CORPORATE PERFORMANCE INDICATORS: THE CASE OF UNIVERSITIES

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Abstract

This paper re-examines the long standing and unresolved debate regarding the use of performance indicators in higher education. This paper aims to identify the primary variables that comprise university performance from the perspectives of academics within universities of technology in South Africa. A structured questionnaire was administered to a conveniently selected sample of 507 academics recruited from five universities of technology in South Africa. Using the exploratory factor analysis technique, five indicators were used as sub-dimensions to measure university performance were identified. These were 1) recognition, 2) image, 3) collaboration, 4) spin-off, 5) employability and 6) research. Overall, the research results suggests that these five performance indicators can assist South Africa's universities of technology to achieve a higher level of institutional performance. The boards responsible for running universities of technology should consider which strategic management approaches they are currently utilising and streamline them to cement their competitive advantage and superior performance.

Keywords: Higher Education Institution, Universities Of Technology, Academics, University Performance

1. INTRODUCTION AND BACKGROUND TO THE STUDY

Since the emergence of democracy in South Africa in 1994, the transformation of the higher education landscape has been the underlying subject of much debate amongst different strategic constituencies (Habib, 2010). The transformation was necessitated by the need to alter the higher education landscape in order to implement distinctive departures from the well-acknowledged effects of the apartheid education system (Schulze, 2008). Some of the transformation imperatives that were adopted included; amongst others, the creation of a three-tier university system consisting of traditional universities, comprehensive universities and universities of technology, the changing arrangement of student and staff distribution, the formation of new regulatory bodies, strengthened research emphases and shifting instructional methods are some of the symbolic dynamics characterising these tectonic shifts (Mafini, 2014). However, the process is inundated with a plethora of challenges, such as decreasing public funds, increasing availability and capacity of information and communication technologies, increasing and widening participation, higher education institutions are continually forced to focus on restructuring and repositioning themselves in order to be locally relevant and globally competitive, all of which continue to stall progress in terms of university performance (Nundullal and Reddy, 2011). This provides fertile ground for continued foci on empirical research directed to university performance in South Africa.

According to Van Staden (2010), a performance-oriented based higher education sector is critical in meeting South Africa's current and future development needs (Garnett, 2005). Despite this view, a major emerging debate relates to how to define and measure university performance. However, in South Africa, the National Plan for Higher Education (Ministry of Education, 2001) prescribes the following five indicators;

(1) technology-based programmes with attributes such as technological competence and undergraduate career-oriented education

(2) Research and innovation through technology and technique in strategic areas

(3) Entrepreneurial and innovative ethos

(4) National and international impact and recognition and

(5) Sustainability in engagement and practice as the performance indicators that may be used to measure university performance in the country.

The above-mentioned indicators signify that in the context of South Africa, any well performing university is expected to have these five characteristics. In order to ensure that university performance objectives are met, the Department of Higher Education and Training (DOHET) superintends all higher education institutions in the country, and promulgates institutional and composite annual progress reports that reveal whether or not the laid down objectives have been realised in higher education (Pricewaterhouse Coopers, 2014). This strict monitoring and regulation ensures that university boards in higher education institutions are held accountable for the performance of their institutions.

2. UNIVERSITIES OF TECHNOLOGY

Amongst the three types of universities created through the transformation matrix in South Africa, much of the limelight has been centred on Universities of Technology. In 2004, six Universities of Technology were created out of the former Technikons (Technical Colleges) with full authority to offer various higher education programs up to

doctorate level (Du Pre 2009:4). The creation of these institutions went a long way to accommodate the ever increasing higher education population in the country. To this extent, the University of Technology Sector has experienced rapid growth in student numbers and applied research in recent times. For instance, Pricewaterhouse Coopers (2014) reports that by 2012, student numbers at universities of technology had almost doubled, 75% of all students were blacks, new funding and quality assurance systems had been put in place and universities of technology have become more receptive to the needs of the people of South Africa. One study by Badat (2007) also reported that a majority (n=55%) of black prospective university students indicated that they preferred to attend universities of technology than the other forms of universities. These developments are microcosmic of the increasing relevance and impact and of universities of technology in modern-age South Africa.

