

The planning and administration, and self-management competencies of managers in manufacturing business

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PREFACE

The reader's attention is drawn to the following:

- The dissertation has been submitted in the form of two research articles.
- Dr LJ van Staden was the supervisor of the study and assisted with the planning and design of the study, as well as the supervision of the different chapters and the two articles.
- The specifications for the targeted journals in terms of page numbers, font and font sizes have been omitted to ensure technical consistency throughout the dissertation. The researcher specifically followed the Harvard style guidelines of North-West University for the entire dissertation.
- The first article (presented in chapter 4) was submitted to the *Journal of Contemporary Management* (a Department of Higher Education and Training (DHET) accredited journal) and was **accepted for publication**.
- The second article (presented in chapter 5) the *Journal Acta Commercii* (a Department of Higher Education and Training (DHET) accredited journal) and was **accepted for publication**. The dissertation was language edited by Ms C. van der Walt (Registration number with SATI 1000228). The letter confirming the language editing can be found in Appendix C.

ABSTRACT

Competition in the manufacturing industry is continuously growing due to the constantly evolving business environment. Factors such as globalisation, diversity of the workforce, increased competitiveness, improving technology, increased workload and the link between work and social life encourage competition amongst manufacturing businesses. For this reason it is vital to consider the importance of managers and the competencies they possess. The changing circumstances require new skills in management to address the growing challenges. It is important for a manager to possess managerial competencies so as to be successful and with that, establish the successful running of a business. Hence managers are expected to continually monitor the business objectives which are an important determinant of obtaining a sustainable competitive advantage. Manufacturing businesses have become more competitive, since customers are demanding higher quality products, better service and delivery within shorter time frames. The manufacturing industry plays a vital role in South Africa's diverse economy. This research aimed at obtaining comprehensive information pertaining to the planning and administration competencies and self-management competencies for top-level and middle-level managers in manufacturing businesses.

The sample consisted of 343 respondents from 67 different manufacturing businesses in four provinces of South Africa. A quantitative, descriptive research design was implemented, while a non-probability sampling technique was applied. The data was collected through a self-administered questionnaire compiled by the researchers. Results indicated that managers revealed a good to very good level of planning and administration competency which embraced information-gathering and problem-solving, planning and organising, time management as well as budgeting and financial management skills. Further to this, a significant and positive relationship exists between managers' information-gathering and problem-solving, as well as planning and organising competencies, also between managers' time management, and budgeting and financial management competencies. The main contribution of this study is that if managers have good knowledge of the identified competencies and associated key elements they can enhance their personal and business performance. This research aims at obtaining comprehensive information pertaining to self-management competencies of top-level and middle-level managers and at determining whether a relation exists between integrity and ethical conduct, between personal drive and resilience, as well as between work-life balances on the one hand and self-awareness and -development on the other – all of which are components of their self-management competency.

The results revealed that a significant and positive relation exists between managers' integrity and ethical conduct, and between personal drive and resilience, as well as a significant positive relationship between work-life balance on the one hand and self-awareness and -development on the other – all of which are components of their self-management competency.

Managers need to develop and display effective planning and administration as well self-management competencies in order for personal and business success. The main outcome of this study is that if managers have good awareness and understanding of the identified competencies and related key elements, they can use to enhance their personal and business performance.

OPSOMMING

Mededinging in die vervaardigingsindustrie is besig om onafgebroke toe te neem weens die konstant uitbreidende sake-omgewing. Faktore soos globalisering, diversiteit van die werksmag, toenemende mededingendheid, verbeterende tegnologie, toename in werk-las, en die skakel tussen werk en sosiale lewe is besig om faktore te beïnvloed wat mededinging onder vervaardigingsondernemings aanwakker. Om hierdie rede is dit van die allergrootste belang om rekening te hou met die belangrikheid van bestuurders en die bevoegdhede waaroor hulle beskik. Die veranderende omstandighede vereis nuwe bestuursvaardighede om die toenemende uitdagings die hoof te bied. Dit is belangrik dat 'n bestuurder oor bestuursbevoegdhede moet beskik om sukses te behaal en daarmee saam die suksesvolle bestuur van 'n onderneming te vestig. Gevolglik word daar van bestuurders verwag om deurentyd die besigheidsdoelwitte, wat 'n belangrike determinant is van die verkryging van 'n volhoubare mededingende voorsprong, te monitor. Vervaardigingsondernemings het meer mededingend geword omdat kliënte aandrang op produkte van 'n hoër gehalte, beter diens en aflewering binne korter tydraamwerke. Die vervaardigingsbedryf speel in deurslaggewende rol in Suid-Afrika se diverse ekonomie. Hierdie navorsing was daarop gerig om omvattende inligting met betrekking tot die beplannings- en administrasiebevoegdhede of selfbestuursbevoegdhede van topvlak- en middelvlakbestuurders in vervaardigingsondernemings in te win.

