

Decrypting the nexus between organisational culture, quality of work life, job satisfaction and employee productivity in the public sector

by Chenedzai Mafini*

Abstract

The recent recognition of the importance of the public sector as a major driver of economic success in any given country underlines the need to focus on strategies for enhancing the productivity of public sector employees. The aim of this paper is to examine the influence of organisational culture and quality of work life on job satisfaction and employee productivity among employees in the South African public sector. Using the quantitative survey research design, a questionnaire was developed and administered to a convenience sample of 264 employees drawn from central government departments in Gauteng. A confirmatory factor analysis was conducted to test the psychometric properties of measurement scales and hypotheses were tested using structural equation modelling. Organisational culture and quality of work life positively and significantly influenced job satisfaction. In turn, job satisfaction positively and significantly influenced employee productivity. Organisational culture exerted greater influence on job satisfaction than quality of work life. By implication, the labour relations environment in the public sector may be improved by nurturing healthy cultures and enriching quality of work life, thereby improving both job satisfaction and employee productivity.

Key words: organisational culture, quality of work life, job satisfaction, employee productivity, public sector employees, public sector

1 Introduction and background

It is widely accepted that the public sector, when viewed through the actions of central government departments or ministries, is a major vehicle for economic prosperity in any given country (Rothbard 2009). In addition to contributing to the formulation, implementation and regulation of national economic policies, an effective public sector builds and maintains confidence in the economy, which makes the public sector the nucleus for economic success (Leeson 2007). However, the important role played by the public sector triggers interest in the behaviour of public sector employees, since the quality of government service in driving the economy is dependent on their input and performance at work. In any given case, the behaviour of public sector employees is unique and distinct from that of their private sector counterparts in that they work in a different environment, which is not driven by the profit motive (Vigoda-Gadot & Kapun 2005). Public and private sector employees may be dissimilar in respect of the importance they attach to different types of inducements and their evaluations of these

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inducements (De Vos & Buelens 2010). This further justifies the need to study the work-related behaviours of the two cohorts separately.

The aim of this paper was to examine the influence of organisational culture and quality of work life on job satisfaction and employee productivity among employees in the South African public sector. In order to achieve this aim, three objectives were set, namely to investigate: (1) the influence of organisational culture on job satisfaction; (2) the influence of quality of work life on job satisfaction; and (3) the influence of job satisfaction on employee productivity. Few previous research studies could be found that examined the above-mentioned constructs in the South African public sector. For instance, Gqada (2004) investigated the impact of organisational culture with specific reference to the culture of service delivery in the South African Police Service (SAPS). A blueprint drawn up by the Western Cape Provincial Government (2009) examined the issue of organisational culture and values in the Western Cape. Other studies (e.g. Kotze 2007; Theron 2014) dealt with the issue of quality of work life in the South African public sector. In addition, several studies (Koketso 2011; Mafini & Dlodlo 2014; Ramasodi 2010) focused on job satisfaction in the South African public sector. Letsaolo (2007) and Zere, McIntyre and Addison (2001) reflected on the subject of productivity within the same sector. It is noteworthy, however, that none of these aforementioned studies was directed at examining causal relationships between organisational culture, quality of work life, job satisfaction and employee productivity in the South African public sector.

In addition to the above, an interrogation of existing literature indicates a link between organisational culture and job satisfaction (e.g. Choi & Scott 2008; Mehr, Emadi, Cheraghian, Roshani & Behzadi 2012) quality of work life and job satisfaction (e.g. Aziz, Nadzar, Husaini, Maarof, Radzi & Ismail 2011; Cummings & Worley 2005) and between job satisfaction and employee productivity (e.g. Ellickson & Logsdon 2001; Munir, Ramlee, Ariff, Malik & Maamor 2012). The existence of such linkages naturally prompted the inclusion of these factors in this paper. It nevertheless appears that the bulk of the literature investigating the existence of linkages between these constructs is heavily biased towards non-African economies while disregarding economies in Sub-Saharan Africa. Such results cannot simply be extrapolated to the South African context. This paper is designed to address these apparent research gaps. Since this research was conducted in the context of South Africa, which is the second largest economy in Africa after Nigeria (*The Economist* 2014), it is an important contribution to literature on all four of the constructs examined as well as to literature on the behaviour of public servants in emerging economies in Africa.

The structure of this paper is as follows: In the next section, a theoretical background is provided for organisational culture, quality of work life, job satisfaction and employee productivity. The following section presents the conceptual framework and hypotheses. These are followed by a discussion of the research methodology, the constructs and scales used, the data analyses and the results. The closing sections of the paper discuss conclusions, suggestions for future research and managerial implications.

2 Theoretical background

This section briefly analyses literature relating to the factors under consideration in this paper, namely employee productivity, job satisfaction, organisational culture and quality of work life.

