

DOI: <https://doi.org/10.5281/zenodo.7369399>

MANAGERIAL EFFECTIVENESS AT A RESEARCH INSTITUTION IN SOUTH AFRICA

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ABSTRACT

Most developed countries achieved economic growth through increased research and development. Therefore, countries continuously commercialise their research output resulting in the creation of strong economies. This is not the case with most developing countries. Developing economies, for example South Africa still lags in terms of research output and its commercialization despite huge financial investment made by the government each year to revive research institutions. Financial investment without considering soft aspects such as management competencies is not enough to bring success in research institutions. This study therefore argues that assessing management competencies in research institutions is one of the strategies that can be adopted to revive performance of research institutions in developing countries. It is therefore upon this background that the objectives of this research were two-fold, thus: (i) to assess employees' perceptions of management competencies among former technical employees in management roles and (ii) to measure if there are differences in perceptions among employees in different gender and age groups. A quantitative descriptive approach methodology, with the use of a structured questionnaire was employed to collect data from a minimum sample of 142 employees at a research institution in South Africa. Statistical Package for Social Sciences (SPSS) was utilised to conduct descriptive analyses that include mean, standard deviation and analysis of variance (ANOVA). The findings revealed that employees had negative perceptions on the management competencies (direction establishment, sense of purpose, people alignment, risk taking, inspirational and ethical standard) of former technical employees in management roles. It was also found that there were no differences in perceptions of management competencies among employees in different gender and age groups. These findings led to major theoretical and practical implications aimed at improving management and output within research institutions.

Keywords: Perceptions, management competencies, research institutions.

INTRODUCTION AND BACKGROUND

Most developed countries achieved economic growth through increased research and development (Shehata, ElMashad & Hassan, 2017:39). Consequently, these countries (i.e. United States of America, Germany, China) continuously commercialise their research output resulting in the creation of strong economies (Commonwealth Education, 2019:2). On the other hand, developing economies still fall behind in terms of research output and its commercialisation (Cirera, Pacchioni & Maloney, 2017:1). South Africa is not exempted from this problem. To resolve this situation the South African government established research institutions through its National Research Foundation Act 28 of 1998. Examples of these research institutions include the South African Medical Research Council (SAMRC) and the Council for Scientific and Industrial Research (CSIR) (WITS, 2019:1). Despite the establishment of these research institutions the shortfall still exists.

Managerial authorities, such as Hough, Thompson, Strickland and Gamble (2011:44) and Dias and Borges (2017:104) argued that establishing research institutions without implementing effective management is not enough to ensure the achievement of set goals and objectives. Fulmer (2017:59) and Bass and Avolio (2014:167) deplore that most technical institutions, including research institutions, have not realised the importance of effective leadership and management in their programmes. Subsequently, the failure to establish sound management in technical institutions leads to decreased employee morale, employee performance and productivity (Buchanan & Huczynski, 2014:135). Among other issues, ineffective management in technical organisations is most likely caused by the inability to handle the transition of technical experts to management positions. Leadership and management competencies should be considered essential for the success of these research institutions (Buchanan & Huczynski, 2014:135; Dias & Borges, 2017:104). Dias and Borges (2017:105) and Fulmer (2017:59) bemoan the fact that most organisations including research institutions do not realise the importance of measuring employees' opinions on management competencies. It is therefore upon this background that this study sought to understand the perceptions of emp

THE DEFINITION OF LEADERSHIP

Leadership is defined as a process through which both the individual and the team are influenced or inspired to act for the purpose of achieving organisational objectives (Hersey, Blanchard & Johnson, 2014:13). Wehrich and Koontz (2015:35) argued that leadership is a process of influencing people to act willingly with enthusiasm to achieve organisational goals.

MANAGEMENT AND LEADERSHIP COMPETENCIES

There is a consensus regarding what should be expected as management and leadership competencies (Goleman, 2008:32; Perren & Burgoyne, 2010:144; Voon, 2011:24). Buchanan and Huczynski (2014:113) as well as Irfanullah and Allah (2016:144) described competencies of leadership and management as direction establishment, sense of purpose, people alignment, self-confidence, innovation and risk-taking, motivation and inspiration, and ethical standards. These competencies are explained in the next subsections.

