Predicting Organisational Performance Through Innovation, Quality And Inter-Organisational Systems: A Public Sector Perspective

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ABSTRACT

There remains a constant need for further empirical research on organisational performance in the public sector, in a bid to generate current and relevant solutions. Such an approach could be a panacea for performance-related problems that continue to affect public organisations in developing countries. The purpose of this study was to examine the relationship between organisational performance and three input factors; namely, innovation, inter-organisational systems and quality. A quantitative approach using the survey method was used in which a questionnaire was administered to 272 randomly selected managers and employees of a South African government department. Data were analysed using a combination of descriptive and non-parametric statistics. Spearman's rho was used to measure the strength of the relationships and regression analysis was used to measure the extent to which the input factors predicted organisational performance. Spearman's correlations showed strong positive relationships between organisational performance and all three factors while regression analysis also revealed that the three factors predicted organisational performance. The study is significant in that managers in public organisations can use the findings as a diagnostic tool in performance problems, with a view to enhance organisational performance among public sector organisations.

Keywords: Organisational performance; innovation; inter-organisational systems; quality; public organization; South Africa

INTRODUCTION AND BACKGROUND

*S*ince the emergence of democracy in 1994, the South African government has come up with a plethora of programmes, policy frameworks and other initiatives that are meant to boost the prosperity of the country and its people. A majority of these government schemes are implemented through government departments. The results have been less than pleasing, with very few of government projects having enjoyed success in implementation (Nilsson, 2010). It has been suggested that the failure of many government schemes in South Africa may partially be ascribed to poor performance by public organisations in the country. Many stakeholders use service delivery as the key performance indicator of the public sector (Carrim, 2009). However, the country has been rocked by incessant service delivery protests, with the public expressing its displeasure with the quality of service they are receiving from government through its primary agencies, government departments (henceforth referred to as public organisations) (Julyan, 2011).

The recurring substandard performance of public organisations in South Africa demands empirical attention, since research is the primary generator of theory that can be applied in solving a host of organisational problems (Hornbaek, 2006). In light of this, several researchers took the mantle of investigating performance related problems in South African public organisations. Schwella (2001) assessed the effectiveness of public sector policy. Van Der Heijden and Mlandi (2005) examined the causes of failure and success in the public sector. Minnaar (2006) proposed a framework that could be used to solve performance related problems among public organisations.

Ramseook-Munhurrun, Lukea-Bhiwajee and Naidoo (2010) examined the issue of service quality in the public sector. A number of scholars (Ludy, 2005; Appel, 2006; Ramasodi, 2010; Mafini & Pooe, 2013) also focused on human-related dimensions as the possible impediment to high performance in public organisations. Although all these studies are important contributors to solving performance problems in the South African public sector, it is an indisputable fact that further research is still merited to address the impact of other factors that have not received much empirical attention in the past on organisational performance.

Against this background, this study enters the fray of public organisational performance research from the angle of organisational factors that are critical ingredients of success, yet they have not received sufficient empirical attention in the context of South Africa. The purpose of the study is to examine the relationship between organisational performance and three factors namely innovation, inter-organisational systems and quality management in a South African public organisation. The rationale behind the study is that organisational performance hinges on the effectiveness of input factors. In other words, performance problems can be solved in part, by investigating the interrelationship between individual input factors in the organisation's transformation process and organisational performance (Ericksen & Dyer, 2005). A positive relationship implies that organisational performance can be increased by making the best out of that factor, and vise versa (Watson, Maxwell & Farquharson, 2007). The fact that performance by public organisations in the country continues to be below-par further exacerbates the need for continued empirical introspection of the whole issue. Therefore, based on the foregoing assertions, the present study addresses the following three empirical objectives:

- To establish the relationship between innovation and organisational performance in a public organisation
- To establish the relationship between inter-organisational systems and organisational performance in a public organisation
- To establish the relationship between quality management and organisational performance in a public organisation