2.1 Employee productivity

The phrase “employee productivity” forms part of the central nomenclature in the area of human behaviour in today’s organisations. In this paper, employee productivity is defined as “the job related activities expected of a worker and how well those activities were executed” (Rausch, Sheta & Ayeshe 2013:41). There is no consensus regarding the factors that contribute to employee productivity. Some studies (e.g. Chandrasekar 2011; Tummers, Vermeeren, Steijn & Bekkers 2012) recognise physical-organic, location, and technological factors while Schneider, Paul, Hanges, Brent and Salvaggio (2003) identify cultural belief values, individual attitudinal, motivational and behavioural factors as the antecedents of employee productivity. Chang and Liu (2008) observe that international influences such as levels of innovativeness and efficiency on the part of the owners and managers of inward-investing foreign companies also tend to impact on employee productivity. The effectiveness of management in recruiting, training and communicating with employees also tends to impact on productivity levels (Hussein 2011). Other key drivers of employee productivity include managerial-organisational and broader economic and politico-legal environments (Haltiwanger, Julia, Lane & Spletzer 2007), levels of flexibility in internal labour markets and the organisation of work (Wright & Cropanzano 2007), and individual rewards and payment systems (Leblebici 2012). In terms of its effects, previous research (e.g. Bockerman & Ilmakunnas 2006; Chang & Liu 2008; Gungor 2011; Proudfoot, Corr, Guest & Dunn 2009; Shub & Stonebraker 2009; Yazici 2008) identifies organisational performance as one of the most important outcomes of employee productivity. Therefore, in addition to its multidimensionality, employee productivity contributes immensely to the meeting of organisational objectives and goals.

2.2 Job satisfaction

In this paper, job satisfaction is seen as “a positive mood resulting from the evaluation of the work experiences of the employees” (Brief 1998:32). A topical conceptualisation of job satisfaction by Altinoz, Cakiroglu and Cop (2012) argues that job satisfaction is mostly influenced by an assemblage of job-related and job context factors such as remuneration, promotional opportunities, control, relations with seniors and colleagues, communication, organisational reputation and operating conditions. As argued by Cascio (2003), job content factors are associated with intrinsic rewards whereas job context factors are associated with extrinsic rewards. Jung (2014) adds that job satisfaction is influenced by a family of personal factors that include attitude, autonomy, creativity and personal development. This suggests that higher satisfaction levels may be experienced in job environments that meet an individual’s needs and values or match his or her personal characteristics. In terms of its benefits, job satisfaction is responsible for improved service quality and productivity (Bockerman & Ilmakunnas 2006), reduced turnover, improved attendance and fewer accidents (Lund 2003), lower unionisation (Tsai 2011), enhanced competitive advantage (Schneider et al 2003) and impressive organisational performance (Judge, Carl, Bono & Patton 2001). An important conclusion from the above is that keeping employees satisfied at work should be a key concern for every employer, in order to attract the rewards associated with high levels of job satisfaction.

2.3 Organisational culture

For the purposes of this paper, organisational culture is perceived as the assumptions, values, attitudes and beliefs that are shared among significant groups within an

organisation (Davies, Mannion, Jacobs, Powell & Marshall 2007). A recent claim regarding organisational culture is that it is influenced by direct mechanisms within organisations and these include exemplary behaviour, opinions, status and appointments (Schein 2010). However, the influence of numerous other factors such as the economy, leadership style, organisational policies, managerial values, organisational structure, member characteristics and organisational size on organisational culture cannot be underestimated (Denison, Haaland & Goelzer 2004). Concerning its outcomes, Tsai (2011) stresses that the impact of organisational culture on employee behaviour and motivations and financial performance is significant and cannot be disregarded. Furthermore, as acknowledged by a number of scholars (Mehr et al 2012; Jacobs & Roodt 2008), organisational culture has relevance in diverse contexts, which include the adoption of innovative technologies and workplace practices, information systems integration, strategy implementation and planning initiation. Therefore, organisational culture is not only multi-faceted but exerts a wide spectrum of influence in various organisational scenarios.

2.4 Quality of work life

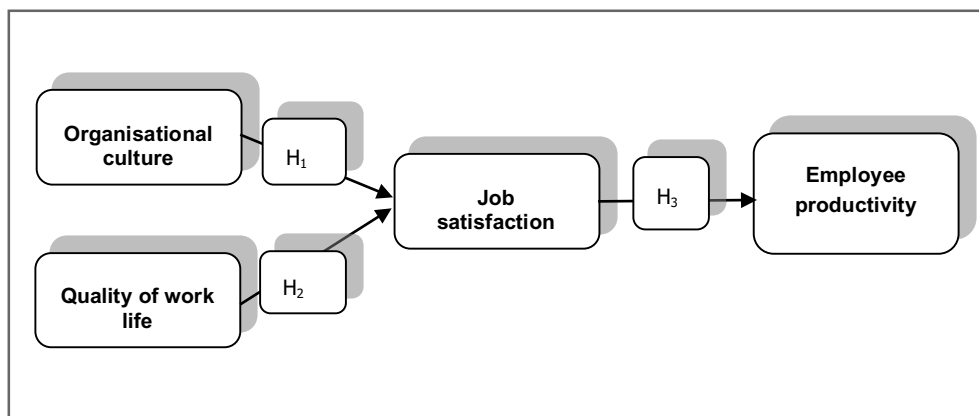
Quality of work life is determined by the extent to which an organisation responds to employee needs by developing mechanisms to allow employees to share fully in making the decisions that determine the quality of their lives at work (Kheradmand, Valilu & Lotfi 2010). It may also be perceived as reflecting the strengths and weaknesses in the overall work environment (Koonmee, Singhapakdi, Virakul & Lee 2010). An emergent taxonomy developed by Rethinam and Ismail (2008) divides the determinants of quality of work life into eight categories, namely (1) adequate and fair compensation; (2) safe and healthy working conditions; (3) immediate opportunity to use and develop human capacities; (4) opportunity for continued growth and security; (5) social integration into the employer organisation; (6) constitutionalism in the employer organisation; (7) work and total life space; and (8) social relevance of work life. However, in modern organisational set-ups, quality of work life has increasingly been directed to problem solving and decision making, two activities that are crucial for the prosperity and survival of the organisation (Cheung & Tang 2009; Stout & Love 2013). Hence, quality of work life enables people to perform better at work by facilitating a universally enabling work environment that shapes employee attitudes as well as their decisions to enter, stay with or leave an organisation (Bagtasos 2011).