Despite their increasing relevance and impact to the South African higher education landscape, universities of technology continue to face persistent challenges in their operations. For instance, the critical shortage of skills at universities of technology is well documented (Walwyn, 2008). Furthermore, the demand for enrolment places at universities of technology is increasing and continuously outstrips the available spaces supplied. As an example based on empirical data provided, only 21% of all students who applied to universities of technology were enrolled in 2010 (Wilson-Strydom and Fongwa, 2012). Yet another challenge pertains to the placement of graduates from universities of technology, since the shrinking job market is now awash with people with irrelevant qualifications (Cele and Lekhanya, 2014). Still, perception problems persist, since many in both traditional and comprehensive universities as well as the industry regard universities of technology as inferior (Mbali, 2006). Chetty (2003) mentions that most universities of technology have low research outputs since they concentrate on more of teaching rather than research, notwithstanding the well-validated nexus between teaching and research.

The feeling amongst other stakeholders is that universities of technology still require more sophisticated education and training for their students in order to sustain the competitiveness of the workforce (Du Pre, 2009). In line with the Stakeholder Theory (Freeman, 1984), organisations should pay particular attention to the views of their stakeholders, for the later are key role players in determining the success of the university. For universities of technology, key stakeholders include *inter alia* other higher education institutions, communities, government, publishers, industry and alumni. These constituencies can play an important role in suggesting performance indicators that should receive particular attention. As a result, universities of technology face the pressure of realigning their strategic focus and efforts to gain sustainable competitive advantage in order to achieve above market performance.

3. UNIVERSITY GOVERNANCE IN SOUTH AFRICA

At institutional level, public universities in South Africa, including universities of technology, are governed by boards or councils appointed by the Department of Higher Education and Training. University councils in the country generally comprise of about 24 members, of whom at least 60 percent are expected to be external members (Ministry of Education, 2001). In contrast with systems in which there is direct control of higher education by the state, and where policies are determined politically by the state and where there is centralised bureaucracy that controls the major elements of university administration, the councils of each institution are given a mandate to superintend over the activities of their respective universities (Council on Higher Education, 2002). These councils have the ultimate responsibility for the institutional mission, the financial position of the institution and for issues of public integrity, including the academic character of the institution as well as its strategy and operational plans (Government of South Africa, 1999). Each institution typically has a Chancellor and a executive Vice Chancellor, the later who, with the assistance of his/her deputies oversee the implementation of university strategy (Department of Higher Education, 2001) This university strategy includes, amongst other issues, the indicators with which to gauge performance in various facets of the university's operations. These indicators are therefore a subject of frequent deliberation in the meetings of university councils, in order to ensure that academic standards are being met by each institution.

4. STATEMENT OF THE PROBLEM

Against the above-mentioned backdrop, this paper acts as a response to the performance challenges facing universities of technology in South Africa. The aim of the paper is to identify indicators that may be used to determine the performance of South African universities of technology. In order to achieve this aim, the study was conducted using the perspective of academics at various universities of technology in South Africa.

Continuing scientific research on universities of technology is merited, given the impact and relevance of such institutions to the South African higher education environment. Since universities of technology face many performance related challenges, it is necessary to provide information on how such challenges may be mitigated. The best of such information is empirically derived. Furthermore, the general lack of research focusing on the performance of South African universities of technology leaves a research gap that still needs to be filled. Although there is some evidence of previous research which placed primary attention on South African universities (e.g. Cele and Lekhanya, 2014; Chetty, 2003; Mbali, 2011, Nundullal and Reddy, 2011; Walwyn, 2008) none of the conclusions reached were based on data collected from academics at universities of technologies. This paper was intended to address these existent research gaps. The results of the paper are important in that they may be used by management and other academic authorities in South African universities of technology in diagnosing performance-related challenges and initiating pragmatic solutions to these challenges.

5. METHODOLOGY

A thorough literature review provided a framework for establishing the importance of the study and acted as a benchmark for delineating the boundaries of the study as recommended by Wolman, Kruger and Mitchell (2011). The quantitative research design was adopted for conducting the empirical part of the study. A quantitative study was appropriate in order to employ multivariate techniques to ascertain variables that may comprise institutional performance of universities of technology in South Africa

5.1. Sample

The target population of the study was restricted to academics who were fulltime employed for more than three years and deemed *au fait* with the functioning of their institutions. The sample consisted of 507 academics that were recruited from five universities of technology located in the different provinces of South Africa. The sample was selected with the belief that it would provide worthwhile information which would be relevant in the study. Respondents were recruited using the non-probability convenience sampling technique. This method was used because it made it easier to contact only those that were accessible at the time of research. A review of previous studies investigating university performance (Bakewell and Gibson-Sweet, 1998; Mazarin, 1998; Ivy, 2001; Rindfleish, 2003) shows that the use of non-probability sampling is common. The profile of these respondents is reported in Table 1.