Direction establishment

People in managerial positions should be able to establish direction for the organisation and its employees. Perren and Burgoyne (2010:144) stated that for direction to be established, a clear vision must be formulated to show where the organisation is going. It is also important for managers to clearly understand the mission of the organisation and to share it appropriately so that employees can be directed on how to perform their duties (Voon, 2011:24). Leadership and management should be able to set goals and objectives that are specific, measurable, attainable, realistic and time bound (Irfanullah & Allah, 2016:144).

Sense of purpose

There must be a clear sense of purpose among the managers and leaders of an organisation. This is seen through the way people in managerial positions handle themselves when carrying out organisational duties (Goleman, 2008:32). Voon (2011:24) found that the actions of leaders and managers should show commitment towards the achievement of an organisation's goals and objectives. Consequently, they need to encourage employees to act in a manner that shows a clear sense of purpose.

People alignment

People alignment refers to employees being aligned to the values and norms of an organisation. According to Wellman (2017:586), it includes the ability to streamline employees towards actions that lead to goal accomplishment. It is, therefore, important for leaders and managers to encourage employees to act according to organisational expectations (Wehrich & Koontz, 2015:35). The goals and objectives of the organisation as well as the strategies for achieving them must be clearly explained so that employees understand how work should be carried out.

Self-confidence, innovation and risk-taking

Considering that the environment is constantly changing, it is important for organisations to continually evolve and strive for improvement (Voon, 2011:24). Continuous improvement occurs when leaders and managers display self-confidence through their actions (Perren & Burgoyne, 2010:144). Self-confidence is, therefore, a necessary attribute which leads to objective thinking. This calls leaders and managers to be creative and innovative while pursuing their mandates. According to Yuan, Sheng and Soutar (2015:147), leaders and managers should promote an environment where employees can take risks.

Motivation and inspiration

Employees who are inspired and motivated perform their duties beyond expectations. Therefore, the ability to inspire employees is a skill that leaders and managers must learn and uphold (Perren & Burgoyne, 2010:144). Wellman (2017:596) argued that the most successful leaders and managers are those who inspire their employees to act in ways which lead to the attainment of organisational goals and objectives.

Ethical standards

Good leadership and management are attributed through the ability to observe ethical standards within the organisation (Yuan *et al.* 2015:147). According to Vosloban (2012:660), ethical standards refer to the norms, values and general ways in which employees are expected to behave. These also refer to the ways in which leaders and managers of an organisation should act.

PROBLEM STATEMENT

Evidence shows that developed countries achieved economic growth through increased research and development (Shehata *et al.* 2017:39). Consequently, these countries (i.e. United States of America, Germany, China) constantly commercialise their research output resulting in the creation of strong economies. On the other hand, developing economies still fall behind in terms of research output and its commercialisation (Cirera *et al.* 2017:1). South Africa is not exempted from this problem. To resolve this situation the South African government established research institutions through its National Research Foundation Act 28 of 1998. Despite the establishment of these research institutions there is still a gap in the amount of research output and its commercialisation. Managerial authorities, such as Hough *et al.* (2011:44) and Dias and Borges (2017:104) argued that establishing research institutions without implementing effective leadership and management is not enough to ensure the achievement of set goals and objectives. Fulmer (2017:59) deplored that most technical institutions, including research institutions, have not realised the importance of effective leadership and management in their programmes.

OBJECTIVES OF THE STUDY

This study had two objectives as follows:

- (i) assessed employees' perceptions of management competencies among former technical employees in management roles.
- (ii) to measure if there are differences in perceptions among employees in different gender and age groups.

RESEARCH METHODOLOGY

A quantitative descriptive research design was employed to conduct the investigation. The investigation on management competencies in a research institution in South Africa, was based on a conceptual theoretical framework developed by Bolden (2004:15) and later employed by Buchanan and Huczynski (2014:62). The target population were employees reporting to former technical employees in managerial roles. The research institution had a total population of 371 employees at management level countrywide (South Africa, 2017:2). Based on the Slovin's Formula (Tejada & Punzalan, 2012:130), the minimum sample size for this population was 142.

$$n = \frac{N}{1 + N(e)^2}$$

Where n = the desired sample size

e = probability of error (i.e. the desired precision, e.g. 0.05 for 95% confidence level)