Die steekproef was saamgestel uit 343 respondente uit 67 verskillende vervaardigingsondernemings in vier provinsies van Suid-Afrika. 'n Kwantitatiewe, beskrywende navorsingsontwerp is geïmplementeer, terwyl 'n nie-waarskynlike steekproefnemingsstegniek toegepas is. Die data is ingesamel aan die hand van self-geadministreerde vraelyste wat deur die navorsers saamgestel is. Resultate het aan die lig gebring dat bestuurders 'n goeie tot baie goeie beplannings- en administrasiebevoegdheidsvlak getoon wat inligtingsinsameling en probleemoplossings-, beplannings- en organiserings-, tydsbestuur- asook begrotings- en finansiëlebestuursvaardighede omvat het. Benewens hierdie vaardighede bestaan 'n positiewe verhouding tussen bestuurders se inligtingsinsamelings- en probleemoplossings-, asook beplannings- en organiseringsbevoegdhede, en ook tussen bestuurders se tydsbestuur-, en begrotings- en finansiëlebestuursbevoegdhede. Die hoofbydrae van hierdie studie is dat indien bestuurders oor goeie kennis van die geïdentifiseerde bevoegdhede en gepaardgaande sleutelemente beskik, hulle hul persoonlike en besigheidsprestasie verhoog. Hierdie navorsing is daarop ingestel om omvangryke inligting met betrekking tot selfbestuursbevoegdhede van topvlak- en middelvlakbestuurders te bekom en om te bepaal of 'n verband bestaan tussen integriteit en etiese gedrag, tussen persoonlike dryfkrag en veerkrag

asook tussen werk-lewebalans aan die eenkant en self-bewustheid en -ontwikkeling aan die anderkant – waarvan elkeen 'n komponent van hul selfbestuursbevoegdhede uitmaak.

Die resultate het laat blyk dat 'n betekenisvolle en positiewe verhouding bestaan tussen bestuurders se integriteit en etiese gedrag, en tussen persoonlike dryfkrag en veerkrag, asook 'n betekenisvolle positiewe verhouding tussen werk-lewebalans aan die eenkant en selfbewustheid en -ontwikkeling aan die anderkant – waarvan elkeen 'n komponent van hul selfbestuursbevoegdhede uitmaak.

LIST OF KEY TERMS

- **MANAGERIAL COMPETENCIES**

Managers fulfil a decisive role in influencing the efficiency or failure of a business as it depends on managers to drive business strategies which increase efficiency and effectiveness, explore opportunities, and identify potential threats in the market (Anzengruber *et al.*, 2017:134). It is essential for managers to possess specific skills and competencies to effectively reach business goals and objectives (Verle *et al.*, 2014:922). Managerial competencies are defined as sets of skills, knowledge, attitudes, and behaviour in which managers need to be effective in fulfilling their jobs (Clark *et al.*, 2016:536; Jena & Sahoo, 2014:144). Sutton and Watson (2013:1024) explain that while there are various approaches to defining managerial competencies, further consideration needs to be given to distinguishing between “superior” and “average” managers. Managerial competencies are important because they impact individual managerial performance (Mohd-Shamsudin & Chuttipattana, 2012:271). However, while theory supports that managerial competencies contribute to managers’ individual performance it is essential to further recognise the influence managerial performance has on the business performance (Sutton & Watson, 2013:1024). Business performance cannot simply be measured by means of physical and financial measures – it is essential for managers to be capable to link intangible assets such as the knowledge of employees, development and research (Verle *et al.*, 2014:922). Consequently, individual managerial performance influences the business performance (Mohd-Shamsudin & Chuttipattana, 2012:271).