THEORETICAL CONSIDERATIONS

Organisational Performance

Organisational performance is commonly conceptualised in simple terms as the actual output or results of an organisation as measured against its intended outputs (or goals and objectives) (Short, Ketchen, Palmer & Hult, 2007). The level of organisational performance is determined by a number of contributing factors that include operational efficiencies, mergers, acquisitions, levels of diversification, organisational structures, top management team composition and style, human resource management, manipulation of the political and/or social influences intruding upon the market conformity (Mankins & Steele, 2005). King (2007) adds that various interpretations of socially responsible behaviours, international or cross cultural activities of expansion and adaptation, and various other organisational and/or sectoral level phenomena are also antecedents to organisational performance. Therefore, organisational performance is a multi-dimensional construct that is influenced by a wide-assortment of factors that are both internal and external to the organisation.

The criteria used to measure performance have remained shrouded in controversy. The existence of this controversy is reflected through the hotchpotch of performance measurement frameworks that have been developed. Examples include the Performance Measurement Matrix, (Keegan, Eiler & Jones, 1989), the Results and Determinants Framework (Fitzgerald *et al.*, 1991) the Performance Pyramid (Lych & Cross, 1991), and the Balanced Scorecard (BSC) (Kaplan & Norton 1996). In addition, Brignall and Modell (2000) and Kloot and Martin (2000) support the adoption of a multi-dimensional approach to the measurement of organisational performance, which reflects the interests of a broader range of stakeholders. Pycraft, Singh, Phihlela, Slack, Chambers and Johnston (2010) suggest the use of historical standards, target performance standards, competitor performance standards and absolute performance standards. However, as suggested by Rouse and Putterill (2003) as well as Pun and White (2005), there is no single framework that suits all organisations. As such, organisation performance is a very complex concept that should be approached in line with the existing context.

Innovation

In recent times, the word 'innovation' has evolved to become a significant part of the language in both the public as well as the private sector. Alegrea and Chiva (2008) suggest that innovation may be perceived as an individual and collective learning process that aims to find new ways of solving problems. Gerwin and Barrowman (2002) define innovation as the creation of better or more effective products, processes, services, technologies, or new ways of doing things as well as the flow of technology and information among the members of an organisation. An innovation system is composed of a set of structural elements: actors in the whole supply chain, networks, institutions (regulations, norms, cognition) and, in some approaches, technology (Jacobsson & Bergek, 2011). The development of innovation in an organisation is based on factors such as the motivation to innovate, the obstacles against innovation and the number of resources available, among others (Rodriguez, 2002).

The concept of innovation has attracted widespread research attention the world over. Empirical evidence supports that the presence of innovation mechanisms in the organisation has a positive influence on a number of key organisational factors such as productivity (Ramstaad, 2005; Sanidas, 2005) and strategic fit and process performance (Carmeli, Gelbard & Gefen, 2010). Innovation is also associated with organisational learning (Jiménez-Jiménez & Sanz-Valle, 2011), organisational performance through transformational leadership (García-Morales, Jiménez-Barrionuevo & Gutiérrez-Gutiérrez, 2011), knowledge management and organisational learning (Liao & Wu, 2010), and the economic performance of an organisation (Evangelista & Vezzani, 2010; Bowen, Rostami & Steel, 2010). It is an important supposition then that in order for organisations and nations to cope with the changes of the 21st century they should employ strategies that could influence their human resources to innovate at all times (Fasoyin, 2006). Based on the aforementioned theoretical considerations, the following hypothesis is proposed:

H$_1$: There is a positive and significant relationship between innovation and organisational performance in a public organisation

Inter-Organisational Systems

Inter-organisational systems are concerned with structures that allow information to be automated between organisations in order to reach a desired common goal (Kim, Ryoo & Jung, 2011). They are formal arrangements that bring together assets (of whatever kind, tangible and intangible) of two or more legally independent organisations with the aim to produce joint value added (Craighead, Patterson, Roth & Segars, 2006). This implies that both inputs and outputs are formally shared by the independent organisations that are involved in the relationship (Nelson, 2006). Since inter-organisational systems involve a number of parties, it is imperative for organisations to identify these parties and to explore and take into consideration their power and interests in order to facilitate successful implementation (Boonstra & de Vries, 2010).