N = the estimate of the population size

A non-probability method using a convenience sampling technique was used to select the sample, accommodating the homogeneous elements of employees at the research institution in South Africa. This sampling method was also used in similar studies; therefore, it would not compromise the quality of the research (Saunders, Lewis & Thornhill, 2012:146; Malhotra, 2010:54). The data was collected using a self-administered survey questionnaire accessed online from SurveyMonkey®. The questionnaire was adapted from the instrument used in the theoretical framework of Buchanan and Huczynski (2014:64) and adjusted to suit the present study. The collected data was analysed using SPSS and prepared by evaluating it for missing data, extreme outliers and normalities. The descriptive statistics were then analysed to understand the characteristics of the data using frequency and percentage frequency for discrete data and mean, standard deviation, and Skewness and Kurtosis for ordinal or continuous data (Babbie & Mouton, 2015:124). The validity of the study was established using factor analysis (principal component analysis), while the reliability was confirmed through Cronbach's Alpha coefficient analysis (Babbie & Mouton, 2015:117; Evanschitzky, Baumgarth, Hubbard, & Armstrong, 2007:411). A pilot study was carried out by ten employees of the research institution in order to ensure that the data collection tool was free from spelling and grammatical errors.

RESEARCH FINDINGS

EMPLOYEES' PERCEPTIONS OF MANAGEMENT COMPETENCIES AMONG FORMER TECHNICAL EMPLOYEES IN MANAGEMENT ROLES

The researcher measured employees' perceptions on management competencies on factors that include direction establishment, sense of purpose, people alignment, risk-taking, inspiration and ethical standards. The perceptions on these sub-constructs were measured with the use of mean and standard deviation. A 5-point Likert scale was used as a measure scale with 1 = strongly agree, 2 = agree, 3 = neutral, 4 = disagree and 5 = strongly disagree. In this study, the mean value of 0.1 – 2.0 represented a positive perception and 2.1 – 5.0 represented a negative perception. Before continuing with further descriptive analyses, it was necessary to perform Kurtosis and skewness tests to indicate if data could be considered as normal for such analysis. All the items considered in this study were within the expected range between -2.0 to 2.0. It was therefore appropriate to carry on with further descriptive analyses. The findings on the perceptions of employees on management competencies are presented in Table 1.1.

Table 1.1. Employees' perceptions of management competencies among former technical employees in management roles

MANAGEMENT COMPETENCIES					
Dimensions and items		Mean	Standard deviation	Kurtosis	Skewness
Direction establishment		2.55	1.09	-0.63	0.58
ED1	My manager is able to establish the vision of the future	2.75	1.2	-1.09	0.31
ED2	My manager is able to develop strategies for change to achieve goals	2.78	1.17	-1.05	0.25
ED3	My manager is able to decide action plans	2.46	1.08	-0.51	0.61
ED4	My manager is able to decide on timetables for work to be done	2.32	1.01	-0.59	0.98
ED5	My manager is able to allocate resources efficiently	2.45	0.99	0.08	0.75
Sense of purpose		2.50	1.03	0.31	0.57
SP1	My manager has a strong drive for responsibility	2.48	1.06	-0.59	0.51
SP2	My manager focuses on completing the task	2.35	1.03	0.06	0.77
SP3	My manager displays vigour in pursuit of goals	2.58	1.02	-0.31	0.56
SP4	My manager displays persistence in pursuit of goals	2.59	1.03	-0.40	0.46
People alignment		3.01	1.25	-1.01	-0.07
PA1	My manager can communicate the vision of the organisation	3.0	1.40	-1.35	0,00
PA2	My manager is able to communicate the strategy of the organisation	3.06	1.41	-1.34	-0.10
PA3	My manager can create teams that accept validity of goals	2.94	1.34	-1.25	0.05
PA4	My manager can decide on the structure in my department	2.88	1.16	-0.77	0.07
PA5	My manager can staff my department effectively	3.08	1.11	-0.60	-0.25
PA6	My manager is capable of developing policies, procedures and monitoring them	3.10	1.13	-0.75	-0.23
Self-confidence, innovation and risk-taking		2.64	1.11	-0.80	0.25
RS1	My manager displays ability to take risks	2.63	1.08	-0.76	0.16
RS2	My manager displays originality in the approach	2.71	1.15	-0.98	0.13

RS3	My manager shows self-confidence	2.59	1.12	-0.61	0.40
RS4	My manager shows a sense of personal identity	2.64	1.11	-0.88	0.31