Table 1. Profile of Respondents

Demographic parameter	*Classifications*	*N*	*n*	*%*
Gender	Males	507	289	57
	Females		218	43
Age group	<30 years	507	66	13
	30-39 years		172	34
	40-49 years		160	32
	50-59 years		29	16
	≥60 years		28	5
Highest academic qualification	Diploma/degree	507	44	9
	First degree		197	39
	Masters		193	38
	Doctorate		71	14
Employed period	<3 years	507	71	14
	3-6 years		239	47
	7-10 years		126	25
	≥10 years		71	14
Current position	Junior lecturer/lecturer	507	246	49
	Senior lecturer/ associate professor		209	41
	HOD/dean/professor		52	10
Faculties of respondents	Management Sciences	507	188	37
	Engineering		112	22
	Humanities		101	20
	Applied Sciences		71	14
	Other		35	7

An analysis of the demographic profile of respondents (Table 1) shows that the majority of respondents (57%; n= 289) of the respondents were male. In terms of the age groups, the largest group was composed of respondents who were aged between 30 and 30 years (34%; n=172). With reference to employment period, 47% (n=239) of the respondents had been employed as academics for periods ranging between three and six years. With regard to academic qualifications, 39% (n=197) of the respondents were holders of a first degree while 38% (n=193) were holders of a Master's degree. In terms of their current occupational positions, 49% (n=246) of the respondents were employed as either junior lecturers or lecturers. With regard to their faculties, 37% (n=188) of respondents were in Management Sciences, 22% (n=112) were in Engineering, 20% (n=101) were in Humanities and 14% (n=71) were in Applied Sciences.

5.2. Research Instrument

A self- administered, structured questionnaire was used in the data collection. The first part of the questionnaire consisted of brief questions that related to demographic information about the respondents while the second part, was specifically designed to capture latent variables that represents university performance. The six items of university performance investigated in this study were adopted in the literature (Ma, 2004; Ma and Todorovic, 2005) and measured using a five (5) point Likert scale anchored on 1=strongly disagree to 5=strongly agree.

5.3. Data Collection Procedures

After obtaining ethical clearance from each participating university of technology, data was collected between May and August 2014. Administration of the questionnaires process was conducted with the assistance of trained contacts at each institution. Prior to distributing the questionnaire, the academics were informed that their participation in the survey was strictly on a voluntary basis and their anonymity and confidentiality was guaranteed. The right to withdraw at any point in time was also highlighted. Out of the 1000 questionnaires that were initially distributed, 528 questionnaires were returned. Among these, 11 questionnaires were discarded because of either incorrect completion of the questionnaires or too many fields of data missing. This culminated in an eventual sample of 507 usable questionnaires, which represents a response rate of nearly 51%. This

response rate was deemed as satisfactory, based on Sekaran's (2003) recommendation that response rates of above 30% are adequate in surveys (validation).

5.4. Data Analysis

In this study, data were analysed with the aid of the Statistical Packages for the Social Sciences (SPSS version 22.0) software. Descriptive statistics were used to analyse the demographic profile of respondents as well as their perceptions towards the scale items. Measures of central tendency were used to determine the importance of item on the measurement scale. Exploratory factor analysis was used to identify the indicators for university performance.

6. RESEARCH RESULTS

The research results section discusses the psychometric properties of the measurement scale, exploratory factor analysis and descriptive statistics on perceptions of respondents.

6.1. Scale Accuracy

Psychometric properties of the measurement scale were assessed through a consideration of its reliability and validity. In terms of reliability, the Cronbach alpha coefficient for the entire scale was established at 0.904, thereby confirming the internal consistency and reliability of the scale (Malhotra, 2010). In addition, the exhibited composite reliability (CR) level exceeded the estimate criteria of greater than 0.7 which is recommended as adequate for internal consistency of the construct (Chin, 1988). These results indicate that the scale with all its items adequately captures the construct under investigation thus making a valuable contribution to the measurement of university performance. The reliabilities and accuracy analysis statistics are reported in Table 2.