Due to the ever changing business environment, more attention is given to the specific competencies of managers because some are considered essential aspects to ensure a competitive advantage over other businesses (Hellriegel *et al.*, 2012:23).

Competent managers are acknowledged as important performers leading to successful projects, activities and business operations (Bredillet, 2014:548). Managerial competencies need to be developed and retained within the context of the business where it will be applied (Mohd-Shamsudin & Chuttipattana, 2012:260).

- **MANUFACTURING BUSINESSES**

Manufacturing is the process by means of which machinery, tools and labour are used to produce goods from inputs to outputs. This includes human activities (entrepreneurship, innovation, work and creative thinking) combined with capital goods (machinery) to transform input materials into outputs to form a final product (Botha & Musengi, 2012:17). The

manufacturing management process consists of having knowledge of the production process, machines, tools, employees and space to produce products within certain parameters such as time, quality, and cost (Spinelli & Adams, 2012:284).

Ngulube (2014:5) explains that South Africa has developed an established and diversified manufacturing base that has shown its resilience and potential to compete in the global market. The manufacturing industry is the third largest contributor to the South-African Gross Domestic Product (GDP) with a contribution of 15.2% in 2013 (Statistics South Africa (Stats SA), 2015). Manufacturing presents an opportunity to significantly advance the country's growth and development. Manufacturing in South Africa, according to Stats SA (2015), is dominated by the following industries, namely food, beverages, tobacco, petroleum products, chemicals, rubber, plastic, metal products, machinery and equipment.

Improved growth projections for the future in manufacturing industry is mainly due to broad diversification, and where a strong relationship exists between the development in infrastructure investments and manufacturing output development (Ngulube, 2014:2).

- **PLANNING AND ADMINISTRATION**

Planning provides employees with direction of what the business aims to achieve, it is therefore considered to be the starting point of the management process (Botha & Musengi, 2012:19). Planning involves organising activities within the business for employees to achieve future goals of the business. Planning and organising projects entails manufacturing managers working with employees to ensure that everybody knows what the objectives are and assign work accordingly (David, 2013:45). Planning is linked to time management, since plans within a business must be executed within a specified period. The execution of the strategic plans are mainly larger plans converted into smaller plans that describe in more detail what is expected and deadlines which need to be achieved (Wu & Passerini, 2013:335). Administrative management focuses on the responsibility of a manager towards information-gathering (De Janasz *et al.*, 2012:83). Administration competencies depend on how the projects and operations in the business are managed. Managers should have a clear understanding of the objectives and strategic plans to be able to work with a view to achieve the business goals (Erasmus *et al.*, 2013:193).

- **SELF-MANAGEMENT**

Self-management is defined as an individual's ability to take responsibility for their own action and behavior related to self-management (Daft & Marcic, 2014:57). It refers to an individual's

ability to control misunderstanding, inefficiency, critical requests and feelings. De Janaz *et al.* (2012:79) refers to self-management as the ability to have control over one's own decisions by identifying specific goals and problems and formulating strategies to solve those problems. Since self-management is learned, training provides management with the opportunity of improving individual performance through self-management (Ross, 2014:300; Bücken & Poutsma, 2010:266). Self-management competencies can be learned by means of training and experience in the associated business context (Daft & Marcic, 2014:57; Bennett, 2011:546). Learning self-management competencies contributes to the advantages an individual has by implementing the skills; therefore executing self-management competencies reinforces the ability to influence the specific behaviour towards effective performance (Ross, 2014:300).

Due to the rapidly changing environment, professional and personal life requires engagement in more than one activity at a time, which leads to self-management becoming more complicated. Through increased knowledge and experience managers learn by means of self-management that difficult tasks can be executed with better achievement (Bennett, 2011:551). Effective self-management requires awareness of one's own emotional and rational response. Frost (2014:126) recognised that managers affect their own decision-making and behaviours by means of self-management competencies. This research underlines that a manager's level of self-management influences the performance displayed by the employees. Managers who manage to successfully apply self-management create good outcomes and encourage development of growing networks and support structures (Griffin & Van Fleet, 2014:367). Only when individuals can lead themselves will they be able to lead others (Ross, 2014:300). In order for managers to implement self-management competencies it requires of them to identify key factors influencing their role in the business; therefore contributing to the effectiveness of the outcomes.