MANAGEMENT COMPETENCIES (Continue)					
Dimensions and items		Mean	Standard deviation	Kurtosis	Skewness
Motivational and Inspiring people		2.21	1.29	-1.23	-0.28
MI1	My manager is capable of motivating people	3.32	1.26	-1.17	-0.31
MI2	My manager is capable of inspiring people	3.33	1.25	-1.15	-0.31
MI3	My manager is capable of energising people to overcome obstacles	3.30	1.28	-1.29	-0.30
MI4	My manager can satisfy human needs	2.89	1.37	-1.34	-0.22
Ethical standards		2.09	0.94	1.00	0.79
ES1	My manager is directed by policies of the organisation	1.70	0.72	1.82	0.16
ES2	My manager follows procedures set by the organisation	1.69	0.70	1.00	1.21
ES3	My manager is guided by the values of the organisation	1.77	0.79	2.86	0.89
ES4	My manager values honesty	2.49	1.15	-0.62	1.29
ES5	I have trust in my manager	2.82	1.26	-1.05	0.44

Employees' perceptions of management competencies among former technical employees in management roles at sub-construct level

The results indicated negative perceptions from the employees on management competencies at all the sub-construct levels. The mean value for each of the sub-construct levels were above 2.0. The sub-construct with the worst results was people alignment with a mean value of 3.01, followed by self-confidence, innovation and risk-taking at 2.64. Direction establishment had a mean value of 2.55, sense on purpose 2.5 and inspiration with a mean value of 2.21. The strongest sub-construct, although still negatively perceived was ethical standards with a mean value of 2.09. The detailed results are illustrated in Figure 4.6. It is thus implied that the Research Institution is not preparing technical employees well enough to take management roles in the organisation.

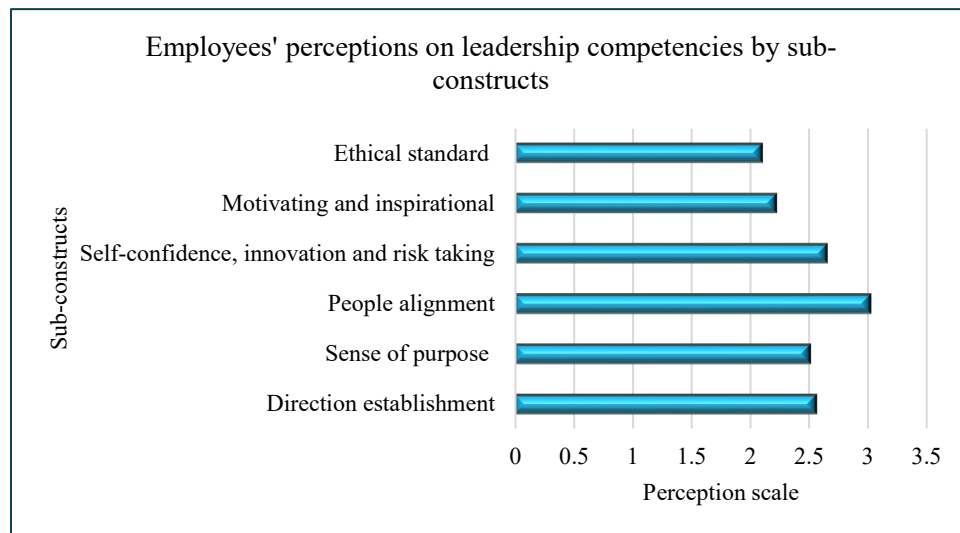


Figure 1.1 Employees' perceptions of management competencies at sub-construct level

Employees' perceptions of management competencies among former technical employees in management roles at item level

A negative perception from the employees was found on all 28 items regarding management competencies. The ten worst perceived items were related to the six statements on people alignment and the four statements on motivation and inspiration as presented in Figure 4.7. The results of the mean values for these statements, in order of highest to lowest mean results were as follows:

- my manager is capable of inspiring people (MI2) with a mean value of 3.33,
- my manager is capable of motivating people (MI1) with a mean value of 3.32,
- my manager is capable of energising people to overcome obstacles (MI3) with a mean value of 3.30,
- my manager is capable of developing policies which incorporates monitoring approach (PA6) with a mean value of 3.10,
- my manager can staff my department effectively (PA5) with a mean value of 3.08,
- my manager can communicate the strategy of the organisation (PA2) with a mean value of 3.06,
- my manager can communicate the vision of the organisation (PA1) with a mean value of 3.0,
- my manager can create teams that accept validity of goals (PA3) with a mean value of 2.94,
- and my manager can satisfy human needs (MI4) with a mean value of 2.89,
- my manager can decide on the structure in my department (PA4) with a mean value of 2.88.