3 Theoretical framework and hypotheses development

Based on the gaps found in the literature and the theoretical contributions drawn from the literature, the theoretical framework illustrated in Figure 1 was developed. This framework illustrates the suggested interconnection of four constructs, namely organisational culture, quality of work life, job satisfaction and employee productivity.

The aim of this paper is to examine the influence of organisational culture and quality of work life on job satisfaction and employee productivity among employees in the South African public sector. In order to achieve this aim, a null (H_0) hypothesis and an alternative hypothesis (H_a) were formulated to explain the proposed relationships between the constructs. This is captured in the next subsection.

Figure 1
Theoretical framework



The aim of this paper is to examine the influence of organisational culture and quality of work life on job satisfaction and employee productivity among employees in the South African public sector. In order to achieve this aim, a null (H₀) hypothesis and an alternative hypothesis (H_a) were formulated to explain the proposed relationships between the constructs. This is captured in the next subsection.

3.1 Organisational culture and job satisfaction

The influence of organisational culture on other organisational factors has received wide-ranging research attention in the past, possibly because of the reported effects of organisational culture on individual attitudes and behaviour. A number of studies (Sempene, Riege & Roodt 2002; Lund 2003; Tsai 2011) have reported direct positive associations between organisational culture and job satisfaction. MacIntosh and Doherty (2010) concluded that organisational culture has a positive influence on both job satisfaction and intention to leave. In a study by Subri, Ilyas and Amjad (2011) organisational culture was categorised into two components, namely organisational culture related to managers and leaders and organisational culture related to employees. The results of that study show that the impact of both kinds of culture on job satisfaction was positive and significant. Additionally, organisational culture was shown to have a direct influence on the levels of employee commitment (Silverthorne 2004) as well as intention to quit (Egan, Yang & Bartlett 2004), both of which are linked to job satisfaction. A study by Ma (2009) has also revealed a meaningful relationship between organisational culture, job satisfaction and employee productivity. Carmeli and Tishler (2004) add that high levels of satisfaction at work result when employees accept and are willing to adapt to the culture of the organisation. Research results (e.g. Chan, Shaffer & Snape 2004) further reveal that organisational culture influences various aspects of overall organisational performance through enhanced employee engagement and involvement, adaptability, effective industrial relations and competitive advantage. Since these results suggest that organisational culture is a valuable factor in increasing the satisfaction of employees, it is logical to envisage a positive association between organisational culture and job satisfaction in this paper. Therefore, the following hypotheses are proposed:

Null hypothesis→ **Ho₁**: Organisational culture has no influence on the job satisfaction of employees in the public sector.

Alternative hypothesis→ **Ha₁**: Organisational culture exerts a positive influence on the job satisfaction of employees in the public sector.

3.2 Quality of work life and job satisfaction

The influence of quality of work life on job satisfaction has emerged as a major conceptual challenge among scholars. However, quality of work life is different from job satisfaction in that job satisfaction is one of the many outcomes of quality of work life (Llorente & Macías 2005). In addition to influencing job satisfaction, the influence of quality of work life also cuts across other broad domains, such as family life, leisure activities, social life and financial life (Lee, Singhapakdi & Sirgy 2007; Yavari, Amirtash & Tondnevis 2009). A number of scholars (Cummings & Worley 2005; Leopold 2005; Wheelan & Hunger 2006; Dess, Lumpkin & Eisner 2007) have established positive associations between quality of work life and some desirable job satisfaction-related outcomes such as ethical conduct, employee productivity, corporate social responsibility and organisational performance. Moreover, quality of work life positively facilitates the creation of a more flexible, loyal and motivated workforce, thereby contributing to the organisation's competitiveness and overall prosperity (Adhikari & Gautam 2010). These results make it rational for the author of this paper to presuppose the existence of a positive relationship between quality of work life and job satisfaction. This gives rise to the following hypotheses:

Null hypothesis→ **Ho₂**: Quality of work life has no influence on the job satisfaction of employees in the public sector.

Alternative hypothesis→ **Ha₂**: Quality of work life exerts a positive influence on the job satisfaction of employees in the public sector.

3.3 Job satisfaction and employee productivity

By virtue of its importance, the job satisfaction-employee productivity nexus has been researched extensively from various angles and in diverse contexts, with varying results. An interesting debate has centered on the direction of the relationship. Despite this, there is sufficient empirical evidence which points to a positive association between job satisfaction and employee productivity. As stated by Branham (2005), an individual with a high level of job satisfaction has a positive attitude towards his or her job, whereas a person who is dissatisfied with his or her job has a negative attitude towards the job. The person with a positive attitude towards his or her job is likely to exert more effort to improve the organisation and its goals. A study by Sy, Tram and O'Hara (2006) found that job satisfaction is positively associated with emotional intelligence and performance. In addition, Surujlal and Singh (2003) have established that the fostering of job satisfaction among employees is a crucial task of management, since job satisfaction gives rise to confidence, loyalty, improved quality and increased production. A study by Rudman (2003) also concluded that a high rate of employee contentedness is directly related to a lower intention to quit and high individual work performance. Research by Munir et al (2012) has consistently found significant correlations between job satisfaction and employee productivity, with transformational leadership mediating the relationship. Based on these results, the following hypotheses are put forward:

Null hypothesis→ **H₀₃**: Job satisfaction has no influence on the productivity of employees in the public sector.