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TABLE OF CONTENTS

ACKNOWLEDGEMENTS.....	I
PREFACE	II
ABSTRACT.....	III
OPSOMMING.....	V
LIST OF KEY TERMS.....	VII
• Managerial competencies	vii
• Manufacturing businesses	vii
• Planning and administration.....	viii
• Self-management	viii
 CHAPTER 1: INTRODUCTION AND BACKGROUND OF THE STUDY	 1
1.1 DEFINING THE CONCEPT	1
1.1.1 Managerial competencies	1
1.1.2 Manufacturing businesses	2
1.1.3 Planning and administration.....	2
1.1.4 Self-management.....	3
1.2 INTRODUCTION.....	4
1.3 LITERATURE REVIEW	5
1.3.1 Self-management.....	6
1.3.1.1 Balancing work/life issues	6
1.3.1.2 Ethical conduct and integrity	6
1.3.1.3 Self-awareness and development.....	7
1.3.1.4 Personal drive and resilience	8

1.3.2	Planning and administration.....	8
1.3.2.1	Information-gathering, analysis and problem solving.....	8
1.3.2.2	Planning and organising projects.....	9
1.3.2.3	Time management.....	9
1.3.2.4	Budgeting and financial management.....	10
1.4	PROBLEM STATEMENT	10
1.5	RESEARCH OBJECTIVES	11
1.5.1	Primary objective.....	11
1.5.2	Secondary Objectives	11
1.6	RESEARCH METHODOLOGY	12
1.6.1	Literature study	12
1.6.2	Research design	13
1.6.3	Target population and sample.....	14
1.6.4	Data collection.....	14
1.6.5	Research instrument	15
1.6.6	Data analysis.....	15
1.7	ETHICAL CONSIDERATIONS	16
1.8	CONTRIBUTION OF THE RESEARCH	17
1.9	PRELIMINARY CHAPTER CLASSIFICATION.....	17
1.10	REFERENCES.....	18
CHAPTER 2:	LITERATURE BACKGROUND	25
2.1	INTRODUCTION.....	25

2.2	MANAGEMENT AS A BUSINESS FUNCTION	25
2.2.1	Overview of the business environment	26
2.2.2	Management Theories	27
2.2.2.1	Classical approach.....	28
2.2.2.2	The behavioural approach	31
2.2.3	Review of Management	35
2.2.3.1	Managerial roles.....	38
2.2.3.1.1	Decision-making al role	38
2.2.3.1.2	Interpersonal roles	38
2.2.3.1.3	Information role	39
2.2.3.2	Managerial Competencies	39
2.2.3.2.1	Importance of managerial competencies	42
2.3	PLANNING AND ADMINISTRATION AS MANAGERIAL COMPETENCIES	43
2.3.1	Information-gathering and problem-solving.....	44
2.3.2	Planning and organising.....	46
2.3.3	Time management	50
2.3.4	Budgeting and financial management.....	52
2.4	SELF-MANAGEMENT AS MANAGERIAL COMPETENCY	54
2.4.1	Work/life balance.....	55
2.4.2	Personal drive and resilience	55
2.4.3	Integrity and Ethical conduct	57

2.4.4	Self-awareness and development.....	58
2.5	SUMMARY	59
2.6	REFERENCES.....	60
CHAPTER 3: RESEARCH METHODOLOGY		68
3.1	INTRODUCTION.....	68
3.2	LITERATURE STUDY	68
3.3	EMPIRICAL RESEARCH DESIGN	69
3.4	FORMULATE THE RESEARCH PROBLEM AND OBJECTIVES.....	69
3.5	RESEARCH DESIGN	71
3.5.1	Causal research	71
3.5.2	Descriptive research	71
3.5.3	Exploratory research	72
3.5.4	Qualitative research	72
3.5.5	Quantitative research	73
3.6	SAMPLE PLAN AND POPULATION PLAN	74
3.6.1	Sampling method	75
3.6.1.1	Non-probability sampling method.....	75
3.6.1.2	Probability sampling method	77
3.6.2	Defining the population	79
3.6.2.1	Sampling errors.....	79
3.6.2.2	Sampling size.....	80
3.6.2.3	Sampling frame	80