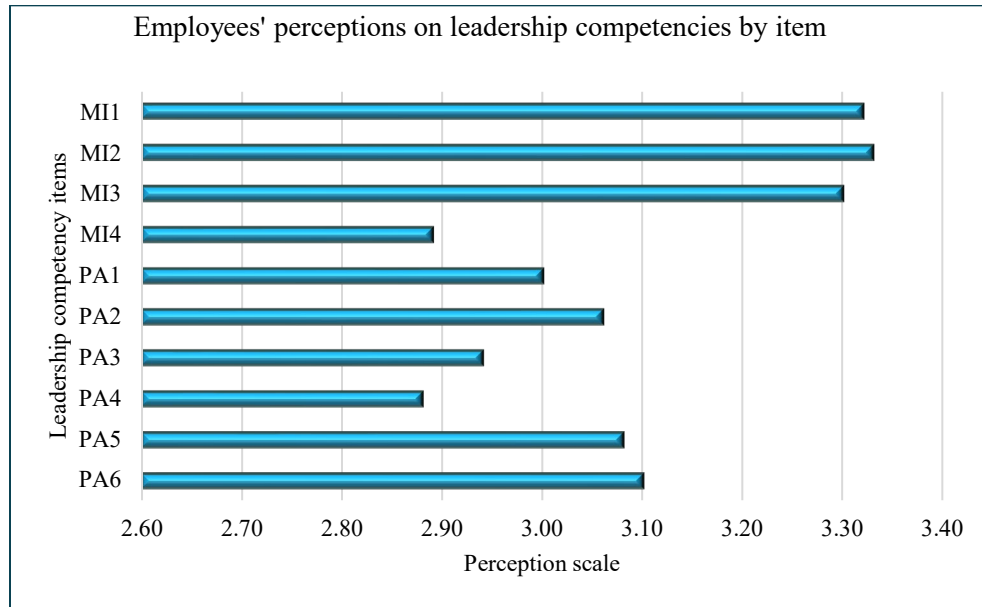


Figure 1.2 Employees' perceptions of management competencies at item level

MEASURING THE DIFFERENCE IN PERCEPTIONS AMONG EMPLOYEES IN DIFFERENT BIOGRAPHIC GROUPS

Analysis of variance (ANOVA) was employed to measure the possible differences in perceptions among participants of different gender and age groups, with the F-ratio and p-value as indices for interpretation. When the F-ratio is close to 1 and $P > 0.05$, no difference in perception is found (Saunders *et al.* 2012:69). The results of the ANOVA are presented in Table 1.2.

Table 1.2 ANOVA Results

Independent Factors		Gender		Age	
Dependent Constructs		F	Sig.	F	Sig.
Direction establishment	Between groups	2.08	.128	1.66	.178
	Within groups	Reject H1a		Reject H2a	
Sense of purpose	Between groups	.62	.541	1.51	.214
	Within groups	Reject H1b		Reject H2b	
People alignment	Between groups	.53	.590	.20	.899
	Within groups	Reject H1c		Reject H2c	
Ethical standards	Between groups	1.04	.355	1.66	.179
	Within groups	Reject H1d		Reject H2d	

Independent Factors		Gender		Age	
		F	Sig.	F	Sig.
Self-confidence, innovation and risk-taking	Between groups	1.68	.191	.23	.872
	Within groups	Reject H1e		Reject H2e	
Motivation and inspiration	Between groups	.46	.629	1.67	.177
	Within groups	Reject H1f		Reject H2f	

Perception on management competencies versus gender

The findings in Table 1.2 indicate that employees in different gender groups had no statistically significant difference in their perceptions on direction establishment as a sub-construct for management competencies. The results from the ANOVA test indicated the $F = 2.08$ and $p = 0.128$ which is above the acceptable value of 0.05. Based on these results hypothesis H1a that states that there is a statistically significant difference in perceptions of management competence (direction establishment) among employees in different gender groups is rejected at $p < 0.05$ significant level.

The results also showed that employees in different gender groups had no statistically significant difference in their perceptions on sense of purpose as a sub-construct for management competencies as signified by ANOVA results of $F = 0.62$ and $p = 0.541$. Therefore, hypothesis H1b that states that there is a statistically significant difference in perceptions of management competence (sense of purpose) among employees in different gender groups is rejected at $p < 0.05$ significant level.