Alternative hypothesis→**H_{a3}**: Job satisfaction exerts a positive influence on the productivity of employees in the public sector.

4 Research methodology

4.1 Research design and sampling procedures

A quantitative approach using the survey method was employed. Respondents were based in six central government departments in Gauteng, South Africa, and were selected using the convenience sampling method. Convenience sampling involves drawing samples of respondents who are both easily accessible and willing to participate in a research study (Teddle & Yu 2007). The absence of a single sampling frame which could have been used as a reference point in determining the sampling elements necessitated the selection of the convenience sampling method (Lasserre-Cortez 2006). However, the use of convenience sampling increased the susceptibility of the study to sampling bias, which is the probability that some members of the intended population were excluded from the sample (Cortes & Mohri 2014). In order to avoid sampling bias, the eventual sample size of N=264 was considered to be sufficiently high to ensure that all members of the intended population were represented in the research, in line with the recommendation by Pannucci and Wilkins (2010). The sample size was determined using best practice in research. For example, Green's 1991 rule, which stipulates that no fewer than 50 participants are a suitable sample size for a correlation or regression study, with the number increasing with larger numbers of independent variables (IVs), was used. Additionally, Avikaran's (1994) recommendation that between 200 and 500 respondents are sufficient when dealing with multivariate statistics (having more than one independent/dependent variable/s) was also used as a reference benchmark in the determination of the sample size.

4.2 Measurement scales

Research scales were operationalised, mainly on the basis of previous work. Minor adjustments were made in order to fine-tune the reflective scales to serve the aim of this research, as prescribed by Harkness (2008). Organisational culture was measured using the Organisational Culture Assessment Instrument (OCAI) (Cameron & Quinn 1999). Several studies (Choi, Seo, Scott & Martin 2010; Colyer 2000; Heritage, Pollock & Roberts 2014; Kalliath, Bluedorn & Gillespie 1999) have reported "excellent" validities as well as acceptable internal consistencies, with Cronbach's alphas ranging between 0.7 and 0.8 for the OCAI. Quality of work life was measured using the work-related quality of life scale WRQLS (Van Laar, Edwards & Easton 2007). Recent studies by Chaiear (2014) and Sirisawasd, Chaiear, Johns and Khiewyoo (2014) indicate that the WRQLS is well validated and appropriate for determining the quality of work life in any suitable environment.

Job satisfaction was measured using the Brief Index of Affective Job Satisfaction (BIAJS) developed by Thompson and Phua (2012). In terms of its psychometric properties, the developers of the BIAJS emphasise that the instrument has been comprehensively validated, not just for internal consistency reliability, temporal stability, convergent and criterion-related validities, but also for cross-population invariance as dictated by nationality, job level and job type (Thompson & Phua 2012). Employee

productivity was measured using the London House Employment Productivity Index (EPI-3) developed and validated by Rafilson (1988) for use as both a pre-employment and post-employment productivity measure. Response options were configured in a seven-point Likert-type scale ranging from 1, representing 'Strongly Disagree', to 7, representing 'Strongly Agree'. Measurement scale items are listed in Appendix 1.

4.3 Procedures for data collection

A pilot study was conducted in which 40 questionnaires were administered to randomly selected public service employees. Additionally, the questionnaire was reviewed by three experienced academics whose expertise lies in the field of Industrial Psychology. The review involved scrutinising the instrument to ensure that it adequately tested what the research study intended to achieve. Feedback from the reviewers and the pilot test facilitated minor changes, which strengthened the face and content validity of the questionnaire. After clearance had been obtained from the Gauteng provincial government, the main survey was conducted in April 2014. The questionnaire was administered with the aid of three trained research assistants who were postgraduate students at a South African university of technology. During the administration of the questionnaire, ethical considerations such as respondent confidentiality, anonymity, voluntary participation and protection from victimisation were observed.

4.4 Data analysis

Three types of statistical software were used in the process of data analysis. Data were captured and coded with the aid of Excel. Descriptive statistics were analysed using the Statistical Package for the Social Sciences (SPSS version 22.0) and the Analysis of Moments (Amos version 22) software was employed to conduct Confirmatory Factor Analysis (CFA) and test the hypotheses.

5 Research results

The results section has been divided into six subsections, namely the demographic profile of respondents, validation of measures, hypotheses testing, discussion, conclusions and suggestions for further research, and managerial implications.

5.1 Demographic profile of respondents

The demographic profile of respondents is reported in Table 1.