Table 2. Accuracy Analysis Statistics

Research Constructs	*Cronbach's Alpha Test*		*CR*	*AVE*	*Factor Loading*	*Highest SV*
	Item-total	**Alpha value**				
University Performance	-	0.904	0.898	0.595	-	0.429

Three types of validities; namely, face, content and construct (convergent and discriminant) validities were assessed in this study. Face validity was ascertained through a panel review of the questionnaire, the process of which involved three faculty members whose lines of research focus on marketing. Content validity was ascertained by ensuring that the selection of items in this study was based on an extensive review of the literature and pilot testing the questionnaire with 50 conveniently selected respondents. The respondents used in the pilot study were not involved in the main survey. These protocols gave a strong content validity of the variable being measured. To ascertain construct validity, the measurement scale showed uni-dimensionality in the factor analysis procedure, (i.e. loading on one construct only with no cross-loading), thus affirming construct validity. The item-total correlations reported in Table ranges between 0.628 and 0.796, all of which are above the suggested threshold of 0.50 indicating that the instrument meets the standards of construct validity. To ascertain convergent validity, both the CR (>0.70) and the AVE (>0.50) satisfied the recommended threshold suggested by Hair et al (2010) and Byrne (2010), which signified adequate levels of convergent validity. Furthermore, Table 4 shows high factor loadings (>0.50) that resulted from the factor analysis procedure. Additionally, the high Cronbach value (>0.70) reflects the degree of cohesiveness among the scale items, which serves as an indirect indicator of convergent validity (Nunnally and Bernstein1994). Discriminant validity was established by checking if the AVE was greater than the shared variance (SV) in line with Fornell and Larcker (1981) recommendation. AVE (0.595) is greater than the SV (0.429).

6.2. Exploratory Factor Analysis (EFA)

The university performance factor structure was extracted through the application of the exploratory factor analysis procedures. However, in order to ascertain that the data captured was suitable for exploratory factor analysis, the Kaiser-Meyer Olkin (KMO) test and the Bartlett's test of Sphericity were conducted, as recommended by Field (2009). Satisfactory results were computed for both these tests and the results are illustrated in Table 3. The Kaiser-Meyer Olkin test yielded sampling adequacy of 0.856 which is within the acceptable range of between 0.5 and 1.00, implying that the data for this study is considered "marvellous" for other factor analysis procedures (Kaiser, 1974). Similarly, the Bartlett's test of Sphericity revealed chi-squares of 1955.496 (df=15), which was at significant level of p=0.000 ;< 0.05 affirming that factor analysis is suitable for the data set (Malhotra, 2010).

Table 3. The KMO measure and the Bartlett Test Results

CONSTRUCTS	*KMO MEASURE*	*BARTLETT'S TEST*		
		Approximate Chi-Square	*Degrees of freedom*	*Significance level.*
University Performance	0.856	1955.496	15	0.000

The criterion for the factor extraction procedure for the university performance scale was determined by eigenvalues (>1), percentage of total variances explained (above 50 %) and high factor loadings (>0.50). The factor analysis results shown in Table 4 indicate that all the items intended to measure university performance loaded satisfactorily onto this factor such that no rotation of factors was performed.

Table 4. Uni-dimensional factor structure of university performance construct

Description	*Factor 1*
Recognition by industry and society for flexibility and innovativeness (UP1)	0.829
Our university is highly regarded by industry(UP2)	0.870
Conduct research in partnership with non-academic professionals(UP3)	0.800
Spin-off resulting from a number of ventures(UP4)	0.866
Graduate students employability (UP5)	0.843
Emphasis placed on research (UP6)	0.731
Eigen value	**4.079**
Total variance explained	**67.982**
Common variance explained	**67.982**

As shown in Table 4, all six intended items to measure university performance loaded on one factor labelled university performance (eigenvalue=4.079), which accounted for 67.982% percent of the total variance explained with item loadings ranging between 0.731 and 0.870. The eigenvalue extraction process illustrated that only one factor was appropriate to capture all the dimensions of university performance.

Furthermore, the university performance items tapped on the extent to which the university accomplished its objectives in industries, community and business. This feature is aptly captured through the perceptions of respondents towards each item in the questionnaire. These perceptions are reported in Table 5.