3.7	DESIGN THE DATA COLLECTION METHOD	81
3.7.1	Data collection instrument.....	82
3.7.1.1	The questionnaire design process	82
3.7.2	Question wording	84
3.7.3	Questionnaire design and layout.....	84
3.7.4	Data collection.....	85
3.8	DATA ANALYSIS.....	86
3.8.1	Data validation	86
3.8.2	Data coding	86
3.8.3	Data entry.....	87
3.8.4	Data cleaning	87
3.8.5	Descriptive statistics.....	87
3.8.6	Inferential statistics.....	88
3.8.7	Factor analysis	89
3.8.7.1	Exploratory Factor Analysis	89
3.8.7.2	Confirmatory factor analysis.....	90
3.8.8	Psychometric properties of the measuring instrument	90
3.8.8.1	Reliability	90
3.8.8.2	Validity.....	91
3.8.8.2.1	Validity of the quantitative data	92
3.9	RESEARCH REPORT	92
3.10	SUMMARY	92

3.11	REFERENCES.....	93
CHAPTER 4:	ARTICLE 1.....	96
4.1	INVESTIGATING THE PLANNING AND ADMINISTRATION COMPETENCIES OF MANAGERS IN MANUFACTURING BUSINESSES.....	96
4.2	INTRODUCTION.....	98
4.3	PROBLEM STATEMENT	99
4.4	RESEARCH AIM AND OBJECTIVES.....	100
4.5	LITERATURE REVIEW	101
4.5.1	Planning and administration competencies of managers.....	102
4.5.2	Information-gathering and problem-solving.....	102
4.5.3	Planning and organising competencies	104
4.5.4	Time management	105
4.5.5	Budgeting and financial management.....	106
4.6	RESEARCH METHODOLOGY	107
4.6.1	Research design, target population and sampling	107
4.6.2	Research instrument and pretesting of the questionnaire.....	108
4.6.3	Data collection procedure	108
4.6.4	Data analysis.....	108
4.6.5	Psychometric properties of the measuring instrument	109
4.6.5.1	Construct validity.....	109
4.6.5.2	Content validity.....	110
4.6.5.3	Reliability.....	110

4.7	RESULTS OF EMPIRICAL STUDY	111
4.7.1	Demographic profile of respondents	111
4.7.2	Results regarding the findings of the four constructs	111
4.7.2.1	Managers' information-gathering and problem-solving skills	112
4.7.2.2	Managers' planning and organising skills	113
4.7.2.3	Managers' time management skills.....	114
4.7.2.4	Managers' budgeting and financial management skills.....	114
4.7.3	Hypotheses testing.....	115
4.7.3.1	Hypothesis 1	116
4.7.3.2	Hypothesis 2	116
4.8	RECOMMENDATIONS.....	117
4.9	LIMITATIONS	118
4.10	CONCLUSION	119
4.11	REFERENCES.....	119
	MAIN FINDING ARTICLE 1 (CHAPTER 4)	123
	CHAPTER 5: ARTICLE 2.....	125
5.1	INVESTIGATING SELECTED SELF-MANAGEMENT COMPETENCIES OF MANAGERS IN MANUFACTURING BUSINESSES.....	125
5.2	INTRODUCTION.....	127
5.3	PROBLEM STATEMENT	127
5.4	RESEARCH AIM AND OBJECTIVES.....	129
5.5	LITERATURE BACKGROUND	130

5.5.1	Self-management.....	130
5.5.1.1	Integrity and ethical conduct	131
5.5.1.2	Personal drive and resilience	132
5.5.1.3	Balancing work-and-life dimension	133
5.5.1.4	Self-awareness and -development.....	133
5.6	RESEARCH METHODOLOGY	134
5.6.1	Research design	134
5.6.2	Target population and sampling.....	135
5.6.3	Research Instrument and pretesting of the questionnaire	135
5.6.4	Data collection procedures.....	136
5.6.5	Data analysis.....	136
5.6.6	Psychometric properties of the measuring instrument	137
5.6.6.1	Content validity.....	137
5.6.6.2	Construct validity.....	137
5.6.6.2.1	Construct validity for integrity and ethical conduct	137
5.6.6.2.2	Construct validity of personal drive and resilience	138
5.6.6.2.3	Construct validity of balancing work and life dimension	138
5.6.6.2.4	Construct validity of self-awareness and -development.....	138
5.6.6.3	Reliability.....	138
5.6.7	RESULTS OF EMPIRICAL STUDY	139
5.6.7.1	Demographic profile of respondents	139
5.6.7.2	Results pertaining to the four constructs.....	139