The findings in Table 1.2 also indicate that employees in different gender groups had no statistically significant difference in their perceptions on people alignment. This is evidenced by the results from ANOVA with $F = .53$ and $p = 0.590$. Based on these results hypothesis H1c that states that there is a statistically significant difference in perceptions of management competencies (people alignment) among employees in different gender groups is rejected at $p < 0.05$ significant level. It is also evident that employees in different gender groups had no statistically significant difference in their perceptions on ethical standards as signified by ANOVA results, $F = 1.04$ and $p = 0.355$. This implies therefore that hypothesis H1d that states that there is a statistically significant difference in perceptions of management competence (ethical standards) among employees in different gender groups is rejected at $p < 0.05$ significant level.

It is also evident as given in Table 1.2 that employees in different gender groups had no statistically significant difference in their perceptions on self-confidence, innovation and risk-taking as a sub-construct for management competencies. This is evidenced by the results from ANOVA where the F-value = 1.68 and $p = 0.191$. Based on these results hypothesis H1e that states that there is a

statistically significant difference in perceptions of management competence (self-confidence) among employees in different gender groups is rejected at $p < 0.05$ significant level.

Finally, the results also showed that employees in different gender groups had no statistically significant difference in their perceptions on motivation and inspiration as a sub-construct for management competencies as signified by ANOVA results, with $F = 0.46$ and $p = 0.629$. This implies therefore that hypothesis H1f that states that there is a statistically significant difference in perceptions of management competence (motivation) among employees in different gender groups is rejected at $p < 0.05$ significant level.

Perceptions on management competencies versus age groups

Table 4.2 indicates that employees in different age groups had no statistically significant difference in their perceptions on direction establishment as a sub-construct for management competencies. This is evidenced by the results from ANOVA with $F = 1.66$ and $p = 0.178$. Based on these results hypothesis H2a that states that there is a statistically significant difference in perceptions of management competence (direction establishment) among employees in different age groups is rejected at $p < 0.05$ significant level.

The results also showed that employees in different age groups had no statistically significant difference in their perceptions on sense of purpose as a sub-construct for management competencies as signified by ANOVA results of $F = 1.51$ and $p = 0.214$. This implies, therefore, that hypothesis H2b that states that there is a statistically significant difference in perceptions of management competence (sense of purpose) among employees in different age groups is rejected at $p < 0.05$ significant level.

Findings in Table 1.2 also indicate that employees in different age groups had no statistically significant difference in their perceptions on people alignment as a sub-construct for management competencies. This is evidenced by the results from ANOVA results with $F = 0.20$ and $p = 0.899$. Based on these results hypothesis H2c that states that there is a statistically significant difference in perceptions of management competence (people alignment) among employees in different age groups is rejected at $p < 0.05$ significant level. It is also evident that employees in different age groups had no statistically significant difference in their perceptions on ethical standards as signified by ANOVA results with $F = 1.66$ and $p = 0.179$. This implies, therefore, that hypothesis H2d that states that there is a statistically significant difference in perceptions of management competence (ethical standards) among employees in different age groups is rejected at $p < 0.05$ significant level.

The results in Table 1.2 further show that employees in different age groups had no statistically significant difference in their perceptions on self-confidence, innovation and risk-taking as a sub-construct for management competencies. This is evidenced by the results from ANOVA where $F = 0.23$ and $p = 0.872$. Based on these results hypothesis H2e that states that there is a statistically significant difference in perceptions of management competence (self-confidence) among employees in different age groups is rejected at $p < 0.05$ significant level. The results finally show

that employees in different age groups had no statistically significant difference in their perceptions on motivation and inspiration as a sub-construct for management competence as signified by ANOVA results, $F = 1.67$ and $p = 0.177$. This implies, therefore, that hypothesis H2f that states that there is a statistically significant difference in perceptions of management competence (motivation and inspiration) among employees in different age groups is rejected at $p < 0.05$ significant level.

CONCLUSIONS ON OBJECTIVES

Conclusion on objective 1

Objective 1 aims to assess employees' perceptions of management competencies among former technical employees in management roles. The results indicated that the participants had negative perceptions on the management competencies of former technical employees in management roles. The 28 items included in the questionnaire on management competencies were all met with negative responses. The mean values on the sub-constructs were 3.01 for people alignment, 2.64 for self-confidence, innovation and risk-taking, 2.55 for direction establishment, 2.5 for sense of purpose, 2.21 for motivation and inspiration and 2.09 for ethical standards.