Table 5. Condensed Descriptive Statistics on the Perceptions of Respondents

Respondents	*UP1*		*UP2*		*UP3*		*UP4*		*UP5*		*UP6*	
Opinion	n	%	n	%	n	%	n	%	n	%	n	%
Strongly disagree	13	3	13	3	24	5	26	5	26	4	25	5
Disagree	54	11	65	13	78	15	66	13	68	13	47	9
Neutral	133	26	141	27	151	30	146	29	134	26	111	22
Agree	183	36	184	36	149	29	161	32	167	33	175	34
Strongly agree	124	24	104	21	105	21	108	21	122	24	149	30
TOTAL	507	100	507	100	507	100	507	100	507	100	507	100
Mean	3.64		3.58		3.43		3.41		3.45		3.78	
Std dev	1.006		1.013		1.067		1.037		1.101		1.121	
Variance	1.120		1.026		1.139		1.076		1.213		1.257	

Likert Scale:1= S/Disagree, 2= Disagree, 3= Neutral, 4= Agree, 5=Strongly agree

7. DISCUSSION

Item one elicited the views of respondents regarding the importance of recognition by industry and society for flexibility and innovativeness in a university of technology. The item attained a mean value of 3.64 with a standard deviation of 1.006 and a corresponding variance of 1.120. The value of the mean score depicts an inclination towards the strongly disagree position on the Likert Scale. In addition, 60% (36% and 24%) of the respondents either agreed or strongly agreed respectively with the statement while 26% were neutral and only 14% of the respondents disagreed with the statement. These results demonstrate that most academics regard recognition by industry and society as playing an important role in the reputation and recognition profile of a higher education institution. An examination of the literature relating to services marketing highlights the quality of impact and recognition as being important to the development of competitive advantage (Mazzaroll, 1998). A study by Aaker (1989) discovered that managers of service organisations ranked recognition for quality (impact) as a significant source of competitive advantage. In marketing education, it is also recognised that the success of the institution is linked to impact, image and recognition (Ma and Todorovic, 2011). For universities of technology, these results advance that such institutions should buttress their collaborations with industries and the society in order to ensure that the actions between these parties reciprocate in a mutual fashion. Thus, universities of technology have the challenge of developing initiatives for enhancing their cooperation with their stakeholders in the form of industry and society in order to increase their performance.

Item two elicited the views of respondents concerning the extent to which their institutions were regarded by industry. This question dovetailed into item one which assessed the importance of this recognition in stimulating institutional success. The recorded mean for the reputation item was 3.58 and the standard deviation of 1.013 with a variance of 1.026. The mean score suggests an inclination towards the 'strongly agree' position on the Likert Scale.

There were significant differences between those who disagree (total of 16%) and those who agree (total of 57%), while only 27% were neutral. These results suggest that their institutions were well regarded by industry. This is important, given that a majority of graduates from such institutions of higher learning are recruited as either employees or graduate trainees by the same industry (Mafini, 2014). Furthermore, industry is an important player to universities of technology in the sense that many employees of different organisations throughout the economic spectrum are either part time or full time students at various institutions of higher learning, inclusive of universities of technology (Cele and Lekhanya, 2014). Industry is also an important contributor to the curriculum at universities of technology (Schulze, 2008). The results of this study are consistent with the results obtained in several studies (Duckworth and Seligman, 2005; Ivy, 2001; Vermont, 2005) that identified institutional image and reputation as one of the strategic tools higher

education institutions use as indicators of university performance. Therefore, academics place sufficient importance on institutional image and reputation as an indicator of the performance of universities of technology.

Item number three elicited information on the importance of conducting research in partnership with non-academic professionals. The recorded mean for the item was 3.43 and the standard deviation1.067 with a variance of 1.139. The mean suggests that some importance was placed by academics on the item as an indicator of university performance. An overall 20% (5%+ 15%) of the respondents disagreed, 50% (29% + 21%) agreed and only 30% were uncertain or neutral to question three. The findings confirm the impact of collaboration and partnership as a critical factor in assessing university performance. Extant literature (Cortese, 2003; Kezar, 2005) also considers partnerships with external stakeholders a determining factor that significantly has an impact on any institutional performance.

Generally, high education institutions have realised that both the potential and need for engagement and practice with industry, community and business linked to a sustainable venture (Van Staden, 2010). In particular, the engagement of universities of technology on a national level is demonstrated through collaborations and services rendered to their various stakeholders such as industry, corporates, government, communities and society in general (Du Pre, 2009). Partnerships with the business, community and industry emphasise the importance of understanding the market (Lategan, 2008). In order to establish a niche market, higher education institutions would need to consider forming partnerships, collaborations and engage with business and industry (Newby, 2003). Valiulis (2003) reiterates that it is imperative for higher education institutions to constantly search for new methods of collaborations with partners in the economy if they want to stay competitive. Accordingly, higher education institutions are being encouraged to collaborate and form partnerships to focus increasingly on the global markets.