An analysis of the demographic profile of respondents (Table 1) reveals that 57% (n = 151) of the respondents were male whereas 43% (n = 113) were female. After collapsing the age groups of respondents, it emerged that the majority (70%; n = 185) were under 40 years of age. In terms of employment period in the public sector, 62% (n = 164) of the respondents had been employed in the public sector for periods ranging from 2 to 9 years. With regard to the type of employment, most of the respondents (64%; n = 168) were employed on a permanent basis. With reference to educational qualifications, 61% (n = 160) of the respondents were holders of either a diploma or a first degree. Furthermore, concerning their current occupational positions in the public sector, the majority of the respondents (53%; n = 139) were either specialist staff or clerical/administrative personnel (26%; n = 68).

Table 1
Demographic profile of respondents

Demographic factor	Categories	n	%
Gender	Males	151	57
	Females	113	43
Age group	18-30 years	77	29
	31-40 years	108	41
	41-50 years	50	19
	51+	29	11
Employment period in public sector	Under 2 years	55	21
	Between 2 and 5 years	87	33
	Between 6 and 9 years	77	29
	Over 9 years	45	17
Type of employment	Permanent	168	64
	Contract	48	18
	Part-time	48	18
Highest academic qualification	Matriculation certificate	19	7
	Diploma	61	23
	Degree	89	34
	Higher degree	71	27
	Other qualification	19	7
Current position	Other qualification	5	2
	Executive manager	8	3
	Senior manager	15	6
	Middle manager	22	8
	Line manager/supervisor	43	16
	Specialist staff	71	27
	Clerical/administrative	68	26
	Other (e.g. general worker)	37	14

5.2 Assessment of the psychometric properties of measurement scales

Anderson and Gerbing (1988) suggest a two-step protocol which involves conducting a confirmatory factor analysis (CFA) prior to testing the hypotheses. Accordingly, this procedure was adopted and followed in this research. The primary aim of the CFA procedure was to examine scale accuracy in terms of internal consistency (reliability) and various types of validity (construct, convergent and discriminant) of the multiple-item construct measures used. The results of the confirmatory factor analysis are reported in Table 2.

Reliability was assessed using Composite Reliability (CR) as well as the Cronbach's alpha threshold of 0.7 suggested by Nunnally and Bernstein (1994). Both the composite reliabilities and the Cronbach's alpha values for the constructs were greater than 0.70, which is indicative of satisfactory internal consistency within all measurement scales used. As suggested by Clark and Watson (1995), a valid measure of a construct requires inter-item correlations ranging between 0.4 and 0.5. Inter-item correlations ranged from 0.513 to 0.749 for all the constructs, which provided evidence of construct validity. All items loaded strongly (i.e. all standardised loadings > 0.50) and significantly ($p < 0.01$) on respective constructs, thereby further substantiating the existence of adequate convergent validity. Discriminant validity was established by determining whether the average value extracted (AVE) value was greater than the highest shared variance (SV) value or the 0.5 threshold (Fornell & Larcker 1981). In all cases, the AVE values were

higher than both their corresponding SV values and the 0.4 threshold. This attested to the acceptable levels of discriminant validity within the measurement scales.

Table2
Psychometric properties of constructs

Research constructs		Descriptive statistics		Reliability tests		CR	AVE	Item loadings	Highest SV
		Mean	SD	Item-total	α Value				
Organisational culture (OC)	OC-1	5.89	1.38	0.618	0.702	0.807	0.524	0.587	0.170
	OC-2			0.625				0.647	
	OC-3			0.605				0.681	
	OC-4			0.599				0.724	
	OC-5			0.727				0.721	
	OC-6			0.523				0.713	
Quality of work life (QWL)	QWL-1	5.52	1.03	0.546	0.756	0.844	0.565	0.702	0.413
	QWL-2			0.529				0.734	
	QWL-3			0.583				0.762	
	QWL-4			0.742				0.687	
	QWL-5			0.616				0.611	
Job satisfaction (JS)	JS-1	5.69	1.21	0.587	0.813	0.832	0.572	0.567	0.248
	JS-2			0.749				0.588	
	JS-3			0.534				0.661	
	JS-4			0.654				0.694	
Employee productivity (EP)	EP-1	5.77	1.33	0.667	0.798	0.865	0.547	0.602	0.391
	EP-2			0.634				0.596	
	EP-3			0.553				0.637	
	EP-4			0.513				0.636	
	EP-5			0.738				0.641	
	EP-6			0.519				0.532	

To assess the model fit, the expected thresholds were as follows: the χ^2/df (Chi-square/degree of freedom) value equal to or less than 5.00, which measures the difference between the sample variance-covariance matrix and the reproduced implied covariance matrix (Babiyak & Green 2010). The comparative fit index (CFI), which compares the null model with the observed covariance matrix value, was expected to be equal to or higher than 0.90 (Bentler 1990). The non-normed fit index (NNFI), which assesses the proportion by which the researcher's model improved fit compared to the null model, was supposed to be a value equal to or higher than 0.90 (Tucker & Lewis 1973). For the incremental fit index (IFI), which addresses the issue of parsimony and sample size, a value equal to or higher than 0.90 was expected (Baumgartner & Hombur 1996). A root mean square error of approximation (RMSEA) value equal to or less than 0.08 was also anticipated in order to assess the error of approximation in the population (Schermelleh-Engel, Moosbrugger & Müller 2003). In this paper, statistical results revealed a χ^2/df value of 2.79, a CFI value of 0.91, a NNFI value of 0.94, an IFI value of 0.96 and a RMSEA value of 0.078. This indicates an acceptable fit of the measurement model to the data.