Conclusion on objective 2

Objective 2 aimed to measure if there are differences in perceptions among employees in different gender and age groups. The results from the ANOVA analysis found that gender and age have no influence on the perception of the participants on management competency. The details of the results are displayed in Table 1.2.

IMPLICATIONS FOR PRACTICE

The results showed that the participants had negative perceptions on the management competencies of technical employees who transitioned to management roles. Descriptive analysis provided evidence that these managers failed to communicate the vision of the organisation. It was also shown that they were not able to communicate the strategy of the organisation, to create teams that accept the validity of goals or to decide on the structure of their departments. Based on the results they also failed to staff their departments effectively and to develop policies which incorporate a monitoring approach. Furthermore, it was indicated that they were not capable of motivating, inspiring and energising employees and could not satisfy human needs. The following recommendations are thus made, guided by the results of the study.

Communicate the vision of the organisation

Every organisation carry a vision and it is important for management to understand the importance of this vision. The vision gives direction to the institution for the future and managers should firstly understand the vision themselves and then communicate it clearly to the employees. The employees need to grasp the goals and objectives of the institution.

Communicate the strategy of the organisation

Strategies are game plans through which goals and objectives are achieved. Managers should contribute in formulating the strategies that are adopted by the research institution. For managers

to share the strategies with the employees, they should have a thorough understanding thereof. They should also understand the role of the employees in the effectiveness of the institution.

Create teams that accept validity of goals

Team building is an essential responsibility of every manager. They should understand their employees and what motivate them to convert them into effective team players. Managers should further ensure that the employees understand and accept the objectives of the institution, since that will lead to success.

Decide on the structure of the department

Technical employees who are promoted to management positions should be equipped with knowledge on the structure of the different departments. Relevant training and support should be provided for new managers to develop a working structure in their departments. This is required for the effective allocation of responsibilities.

Build the capability to staff the department effectively

Managers should continuously evaluate their departmental requirements in order to identify the human resources needs. Failure to source the right employees could lead to failure in a department and ultimately an institution.

Develop policies which incorporates monitoring approach

Departments function well under the guidance of effective policies. Policies are also good measures of how organisational activities should be performed. Developing such policies requires managers to have a good understanding of the vision, mission and objectives of the organisation. New managers should, therefore, receive training in this regard and solid support should be provided.

Motivate and inspire people

The work of a leader is carried out through people. It is therefore important for managers to develop mechanisms through which they motivate their subordinates. Employees should be motivated through the enrichment and enlargement of their roles and by being part of decision making in the institution. Managers should lead by example and show appreciation for their employees. They need to be compassionate regarding human needs and family responsibilities.

LIMITATIONS OF THE STUDY

Considering that this study employed the quantitative research method through a structured questionnaire. This method does not allow participants to express their own views and is limited to the provided constructs. Secondly, only six sub-constructs were included in the questionnaire, yet there are other constructs that could be significant to management competencies. Thirdly, the study sample involved a single research institution. It is therefore implied that responses provided cannot be generalised to other research institutions in South Africa. Fourthly this study was carried out using a cross-sectional research approach over six months. This means that the study does not

capture a change in the perceptions of participants over time. Lastly the opinions of the managers were not considered in the research.

RECOMMENDATIONS FOR FUTURE RESEARCH

This study identified several gaps that can be exploited by future researchers. The use of the qualitative research method, including interviews, could allow participants to express their own views, leading to an informed data set. The use of alternative conceptual frameworks can also be considered since perceptions might be different when measured to other management competencies. A wider study population could be targeted by including different research institutions using a longitudinal research processes which will capture any changes in perceptions over time. Managers could also be included in a future study to identify the challenges they face during the transition period.

CONCLUSION

This chapter concludes the study and offers discussions of the results. A general negative perception of the management competencies of previous technical employees were identified. It was found that gender and age do not influence these perceptions. The six sub-constructs tested were confirmed to be significant as management competencies. A positive relationship between management competencies and employee performance was identified as well as between employee performance and organisational performance. It was established that management competencies influence employee performance at varying levels. These findings answer the research question effectively, therefore, the study objectives have been met.

