: The Good Solider Syndrome*, Lexington Books, Lexington, MA.

Organ, D.W. (1990), "The motivational basis of organizational citizenship behavior", in Staw, B.M. and Cummings, L.L. (Eds.), *Research in Organizational Behavior*, Vol. 12, JAI Press, Greenwich, CT, pp. 43-72.

Organ, D.W., Podsakoff, P.M. and MacKenzie, S.B. (2006), *Organizational Citizenship Behavior: Its Nature, Antecedents, and Consequences*, Sage, Thousand Oaks, CA.

Paauwe, J. (2009), "HRM and performance: achievements, methodological issues and prospects", *Journal of Management Studies*, Vol. 46 No. 1, pp. 129-142.

Paine, K.D. (2003), *Guidelines for Measuring Trust in Organizations*, The Institute of Public Relations, London.

Pavlou, P.A. and Gefen, D. (2005), "Psychological contract violation in online marketplaces: antecedents, consequences, and moderating role", *Information Systems Research*, Vol. 16 No. 4, pp. 372-399.

Piccolo, R.F. and Colquitt, J.A. (2006), "Transformational leadership and job behaviors: the mediating role of core job characteristics", *Academy of Management Journal*, Vol. 49 No. 2, pp. 327-340.

Pillai, R. (2013), "Transformational leadership for crisis management", in Dubrin, A.J. (Ed.), *Handbook of Research on Crisis Leadership in Organizations*, Edward Elgar Publishing, Cheltenham, pp. 47-66.

Pillai, R., Schriesheim, C.A. and Williams, E.S. (1999), "Fairness perceptions and trust as mediators for transformational and transactional leadership: a two-sample study", *Journal of Management*, Vol. 25 No. 6, pp. 897-933.

Pinder, C.C. (1998), *Work Motivation in Organizational Behavior*, Prentice-Hall, Upper Saddle River, NJ.

Purcell, J. and Hutchinson, S. (2007), "Front-line managers as agents in the HRM-performance causal chain: theory, analysis and evidence", *Human Resource Management Journal*, Vol. 17 No. 1, pp. 3-20.

Puusa, A. and Tolvanen, U. (2006), "Organizational identity and trust", *Electronic Journal of Business Ethics and Organizational Studies*, Vol. 11 No. 2, pp. 29-33.

Rafferty, A.E. and Griffin, M.A. (2006), "Refining individualized consideration: Distinguishing developmental leadership and supportive leadership", *Journal of Occupational and Organizational Psychology*, Vol. 79 No. 1, pp. 37-61.

Restubog, S.L.D., Bordia, P. and Bordia, S. (2009), "The interactive effects of procedural justice and equity sensitivity in predicting responses to psychological contract breach: an interactionist perspective", *Journal of Business and Psychology*, Vol. 24 No. 2, pp. 165-178.

Rhoades, L. and Eisenberger, R. (2002), "Perceived organizational support: a review of the literature", *Journal of Applied Psychology*, Vol. 87 No. 4, pp. 698-714.

Schaubroeck, J., Lam, S.S.K. and Peng, A.C. (2011), "Cognition-based and affect-based trust as mediators of leader behavior influences on team performance", *Journal of Applied Psychology*, Vol. 96 No. 4, pp. 863-871.

Schaufeli, W.B., Salanova, M., Gonzalez-Roma, V. and Bakker, A.B. (2002), "The measurement of engagement and burnout: a two sample confirmatory factor analytic approach", *Journal of Happiness Studies*, Vol. 3 No. 1, pp. 71-92.

Schoorman, F.D., Mayer, R.C. and Davis, J.H. (2007) "An integrative model of organizational trust: past, present, and future", *Academy of Management Review*, Vol. 32 No. 2, pp. 344-354.

Settoon, R. and Mossholder, K. (2002), "Relationship quality and relationship context as antecedents of person- and task-focused interpersonal citizenship behavior", *Journal of Applied Psychology*, Vol. 87 No. 2, pp. 255-267.

Song, J.H., Kang, I.G., Shin, Y.H. and Kim, H.K. (2012), "The impact of an organization's procedural justice and transformational leadership on employees' citizenship behaviors in the Korean business context", *Journal of Leadership & Organizational Studies*, Vol. 19 No. 4, pp. 424-436.

Stinglhamber, F., De Cremer, D., Mercken, L. (2006), "Perceived support as a mediator of the relationship between justice and trust", *Group Organ Manage*, Vol. 31 No. 4, pp. 442-468.

Strom, D.L., Sears, K.L. and Kelly, K.M. (2014), "Work engagement: the roles of organizational justice and leadership style in predicting engagement among employees", *Journal of Leadership and Organizational Studies*, Vol. 21 No. 1, pp. 71-82.

Suliman, A. and Al Kathairi, M. (2013), "Organizational justice, commitment and performance in developing countries: the case of the UAE", *Employee Relations*, Vol. 35 No. 1, pp. 98-115.

Takeuchi, R., Lepak, D.P., Wang, H. and Takeuchi, K. (2007), "An empirical examination of the mechanisms mediating between high-performance work systems and the performance of Japanese organizations", *Journal of Applied Psychology*, Vol. 92 No. 4, pp. 1069-1083.

Turnley, W.H. and Feldman, D.C. (2000), "Re-examining the effects of psychological contract violations: Unmet expectations and job dissatisfaction as mediators", *Journal of Organisational Behavior*, Vol. 21 No. 1, pp. 25-42.