There has been an explosion of research interests focusing on the impact of inter-organisational systems in organisations. Kenia and Johnston (2000) and Kim *et al.* (2011) linked inter-organisational systems to competitiveness and supply chain performance. Choe (2004) found that inter-organisational relationships facilitate the flow of information through value chains. Vaccaro, Parente and Veloso (2010) also linked inter organisational systems to knowledge management tools, innovation and firm performance. Boonstra and de Vries (2010) found that the adoption of inter-organisational systems yields several attractive benefits ranging from close links between the value chains of the organisations, which potentially leads to lower transaction costs and a quicker delivery of goods and services, flexibility, improvement in services and closer partnerships. Radermacher, Karunarathna, Grace and Feldman (2011) also suggest that organisations that have adopted inter-organisational systems tend to post exceptional performance results, as coined by the popular phrase *"partner or perish"*. Consequently, the formation of alliances or global partnerships with other organisations through inter-organisational systems has gained momentum in recent years (Isoraitė, 2009). Therefore, the importance of mutually beneficial exchanges emanating from inter-organisational partnerships cannot be underestimated in any type of organisation. This leads to the following hypothesis:

H₂: There is a positive and significant relationship between inter-organisational systems and organisational performance in a public organisation.
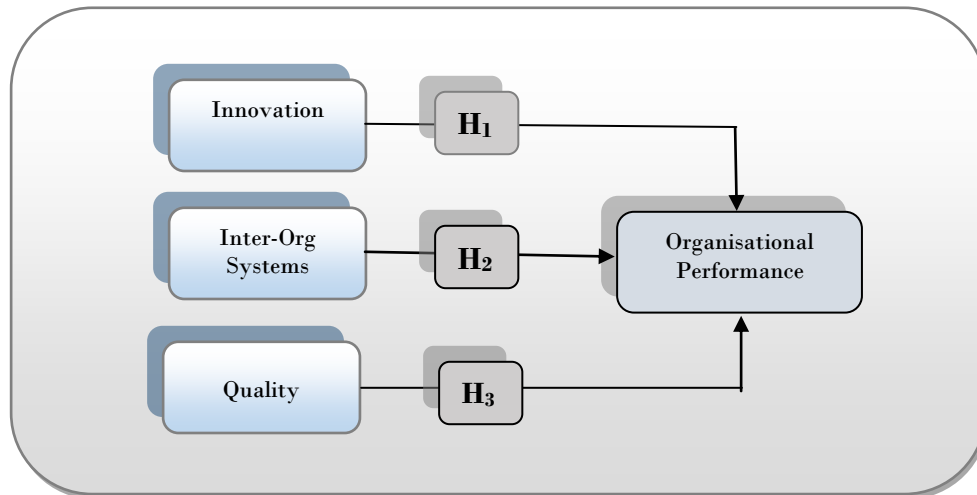
Quality

Quality is concerned with organisational actions designed to ensure consistency or quality in approach, process and output (Lee, 2003). Quality has developed into an important part of corporate strategy; and that only those organisations with advanced quality systems achieve superior organisational performance and remain competitive in the marketplace (Zhang, 2005). Hung, Lien, Yang, Wu and Kuo (2011) suggest that quality has significant and positive effects on organisational learning, and that that both quality and organisational learning have significant as well as positive effects on innovation performance. Prajogo and Sohal (2003) also argue that an organisation's performance is also influenced by the extent to which quality is emphasised in the entire organisation's systems and processes. Lee and Lim (2009) also suggest that the adoption of the well-acclaimed Total Quality Management (TQM) concept, which is a sub-component of quality, can enable organisations to enhance quality, with the aim of improving organisational effectiveness and flexibility. The adoption of and adherence to ISO 9000 standards has also gained recognition as a procedure to enhance quality systems, with obvious positive effects on organisational performance (Tserng & Lin, 2004). In the narrow context of the public sector, the issue of quality in most public sector organisations world-wide has become a topical issue, largely because of the failure by public organisations to meet the expectations of their clients (Ramseook-Munhurrun *et al.*, 2010). Therefore, quality management remains an area that presents a wide spectrum of opportunities for public organisations to tap into (Teicher, Hughes & Dow, 2002). Accordingly, the following hypothesis is put forward:

H₃: There is a positive and significant relationship between quality and organisational performance in a public organisation.

CONCEPTUAL FRAMEWORK

Taking into consideration the literature review as discussed in the foregoing sections, the conceptual framework illustrated in Figure 1 is proposed.

Figure 1. Conceptual Framework

The conceptual framework lists innovation, inter-organisational systems and quality as the drivers or antecedents of organisational performance. As such, this study is intended to test the indicated three hypotheses (H₁, H₂ & H₃). These hypotheses are tested against the following null hypothesis;

H₀: There is neither a positive nor a significant relationship between organisational performance and three factors; namely, innovation, inter-organisational systems and quality amongst public organisations.

RESEARCH METHODOLOGY

A review of literature on innovation, inter-organisational systems, quality and organisational performance was undertaken. A quantitative design using the cross-sectional survey approach was then adopted for the empirical portion of the study. The survey method was deemed appropriate for this study because it easily facilitates the collection of data from large populations, making it easier to develop and administer the research questionnaire while generalising the research findings (Malhotra, 2010).

Participants

The sample for the present study consisted of 272 managers and employees of a South African public organisation. The sampling frame was a list of Gauteng-based management and employees in the organisation and was obtainable from the human resource database of the organisation. Respondents were selected using the simple random sampling technique, which ensures that all elements within the population are eligible for selection as sample elements (Yates, Moore & Starnes, 2010). Green's (1991) rule of thumb which prescribes that no less than 50 participants are suitable for a correlation or regression with the number increasing with larger numbers of independent variables (IVs) was used as the nominal anchor in determining the sample size. In addition, the historical approach was also used by making reference to the studies from which the questionnaire items were adapted.

Instrumentation

In the present study, data were collected through a four-section structured questionnaire. Section A of the questionnaire consisted of items requesting respondents' biographical information on gender, age, period of employment, type of employment, highest qualification and job position. Section B focused on respondents' perceptions on organisational performance at the public organisation. Section C elicited information on respondents' views on innovation in the organisation. Section D requested respondents' views on inter-organisational systems in their organisation. In Section E, respondents were requested to indicate their views on quality issues within their organisation. Questions in Sections B, C, D and E were adapted from a number of studies (Jenkins, Gupta, Mitra & Shaw, 1998; Duncan, Gintei & Swayne, 1998; Taylor, 2000; Ittner, Larcker & Meyer, 2003; Rosemann & DeBruin, 2005; Lau & Sholihin, 2005; Hung, 2006). Since the original questions were applied in environments different from that used in the current study, the process of adaptation involved modifying these questions so that they could suit the context of the current study. The modifications included substantive adjustments to such aspects as language used, grammar, as well as the level of difficulty in each question. With the exception of Section A, the items in the rest of the questionnaire were placed on a five point Likert-type response scale, (from 1 representing strongly disagree and five representing strongly agree).

Data Collection Procedures

Permission to collect data was obtained from the public sector organisation in May 2012. After developing the questionnaires, 500 questionnaires were distributed from the 2nd of July to the 19th of July 2012 to the identified sample of management and employees in the various offices of the public organisation. Administration of the questionnaire was conducted with the assistance of a trained staff member of the public sector organization.