REFERENCES

1. BABBIE, E. & MOUTON, J. 2015. *The practice of social research*. 2nd ed. Cape Town: Oxford University Press.
2. BASS, B.M. & AVOLIO, B.J. 2014. *Improving organizational effectiveness through transformational leadership*. Thousand Oaks. CA.: Sage Publications.
3. BOLDEN, R. 2017. What is leadership? Leadership South West Research Report 6, University of Exeter, Centre for Leadership Studies.
4. BUCHANAN, D. & HUCZYNSKI, A. 2014. *Organisational behavior: An introductory text*. 5th ed. Harlow: Pearson Education limited.
5. CIRERA, X., PACCHIONI, E.A.G. & MALONEY, W. 2017. *Why poor countries invest too little in R & D*. [Online]. Available from: <https://voxeu.org/article/why-poor-countries-invest-too-little-rd> [Accessed: 30/05/2019].
6. COMMONWEALTH EDUCATION. 2019. Research institutes in South Africa. [Online]. Available from: www.commonwealthofnations.org/sectors-south_africa/education/research_institutes/ [Accessed: 30/05/2019].
7. DIAS, M.A.M.J. & BORGES, R.S.G.E. 2017. Performance and leadership style: When do leaders and followers disagree? *Mackenzie Management Review*, 18(2):104-129.
8. EVANSCHITZKY, H., BAUMGARTH, C., HUBBARD, R., & ARMSTRONG, J.S.
9. 2007. Replication research's disturbing agenda. *Journal of Business Research*, 60(7):411–415.

10. FULMER, R.M. 2017. The evolving paradigm of leadership development. *Organisational Dynamics*, 25(4):59 -73.
11. GOLEMAN, D. 2008. What makes a leader? *Harvard Business Review*, November – December.
12. HERSEY, P., BLANCHARD, K. & JOHNSON, D.E. 2014. *Management of organizational behaviour*. 8th ed. Englewood Cliffs, NJ.: Prentice Hall.
13. HOUGH, J., THOMPSON, A.A., STRICKLAND, A.J. & GAMBLE, J.E. 2011. *Crafting and executing strategy: Creating sustainable high performance in South Africa: Text, Readings and cases*. 2nd ed. United Kingdom: McGraw-Hill Higher Education.
14. IRFANULLAH, K. & ALLAH, N. 2016. The leadership styles and the employees' performance: A review. *Gomal University Journal of Research*, 32(2):144-150.
15. MALHOTRA, N.K. 2010. *Marketing research: an applied orientation*. 6th ed. Upper Saddle River, NJ.: Pearson.
16. PERREN, L. & BURGOYNE, J. 2010. *Management and leadership abilities: an analysis of texts, testimony and practice*. London: Council for Excellence in Management and Leadership.
17. SAUNDERS, M., LEWIS, P. & THORNHILL, P. 2012. *Research Methods for Business Students*. 5th ed. England: Pearson Education Limited.
18. SHEHATA, S.M., ELMASHAD, N.M. & HASSAN, A.M. 2017. Current review of medical research in developing countries: A case study from Egypt. *Intech Open*.
19. SOUTH AFRICA. 2017. Government system, structure and functions in South African government. SA [Online]. Available from: <http://www.gov.za/about-government/government-system/structure-and-functions-south-african-governemnt> [Accessed: 27/07/2019].
20. TEJADA, J.J. & PUNZALAN, J.R.B. 2012. On the misuse of Slovin's formula. *The Philippine Statistician*, 61(1):129-136.
21. UNIVERSITY OF THE WITWATERSRAND (WITS). 2019. Scholarly research and related resources: Research institutions (SA). [Online]. Available from: <https://libguides.wits.ac.za/c.php?g=145381&p=953593> [Accessed: 30/05/2019].
22. VOON, M.C. 2011. The influence of leadership styles on employees' job satisfaction in public sector organisations in Malaysia. *International Journal of Business Management & Social Science*, 2(1):24-32.
23. VOSLOBAN, R.I. 2012. The influence of the employee's performance on the company's growth – a managerial perspective. *Procedia Economics & Finance*, 3:660-665.
24. WEIHRICH, T.J. & KOONTZ, M. 2015. Personal factors associated with leadership. *Journal of Psychology*, 25:35-71.
25. WELLMAN, N. 2017. Authority or community? A relational models theory of group-level leadership emergence. *Academy of Management Review*, 42(4):596-617.
26. YUAN, G., SHENG, V. & SOUTAR, G.N. 2015. The role of ethical behavior in the relations between leader styles and job performances. *Conference of Corporate Responsibility*.