Item number four elicited information on Spin-off (positive outcomes) resulting from a number of ventures that the institution has undertaken. This item had a mean value of 3.41 with a standard deviation of 1.037 and a variance of 1.076. This mean suggests that some importance was placed by academics for the variable as an indicator of university performance. On the one hand, a mere 15% and 13% respectively strongly disagreed and disagreed for the statement. On the other hand, 32% of the respondents agreed and 21% strongly agreed respectively while 29% of the respondents were neutral. These results are interesting because they clearly confirm the role of spin-of activities as indicators of university performance. These results are in sync with observations made by a number of scholars (Di Gregorio and Shane, 2003; Etzkowitz, 2002; Wright, Vohora and Lockett, 2003, 2004) who confirm the number of spinoff ventures are a reflection of university performance. In addition, Shea *et al.* (2005) refer to the case of Massachusetts Institute of Technology as the reference example of an institution that has successfully converted new scientific discoveries into spin-of opportunities. As a consequence, most higher education institutions are looking for opportunities and are improving their strategies in dealing with the vestige of academic entrepreneurship (Maydeu-Olivares and Lado, 2003).

The fifth item focused on the employability of graduates from universities of technology. The recorded mean for the employability item was 3.45, a standard deviation of 1.101 with a variance of 1.213, which all suggested that some importance was placed on the statement by academics for the item as a PI of university performance. The significant difference between those who agrees, 57 %(33% + 24%) and those who disagree; 17 %(4% and 13%) also confirmed Harvey's (2001) assertion that employability should also regarded as an indicator of the institution's performance. The results of this study are further supported by a study conducted by other previous researches (Bratti, McKnight, Naylor and Smith, 2004; Johnes and McNabb, 2003; Smith and Naylor, 2001) who provided empirical evidence affirming employability as a unique aspect of university performance. This presents a strong challenge for universities of technology to self-introspect in order to determine whether their graduates are employable or not.

The sixth item focused on research focus amongst universities of technology. It emerged from the responses that the sixth item named research focus is a good indicator of university performance, since the recorded mean for the research item was 3.78, while the standard deviation and the variance were 1.121 and 1.257respectively. This is further supported by the findings that only 22% of the respondents were undecided, 5% strongly disagreed, 9% disagreed, 34% agreed and 30% strongly agreed. According to Garnett (2005), performance in in higher education institutions may be quantified by measures such as research outputs to ensure competitive advantage and survival of these institutions. In South Africa, higher education institutions are dependent on these research outputs for survival and to obtain more funding, which means that research outputs are a reasonable measure of university performance. A study by Brown and Sharp (2003) provides empirical evidence to prove that there is a need to create a culture in the public sector which supports and values research. In addition, Neuman and Guthrie (2001), in analysis of consequences for research in higher education recommend for corporatisation of research. As such, universities of technology need to adopt a paradigm shift and embrace the culture of research if they are to be successful in their operations.

8. CONCLUSION

The paper contributes to the existing body of knowledge on university performance by providing empirical evidence regarding the indicators used to measure university performance. The paper aimed to elicit the perceptions of academics towards the performance of universities of technology in South Africa. The paper identified six measures of university that are applicable to universities of performance; and these are recognition by industry and society for flexibility and innovativeness, institutional image and reputation, partnership with non-academic professionals, institutional entrepreneurship, employability of graduates and emphasis on research. The results of this study

demonstrate the suitability of performance indicators mentioned in assessing the performance of universities of technology and can further assist university boards to best present their institutional performance in developing a positioning in the minds of its stakeholders. Performance indicators identified in this study can also be utilised by other higher education institutions to redesign specific programmes and services in order to introduce new courses and consequently provide an institution a competitive advantage in an ever increasing competitive higher education environment. This will enable universities of technology to generate a favourable impression amongst their diverse stakeholders.

9. LIMITATIONS AND OPPORTUNITIES FOR FUTURE RESEARCH

The findings of this research should be viewed in the light of its limitations which can provide impetus for further research avenues within higher education institutions in South Africa. The most prominent limitation is that the study employed a non-probability convenience sampling, which does not allow for an objective assessment of the exactitude of the sample finding (Malhotra, 2010). Another weakness of this technique used, is that even though the sample included respondents from five of South African's six universities of technology, the study focused exclusively on the academics and disregarded the views of non-academic staff. Thus the study had a retrospective focus as it is not representative of the entire population and will make it difficult to generalise the findings. It is therefore suggested that qualitative research, which can probe deep into a phenomenon to provide a profound understanding and more meaningful results, be conducted. Further studies should consider the multidimensional nature and longitudinal aspect of university performance.

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