A cover letter was attached to the questionnaire to highlight the purpose of the study. Additionally, a memorandum encouraging staff members to complete the questionnaire was written by the Director General of the public organisation and e-mailed to all members of management and staff prior to the commencement of the administration of questionnaires. Before participating in the questionnaire, respondents were requested to sign an informed consent form. Confidentiality of all respondents was ensured throughout the research process. Participation in the study was voluntary and respondents could withdraw at any time during the research without any fear of victimisation. Of the 500 questionnaires that were initially distributed, 301 were returned. Among these, 29 were eliminated in the screening process, giving a return rate of 54%.

DATA ANALYSIS

For the purposes of the present study, descriptive and inferential statistical analyses were conducted using the Statistical Package of the Social Sciences (SPSS version 21.0). Spearman's correlation and multiple linear regression analysis were used to determine the relationships between variables.

Profile of Participants

The biographic profile of the respondents is reported in Table 1.

Table 1. Biographic Profile Of Respondents

Category	Frequency	Percentage
Gender		
Male	150	55
Female	122	45
Total	**272**	**100**
Age		
≦25	23	9
26-35	135	50
36-45	75	28
46-55	29	10
≧56	10	3
Total	**272**	**100**
Emplyoment Period		
≦2 years	11	41
2-5 years	89	33
6-9 years	39	14
≧ 9 years	33	12
Total	**272**	**100**
Employment type		
Permanent	223	82
Contract	38	14
Part Time	11	4
Total	**272**	**100**
Highest Qualifications		
Matriculation	15	6
Certificate	29	11
Diploma	69	25
Degree	117	42
Postgraduate Degree	40	15
Other (eg. Professional qualifications)	2	1
Total	**272**	**100**
Job Position		
Executive Manager	4	2
Senior Management	18	7
Middle Manager	24	9
Line Manager	48	18
Specialist Staff	74	26
Clerical / Administrative	70	26
Other (eg. General work)	34	13
Total	**272**	**100**

An analysis of the biographic profile of respondents as illustrated in Table 1 reveals that 55% (150) of the respondents were male and 45% (122) were female. After collapsing the ages of the respondents, it emerged that approximately 58% (185) were aged below 35 years. A majority of the respondents (74%; n=200) had been employed in the organisation for less than 5 years. It was also observed that 82% (223) of the respondents were permanently employed by organisation. Additionally, it is noteworthy that 43% (117) of the respondents were

holders of a first degree while approximately 15% (40) of the respondents were holders of a postgraduate degree. In terms of position held, 1.5% (4) of the respondents were executive managers, 7% (18) were senior managers, 9% (24) were middle managers, 18% (48) were line managers, 27% (74) were specialist staff, 26% (70) were clerical or administrative staff and 13% (34) occupied other auxiliary positions such as internships, security and general work.

Validity Of The Measurement Instruments

Validity refers to the degree to which evidence and theory support the interpretations of test scores entailed by proposed uses of tests (Boyce, 2002). In establishing face and content validity, two senior faculty members whose lines of expertise revolve around public management reviewed the questionnaire items. Moreover, the questionnaire was pretested with a conveniently selected sample of 20 respondents at the public organisation. Feedback from the pre-test and the expert reviews was used to facilitate a number of minor revisions to the questionnaire in order to improve its validity in addressing the research objectives (Radhakrishna, 2007). To establish convergent and discriminant validity, Spearman's correlation was employed, as suggested by Agresti and Finlay (2008). Significant correlations existed among the constructs (refer to Table 3), which demonstrates that convergent validity was within acceptable levels. Predictive validity was ascertained through regression analysis (refer to Table 4). High associations observed between the dependant and independent variables point to the existence of high predictive validity in the questionnaire.

Scale Reliability And Operational Definitions

Reliability may be defined as the degree to which a test or procedure produces similar results under constant conditions (Clark & Harcourt 2004). Table 2 reports on the reliability (internal consistency) estimates as well as the operational definitions for all the factors examined in the present study.