5.3 Structural model analysis and hypothesis testing

The second step of structural equation modelling (SEM) involved an analysis of the structural model using the maximum likelihood estimation technique (Arbuckle 2008). Model fit was assessed using the following recommended parameters: goodness-of-fit index, which is the percentage of observed covariance explained by the model (GFI) ≥ 0.80 ; adjusted goodness-of-fit index, for correction of the GFI (AGFI) ≥ 0.80 (Bentler 1990); root mean square error of approximation (RMSEA), values ≤ 0.08 ; incremental index of fit (IFI), non-normative fit index (NNFI) and comparative fit index (CFI) values ≥ 0.90 ; and Chi-square degrees of freedom ratio (CMIN/DF) value < 3 . Recommended statistics for the final overall model assessment showed acceptable fit of the measurement model to the data: Chi-square value over degrees = 751.679 (314), CMIN/DF = 2.394; GFI = 0.886; AGFI = 0.816; IFI = 0.914; TLI = 0.908; CFI = 0.923; RMSEA = 0.061. The results of hypotheses tests are reported in Table 3.

Table 3
Results of structural equation model analysis

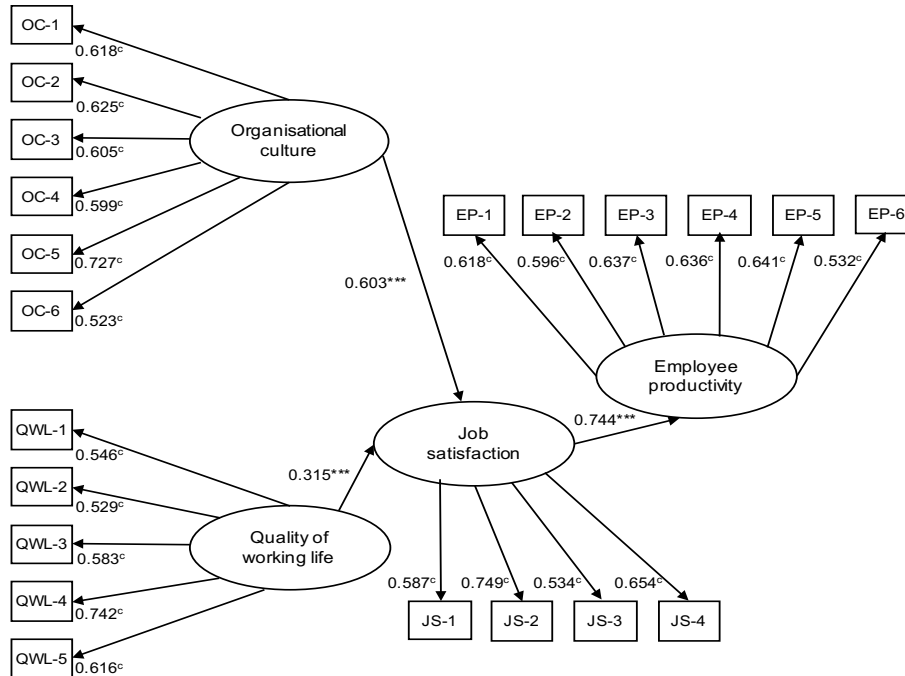
Path coefficients	Null hypothesis	Alternative hypothesis	Factor loadings	Hypothesis decision
Organisational culture → Job satisfaction	Ho ₁	Ha ₁	0.603***	Reject null hypothesis
Quality of work life → Job satisfaction	Ho ₂	Ha ₂	0.315***	Reject null hypothesis
Job satisfaction → Employee productivity	Ho ₃	Ha ₃	0.744***	Reject null hypothesis

Note: χ^2 (df) = 780.940 (314); GFI = 0.886; AGFI = 0.816; IFI = 0.914; NNFI = 0.908; CFI = 0.923; RMSEA = 0.061; ***p < 0.01.

The results reported in Table 3 are further illustrated by the structural model in Figure 2.

Analyses of both Table 3 and Figure 2 show that there was support for all three alternative hypotheses that were proposed. The loadings of individual items on their respective constructs reported in Table 3 indicate that the model converged well and could be a plausible representation of underlying empirical data structures collected for this research. When a theoretical framework has been tested, it becomes known as a conceptual model (Green 2014). The conceptual model shows that after testing the proposed hypotheses, organisational culture exerted a stronger positive influence on job satisfaction than quality of work life and that job satisfaction exerted a strong positive influence on employee productivity. These results are discussed in detail in the next section.

Figure 2
Resultant structural model



6 Discussion

The aim of this paper was to examine the influence of organisational culture and quality of work life on job satisfaction and employee productivity among employees in the South African public sector. This aim was unpacked through a conceptual framework which proposed that organisational culture and quality of work life are antecedents to job satisfaction, which in turn acts as an antecedent to employee productivity. The relationships proposed in the conceptual framework were further unloaded through various hypotheses, which were tested in order to achieve the aim and objectives of this study.