Ugwu, F.O., Onyishi, I.E. and Rodrıguez-Sanchez, A.M. (2014), "Linking organizational trust with employee engagement: the role of psychological empowerment", *Personnel Review*, Vol. 43 No. 3, pp. 377-400.

van Dyne, L., Vandewalle, D., Kostova, T., Latham, M.E. and Cummings, L.L. (2000), "Collectivism, propensity to trust and self-esteem as predictors of organizational citizenship in a non-work setting", *Journal of Organizational Behavior*, Vol. 21 No. 1, pp. 3-23.

Wang, G., Oh, I.-S., Courtright, S.H. and Colbert, A.E. (2011), "Transformational leadership and performance across criteria and levels: a meta-analytic review of 25 years of research", *Group & Organization Management*, Vol. 36 No. 2, pp. 223-270.

Wong, Y.-T., Ngo, H.-Y. and Wong, C.-S. (2006), "Perceived organizational justice, trust, and OCB: a study of Chinese workers in joint ventures and state-owned enterprises", *Journal of World Business*, Vol. 41 No. 4, pp. 344-355.

Wu, P.-C. and Chaturvedi, S. (2009), "The role of procedural justice and power distance in the relationship between high performance work systems and employee attitudes: a multilevel perspective", *Journal of Management*, Vol. 35 No. 5, pp. 1228-1247.

Yang, J. and Mossholder, K.W. (2010), "Examining the effects of trust in leaders: a bases-and-foci approach", *The Leadership Quarterly*, Vol. 21 No. 1, pp. 50-63.

Zhu, W., Newman, A., Miao, Q. and Hooke, A. (2013), "Revisiting the mediating role of trust in transformational leadership effects: do different types of trust make a difference?", *The Leadership Quarterly*, Vol. 24 No. 1, pp. 94-105.

Appendix

Construct	Instrument author	Subscales	Number of items	Cronbach α	Percent of variance explained	CFA factor loadings	Aggregation indices ICC (1)	ICC (2)	RWG (J)
Transformational leadership				0.889	82.037		0.237	0.911	0.811
	Purcell and Hutchinson (2007)	Responsive	5	0.894	70.403	0.922	0.236	0.876	0.856
	Rafferty and Griffin (2006)	Supportive	3	0.909	84.674	0.909	0.209	0.893	0.702
	Rafferty and Griffin (2006)	Developmental	3	0.887	81.596	0.886	0.229	0.901	0.756
Organisational justice	Niehoff and Moorman (1993)			0.883	81.342		0.318	0.880	0.818
		Distributive justice	4	0.899	76.844	0.878	0.342	0.875	0.777
		Procedural justice	4	0.851	69.785	0.933	0.308	0.857	0.835
		Interactional justice	4	0.903	77.420	0.894	0.251	0.840	0.796
Organisational trust	Paine (2003)			0.920	86.194		0.263	0.924	0.828
		Integrity	4	0.905	77.867	0.934	0.266	0.907	0.836
		Competence	3	0.865	78.772	0.916	0.267	0.862	0.780
		Dependability	4	0.888	74.922	0.936	0.108	0.942	0.836
Employee reactions	Lockwood (2010)			0.856	70.846		0.266	0.964	0.934
		Motivation	3	0.926	87.160	0.789	0.252	0.931	0.804
		Recognition	4	0.929	87.567	0.931	0.213	0.919	0.743
		Incentives	4	0.904	77.707	0.934	0.262	0.927	0.815
		Relations	4	0.915	79.757	0.935	0.237	0.914	0.819
	Allen and Meyer (1990)	*Organisational commitment*		0.799	71.308	0.891	0.293	0.954	0.876

Table AI.
Summary of
measuring
instruments

Table AI.

Construct	Instrument author	Subscales	Number of items	Cronbach α	Percent of variance explained	CFA factor loadings	ICC (1)	ICC (2)	RWG (J)
		Affective commitment	7	0.935	72.173	0.878	0.247	0.972	0.899
		Continuance commitment	4	0.829	66.155	0.806	0.262	0.877	0.856
		Normative commitment	4	0.738	57.986	0.847	0.271	0.885	0.851
	Schaufeli *et al* (2002)	*Work engagement*		0.892	82.624	0.887	0.241	0.971	0.856
		Vigor	6	0.909	68.917	0.922	0.212	0.971	0.921
		Dedication	5	0.923	76.588	0.918	0.222	0.970	0.867
		Absorption	6	0.921	71.834	0.887	0.245	0.956	0.881
	Niehoff and Moorman (1993)	*Organisational citizenship behaviour*		0.848	63.031	0.794	0.271	0.911	0.951
		Altruism	4	0.875	72.856	0.771	0.266	0.699	0.888
		Courtesy	4	0.799	62.608	0.842	0.230	0.822	0.916
		Sportsmanship	4	0.825	66.274	0.814	0.187	0.737	0.898
		Conscientiousness	4	0.821	65.417	0.804	0.219	0.848	0.898
		Civic virtue	4	0.888	75.065	0.734	0.253	0.966	0.842
				0.881	80.748		0.259	0.789	0.869
Organisational performance	Delaney and Huselid (1996)	Productivity	2	0.811	84.160	0.889	0.236	0.758	0.776
		Growth	2	0.796	83.064	0.926	0.262	0.810	0.752
		Creativity	2	0.756	80.614	0.801	0.234	0.801	0.755

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