Table 2. Scale Reliabilities And Operational Definitions

Factor	Number of Items	Reliability (α)	Operational description
F1. Innovation	12	0.709	This factor is concerned with the creation of better or more effective products, processes, services, technologies, or new ways of doing things as well as the flow of technology and information among the members of an organisation.
F2. Inter-organisational	9	0.821	This factor is concerned with ICT-based systems that allow information to be automated between organisations in order to reach a desired common goal
F3.Quality	8	0.786	This factor is concerned with organisational actions designed to ensure consistency or quality in approach, process and output.
F4.Organisational performance	22	0.794	This factor is concerned with the extent to which the organisation is able to meet its goals

Overall Cronbach Alpha for the entire scale = 0.775

In establishing the reliability of the measurement scale, Cronbach alpha (α) was computed. According to George and Mallery (2003), a common rule of thumb is: '$\alpha \geq 0.9$=Excellent, $\alpha \geq 0.8$=Good, $\alpha \geq 0.7$=Acceptable, $\alpha \geq 0.6$=Questionable, $\alpha \geq 0.5$=Poor, and $\alpha < 5$=Unacceptable'. In the present study, internal consistency scores for all the factors examined as well as the entire scale, as reflected in Table 2, ranged between 0.709 and 0.821. This expresses that the scales used were internally consistent.

Correlation Analysis

The purpose of this study was to establish the relationship between organisational performance and three factors namely innovation, inter-organisational systems and quality in a public organisation. To achieve this purpose, Spearman's rho coefficient was used to determine the degree of association between these factors. The subsequent results are reported in Table 3.

Table 3. Correlation Matrix

Factors	Mean	SD	F 1	F2	F3	F4
F1. Innovation	3.874	0.830	1			
F2. Inter-Organisational	3.786	0.710	0.615**	1		
F3. Quality	3.907	0.711	0.528**	0.644**	1	
F4. Organisational Performance	3.891	0.845	0.613**	0.608**	0.674**	1

N=272. ** Correlation is significant at the 0.01 level (2-tailed). *Correlation is significant at the 0.05 level (2-tailed).

Table 3 reveals that the mean scores for the factors ranged between 3.786 and 3.907. These score portray a heavy inclination towards the 'agree' position on the Likert scale. This suggests that respondents were to a large extent in agreement with the extent to which these factors had been established in the organisation. A comparison of the mean scores discloses that quality was ranked highest ($\bar{x}$ = 3.907) among the factors examined. This finding implies that respondents perceived that the performance of the public organisation is mostly attributable to quality than either innovation or inter-organisational systems. Strong positive inter-item correlations ($0.528 \leq r \leq 0.644$) were also observed between innovation, inter-organisational systems and organisational performance, thereby signifying a significant relationship between them.

Regression Analysis

Since positive relationships were found in the correlation analysis, it was deemed necessary to employ regression analysis in order to establish whether the there were any predictive relationships between the dependant and independent variables. Multiple regression analysis is a statistical technique that can achieve the best linear prediction equation between dependant variables (in this case organisational performance) and independent variables (in this case innovation, inter-organisational systems and quality) (Aldlaigan & Buttle, 2008). Multicollinearity statistics were first assessed to ascertain that the independent variables were not highly correlated. Variance inflation factor (VIF) values ranged between 1.690 and 2.082, which falls within the 1.0 to 4.0 range prescribed by Pan and Jackson's (2008) rule of thumb. Tolerance values ranged between 0.657 and 0.792 which was higher than the recommended minimum of 0.5 (O'Brien, 2007). Therefore, muticollinearity problems associated with regression analysis were almost negligible in the present study. The results are presented in Table 4.