The first alternative hypothesis (H_{a1}), which postulates that organisational culture positively influences job satisfaction, was supported and accepted. As confirmation of this result, there was a positive and significant association ($r = 0.603$; $p < 0.01$) between organisational culture and job satisfaction. This result indicates that healthy organisational cultures are associated with higher job satisfaction levels among employees in the public sector. A healthy organisational culture is one that promotes humility, openness, personal responsibility, accountability, a commitment to correct behaviour, integrity, consistency and persistence in meeting organisational goals and objectives (Carney 2011). Consistently, several studies (Koufteros, Nahm, Cheng & Lai 2007; Liao 2007; Zheng, Yang & McLean 2010) equally confirm the existence of a positive association between organisational culture and job satisfaction. In addition, Garnett, Marlowe and Pandey (2008) opine that unless an organisational culture that is based on the values of altruistic (selfless) love is established in public organisations,

employees are likely to remain dissatisfied, leading to a constrained relationship between them and their employers. This aspect is important in the South African public sector, where some incidences of labour unrest can be traced back to both organisational and social cultures that promote unionisation and public protests (Picard 2005). This paper suggests that such scenarios could be turned around by introducing cultures in which organisational members have a sense of membership, feel understood and appreciated, and have genuine care, concern and appreciation for both self and others. Therefore, this paper endorses the view that organisational culture is a meta-mechanism for shaping and enhancing employee job satisfaction and employee productivity in public organisations.

The second alternative hypothesis (H_{a2}) proposes that quality of work life exerts a positive influence on job satisfaction. This hypothesis was supported and accepted since results in this paper revealed a moderately positive and significant relationship ($r = 0.315$; $p < 0.01$) between the two constructs. This result demonstrates that higher quality of work life has a moderately (neither high nor low) positive but significant stimulus effect on the job satisfaction of employees in the public sector. Consistent with this result, research has previously established that quality of work life exerts a positive influence on job satisfaction through factors such as life satisfaction (Feldt, Kinnunen & Maunao 2000), work ability (Chiu, Wang, Lu, Pan, Kumashiro & Ilmarinen 2007), camaraderie and teamship (Lee et al 2007) and employee commitment (Noor & Abdullar 2012) as well as improved family and peer relations (Bagtasos 2011). Another previous study conducted by Mafini, Surujlal and Dhurup (2012) uncovered a direct and positive correlation between quality of work life and job satisfaction in the public sector in South Africa. It is therefore clear that a healthy quality of work life remains an enduring indicator of higher job satisfaction among employees in the South African public sector.

The third alternative hypothesis (H_{a3}) suggests that job satisfaction exerts a positive influence on employee productivity. This was supported by the findings and has been accepted. The standardised coefficient for the relationship between job satisfaction and employee productivity is positive and significant ($r = 0.744$; $p < 0.01$). This result demonstrates that higher job satisfaction levels are associated with higher productivity levels among employees in the public sector. In South Africa, the public sector is faced with the challenge of improving employee productivity. For example, low employee productivity in South Africa's public sector is a major source of concern to stakeholders, with employee productivity having reached its lowest level in 46 years by January 2014 (University of South Africa 2014). These employee productivity challenges may be associated with the high incidence of labour unrest involving public sector employees, which in turn could be linked to low job satisfaction levels (Dhai, Etheredge, Vorster & Veriava 2011). As mentioned by Sturges, Conway, Guest and Liefoghe (2005), labour unrest is often triggered by disgruntlement stemming from employee dissatisfaction. The results of this paper signify that labour disputes and unrest in the South African public sector can be addressed by improving the levels of job satisfaction among public employees. Thus, a constant need exists to monitor the job satisfaction of employees in the public sector as it has a ripple effect on their productivity.

An important observation is that organisational culture has a greater influence on job satisfaction than quality of work life. This view is borne out by the fact that organisational culture attained a higher mean score ($\bar{x} = 5.89$) as well as a higher factor loading ($r = 0.603$) when compared with quality of work life ($\bar{x} = 5.52$; $r = 0.315$). A possible explanation for this result could be the presence of unwieldy and dysfunctional organisational cultures in the South African public sector as reported in several studies

(e.g. Emuze & Smallwood 2013; Mokgolo, Mokgolo & Modiba 2012; Picard 2005; Salvador 2015), which tends to override the positive effects of any improvements in the quality of work life. As noted by Gelb (2010), politics, power, institutional design and institutional history associated with the South African public sector are associated with a wide array of conundrums. The Public Affairs Research Institute (2011) adds that corruption and non-compliance, top-heavy designs, bureaucracy and red tape, a patronage system that promotes political rather than meritorious appointments and transformation pressures that are meant to redress the inequalities created by the apartheid system, are some of the issues that have a disruptive effect on the organisational cultures in public service departments in South Africa. These complexities tend to encourage unhealthy or dysfunctional cultures within the public sector, thereby promoting an abrasive and volatile labour relations environment. It is possible that despite efforts to improve the quality of work life in the public sector, the cultural inundations remain overwhelming to employees and exert more impact on employee job satisfaction than quality of work life. Thus, employees in the public sector are more exposed to the strain emanating from organisational culture than from quality of work life-related issues.

Another noteworthy result is the mediating effect of job satisfaction on the relationship between employee productivity and two specific constructs, namely organisational culture and quality of work life. In other words, organisational culture influences the productivity of employees in the public sector through the mediating effects of job satisfaction. Studies conducted by Berson, Oreg and Dvir (2005) as well as Akta, Çiçek and Kiyak (2011) substantiate the view that organisational culture can enhance both employee and firm performance through the mediating effect of job satisfaction. This pattern of interaction could reasonably be expected if it is accepted that organisational culture should first influence employee attitudes, which would then translate into employee performance (George & Jones 2002). Additionally, a number of authors (Hussein 2011; Judge et al 2001; Schneider et al 2003; Wright & Cropanzano 2007) acknowledge the mediating power of job satisfaction on the relationship between quality of work life and employee productivity. These results demonstrate that organisational culture and quality of work life positively and significantly influence the productivity of employees in the public sector, but this is only attainable through the intermediating action of job satisfaction. Hence, it is job satisfaction that explains why organisational culture and quality of work life exert an influence on employee productivity.