Table 4. Regression Model

Independent Variables	Dependent Variable: Organisational Performance				
	Beta	t	Sig	Collinearity Statistics	
				Tolerance	VIF
Innovation	0.297	5.621	0.000	0.792	1.690
Inter-organisational	0.158	3.692	0.008	0.680	2.082
Quality	0.416	7.655	0.000	0.657	1.794

R= 0.747; Adjusted R^2 = 0.453; F=39.964

The regression model (Table 4) reveals that innovation, inter-organisational systems and quality (independent variables with an adjusted R^2 of 0.453) explain approximately 45% of the variance in overall organisational performance in the public organisation. By implication, about 55% of the variance in organisational performance is explained by other factors not accounted for in this study. Furthermore, amongst the three independent constructs, quality attained the highest Beta value (0.406). This signifies that in a public organisation, quality tends to exert a higher influence on organisational performance than innovation an inter-organisational systems.

DISCUSSION

Hypothesis H_1 which suggested that there is a positive and significant relationship between innovation and organisational performance was accepted. Initial support for this decision is found in the correlation analysis where a strong positive association (r=0.613; p<0.01) was found between innovation and organisational performance. This result demonstrates that when innovation within the organisation increases, organisational performance is also enhanced. Additional support for the decision to accept H_1 rests in the regression analysis where innovation was statistically significant (β =0.297; t = 5.621; $p < 0.000$). This result denotes that innovation is a predictor of

organisational performance in a public organisation. These findings have empirical support. In a study focusing on the impact of organisational learning and innovation on organisational performance, Jiménez-Jiménez and Sanz-Valle (2011) concluded that both factors: organisational learning and innovation, contribute positively to business performance although the relationship is moderated by size and age of the firm, industry and environmental turbulence. Camisón and Villar-López (2012) also confirm that organisational innovation favors the development of technological capabilities and that both organisational innovation and technological capabilities for products and processes can lead to superior organisational performance. In parallel, García-Morales *et al.* (2012) acknowledge that organisational innovation influences organisational performance positively but the relationship is mediated by leadership style and organisational learning. Dauda (2009) further emphasises that in terms of overall organisational performance, innovative organisations are renowned for their high performance in most disciplines of their operations. An earlier study by Vincent, Bharadwaj and Challagalla (2004) also substantiates that innovation is significantly and positively related to superior performance. These findings point to the importance of developing and sustaining a culture of innovation in order to optimise overall performance in the public organisation.

Hypothesis H_2 suggested that there is a positive and significant relationship between inter-organisational systems and organisational performance. The decision taken was to accept this proposition. As endorsement of this decision, there was a strong positive correlation (r=0.608; p<0.01) between inter-organisational systems and organisational performance. This finding typifies the fact that effective inter-organisational systems have a positive stimulus effect on organisational performance. Furthermore, the result of the regression analysis indicate that inter-organisational systems (β =0.158; t = 3.692; p < 0.008) were statistically significant. As such, organisational performance in a public organisation can be predicted through the presence of effective inter-organisational systems. It is noteworthy to attest that the findings of the present study are supported by previous empirical research. For instance, Heijltjes and Witteloostuijn (2003) underscore that inter-organisational systems can be used as a measure of organisational performance since no organisation can prosper without strategic linkages to other organisations. A number of scholars (Ireland, Hitt & Vaidyanath 2002; Choe 2008; Cheung, Myers & Mentzer, 2010) stress the importance of inter-organisational networks developed through inter-organisational systems as an instrument for creating value in a dynamic operational climate. Inter-organisational systems generate capacities for the creation of value for strategic partners, which gives competitive advantage to the organisation (Ranaei, Zareei & Alikhani, 2010). The findings of a study conducted by Ismail (2010) also reveal that adopting inter-organisational systems indirectly improves the operational performance of firms through business process performance but the relationship is influenced by organisational factors. Grabher and Powell (2004) add that through inter-organisational systems, benefits in areas such as risk reduction, obtaining economies of scale and technology exchanges may be enjoyed. It is therefore expedient that managers in public organisations consider inter-organisational systems as a critical ingredient to their corporate strategies.