7 Conclusions and suggestions for future research

The aim of this paper is to discuss the influence of organisational culture and quality of work life on job satisfaction and employee productivity in the public sector in South Africa. All three alternative hypotheses formulated in order to achieve the aim of the paper were empirically supported and accepted. This paper contends that organisational culture and quality of work life both exert a positive and significant influence on the job satisfaction of employees in the South African public sector. This paper also submits that organisational culture exerts a greater influence on job satisfaction than quality of work life, perhaps owing to challenges related to the heavy prevalence of dysfunctional organisational cultures in the South African public sector (Mokgolo et al 2012). Furthermore, the paper supports the view that the job satisfaction of public sector employees in South Africa positively and significantly influences their level of productivity, which validates previous research results by Koketso (2011), Mafini and Dlodlo (2014) and Ramasodi (2010). The paper also acknowledges the mediating role of job

satisfaction in the relationship between employee productivity and two factors, namely organisational culture and quality of work life. This observation affirms that both organisational culture and quality of work life contribute to the productivity of employees in the public sector in South Africa, but this contribution is realised through their effect on job satisfaction. Last but not least, this paper extends research evidence on the interplay between the factors considered, from non-African contexts to the previously disregarded public sector in South Africa. Such a focus is of supreme significance, given the plethora of employee productivity challenges facing the public sector in South Africa (Emuze & Smallwood 2013).

This paper contains certain suggestions for future research. Future studies on the same topic could be conducted using samples drawn from other regions in South Africa and beyond, in order to further validate the results of this paper in other geospatial contexts. Since the proposed theoretical framework was exclusively tested among employees in public organisations, the results of this paper could be further extended by testing the same framework among employees in different industries in the private sector or among specific professions within both the public and the private sectors. Moreover, it may be necessary to conduct longitudinal studies on the same topic, in order to test the framework over different time periods, for example after salary increments, during periods of economic decline and after widespread industrial action/s in the same sector. Using a mixed method approach in future studies could facilitate the uncovering of other insights that were not revealed in this paper.

8 Implications for management

As a practical contribution, this paper provides strategic implications for managers who intend to improve the labour relations climate in their organisations within the South African public sector. In the light of the positive interconnection between all the factors examined in this paper, it is important that managers in the public sector provide a working environment that enables employees to perform optimally and to be self-motivated at work (Baumeister & Vohs 2004). This can be attained through the promotion of both healthy organisational cultures and improved quality of work life within the rank and file of employees in the public sector. Healthy organisational cultures can be cultivated through deliberate actions that include valuing employees' innovative ideas and opinions, easily adapting to change, recruiting wisely, encouraging teamwork, motivating employees and ensuring open communication within the organisation (Akta et al 2011).

Managers can enhance quality of work life through practices that include an appropriate management style, in which good work is recognised, working conditions and facilities improved, employees involved in decision making, and autonomy and employee development encouraged (Thompson & Phua 2012). Such actions will have a positive ripple effect on job satisfaction, the end result being happy employees who are more productive (Mafini & Pooe 2013). Given that organisational culture has a greater effect on job satisfaction than quality of work life, it may be necessary to place greater emphasis on creating and nurturing positive cultures among employees in the public sector. In general, more effective organisational cultures, satisfactory quality of work life and high job satisfaction motivate public employees, leading to a tranquil labour relations environment that is characterised by high employee productivity. Employee productivity-centred empirical discourse therefore remains an absolute necessity when focusing on the role of labour relations in South Africa's public sector in stimulating economic growth and prosperity.

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Appendix 1: Measurement scale items

Organisational culture

OC-1: My organisation is a very personal place where people feel like a family and share a lot among themselves.

OC-2: My organisation is a very results oriented one where people are mainly concerned about getting the job done.

OC-3: The management style in my organisation is characterised by hard-driving competitiveness, high demands, and achievement.

OC-4: The glue that holds the organisation together is formal rules and policies such that maintaining a smooth-running organisation is important.

OC-5: The organisation emphasises human development such that high trust, openness, and participation persist.

OC-6: The organisation defines success on the basis of the development of human resources, teamwork, employee commitment, and concern for people.

Quality of work life

QWL-1: I am satisfied with the career opportunities available for me here

QWL-2: My current working hours/patterns suit my personal circumstances

QWL-3: I am satisfied with the training I receive in order to perform my present job

QWL-4: My employer provides me with what I need to do my job effectively

QWL-5: I work in a safe environment

Job satisfaction

JS-1: I find real enjoyment in my job

JS-2: I like my job better than the average person

JS-3: Most days I am enthusiastic about my job

JS-4: I feel fairly well satisfied with my job

Employee productivity

EP-1: I usually make an effort to comply with the rules and regulations of the organisation

EP-2: I am absent from work on very few occasions

EP-3: I usually make an effort to get along with my co-workers

EP-4: As much as possible, I try to do a good job

EP-5: I make an effort to ensure that the needs of customers/clients are met

EP-6: I do not make use of drugs and alcohol during working hours