Hypothesis H_3, which suggested that there is a positive and significant relationship between quality and organisational performance was supported and accepted in the current study. For confirmation, a strong positive correlation (r=0.674; p<0.01) was observed between quality and organisational performance. This finding implies that quality influences organisational performance proportionally, that is, effective quality systems will lead to enhanced organisational performance whereas ineffective, defective and malfunctioning quality systems lead to a decline in organisational performance. Moreover, in the regression analysis, it was observed that quality (β =0.416; t = 7.655; p < 0.000) was statistically significant. This finding suggests that quality is an indicator of organisational performance in a public organisation. Consistently, Prajogo and Sohal (2003) argue that an organisation's performance is also influenced by the extent to which quality is emphasised in the entire organisation's systems and processes. A previous study conducted by Chong and Rundus (2004) also substantiates the existence of symbiosis between quality and organisational performance. These results are further affirmed by Lin, Chow, Madu, Kuei and Yu (2005), Yeung (2008) and Onuwa (2008), who support the importance of quality systems and practices as crucial determinants of organisational performance in various contexts. Moreover, Macinati (2008) identified six factors namely management leadership and commitment to quality, quality strategic planning, human resource training, participation and support, organisational coordination among units, supplier quality management and process management as the core areas of the quality management systems that are the best predictors of organisational performance in a public organisation. Should these areas be given adequate attention, performance of a public organisation will increase exponentially. As such, quality and its associated systems remain an important and enduring part of any high performance public organisation (Lee, 2003).

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Limitations And Implications For Further Research

Like any other research project, the present study has its limitations. First, the results of the study were restricted to a small sample composed of 272 respondents who were based in one geographic location. This places a limitation on the extent to which the findings can be generalised to other contexts and populations. In view of this fact, future research may be conducted using larger sample sizes or a broader geo-spatial coverage that includes other provinces or regions. Second, the study was limited to the structural relationship between organisational performance and three input factors only. Future research could investigate the interplay between organisational performance and other factors that were excluded from this study. Third, the questionnaire items used in the present study were adapted from several studies that were originally designed for other purposes and contexts. It could be interesting then, to conduct future research on the same topic using questionnaire items that are originally intended for this study instead of using hybrid adaptations. Fourth, the general limitations associated with the quantitative approaches used in this study (e.g. correlations and regression) are acknowledged. Future studies therefore could use more robust statistical tools such as structural equation modeling to investigate fundamental relationships between key organisational factors. Fifth, since the present study adopted the cross-sectional mode, longitudinal studies could be conducted in the future in order to track the permutations in the relationships between organisational performance and the three factors over an extended period of time.

CONCLUSIONS

The purpose of the present study was to investigate the relationship between organisational performance and three organisational factors namely, innovation, inter-organisational systems and quality. Correlation analysis showed strong positive relationships between organisational performance and the three factors. Regression analysis revealed predictive relationships between organisational performance and the three factors. Based on these results, it can be concluded that innovation, inter-organisational systems and quality have a significant and predictive impact on organisational performance in a public organisation. Mean-scores also showed that organisational performance in the public organisation was more attributable to quality than innovation and inter-organisational systems.

The current study is not without managerial implications. The public sector in South Africa and in other developing countries faces numerous performance related inundations, which require solutions on an ongoing basis. The findings of the present study propose that part of the solution to performance problems in the public sector has to do with the advancement of innovation efforts, intensification of inter-organisational systems and optimisation of quality in all the organisations operations. Once these key factors become effective, they become part of the embodiment of high performance in the organisation. The parameters proposed in the present study could therefore be employed within public organisations with the prime intention of streamlining performance structures. When performance-related problems arise, managers in public organisations can also refer to the findings of the present study. The public organisation's innovation, inter-organisational and quality apparatus should be among the input factors that should also receive attention in all diagnostic endeavours where organisational performance is the problematic factor. Since quality exerts the highest influence on organisational performance, managers in public organisations should direct more strategic emphasis on quality than on innovation and inter-organisational systems.

AUTHOR INFORMATION

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