5.6.7.2.1	Managers' integrity and ethical conduct.....	139
5.6.7.2.2	Managers' personal drive and resilience.....	140
5.6.7.2.3	Managers, work-life balance	141
5.6.7.2.4	Managers' self-awareness and -development	142
5.6.8	Hypothesis testing,.....	143
5.7	DISCUSSION AND IMPLICATIONS	144
5.8	CONCLUSION	146
5.9	REFERENCES.....	146
	MAIN FINDING ARTICLE 2 (CHAPTER 5)	152
	CHAPTER 6: RECOMMENDATIONS AND CONCLUSIONS	153
6.1	INTRODUCTION.....	153
6.2	SUMMARY OF THE STUDY	153
6.3	FINDINGS FROM THE LITERATURE	156
6.3.1	Main finding on management as a business function	156
6.3.2	Main findings on the business environment	156
6.3.3	Main findings on management theories	157
6.3.4	Main findings on management	158
6.3.5	Main findings on managerial roles	158
6.3.6	Main findings on managerial competencies	158
6.3.7	Main findings on planning and administration competency.....	159
6.3.8	Main findings of self-management competencies	159
6.4	FINDINGS OF THE EMPIRICAL RESEARCH.....	160

6.5	FINDINGS ON THE OBJECTIVES OF THE STUDY AND RECOMMENDATIONS.....	161
6.5.1	Secondary objective 1	161
6.5.2	Secondary objective 2.....	161
6.5.2.1	Recommendation 1	162
6.5.3	Secondary objective 3.....	162
6.5.3.1	Recommendation 2	163
6.5.4	Secondary objective 4.....	164
6.5.4.1	Recommendation 3	164
6.5.5	Secondary objective 5.....	165
6.5.5.1	Recommendation 4	165
6.5.6	Secondary objective 6.....	166
6.5.6.1	Recommendation 5	166
6.5.7	Secondary objective 7	167
6.5.7.1	Recommendation 6	167
6.5.8	Secondary objective 8.....	167
6.5.8.1	Recommendation 7	168
6.5.9	Secondary objective 9.....	168
6.5.9.1	Recommendation 8	168
6.6	RECOMMENDATIONS FOR FURTHER STUDY.....	170
6.7	LIMITATIONS	170
6.8	CONTRIBUTION OF THE STUDY	170
6.9	CONCLUSION	171

6.10	REFERENCE	171
APPENDIX A:	QUESTIONNAIRE.....	174
APPENDIX B:	LETTER FROM STATISTICAL CONSULTATION SERVICES	178
APPENDIX C:	LETTER FROM THE LANGUAGE EDITOR.....	179
APPENDIX D:	LETTER OF ETHICAL CLEARANCE	180
APPENDIX E:	LETTER FROM THE TECHNICAL EDITOR.....	181

LIST OF TABLES

Table 1.1:	Sampling frame representing the target population.....	14
Table 2.1:	Management theories and time frames	28
Table 2.2:	Difference in Theory X and Theory Y assumptions	34
Table 3.1:	Forms of probability and non-probability sampling methods	78
Table 3.2:	Target	79
Table 3.3:	Sampling frame representing the target population.....	81
Table 3.4:	Descriptive statistics	88
Table 3.5:	Cronbach alpha values for the two factors	91
Table 3.6:	Represents the definitions of the various types of validity	92
Table 4.1:	Sampling representing the target population.....	107
Table 4.2:	Cronbach alpha coefficient values for the factors.....	111
Table 4.3:	Information-gathering and problem-solving skills	112
Table 4.4:	Planning and organising skills	113
Table 4.5:	Time management skills.....	114
Table 4.6:	Budgeting and financial management skills	115
Table 4.7:	Pearson correlation coefficients	116
Table 4.8:	Pearson correlation coefficient	117
Table 5.1:	Breakdown of target sampling frame.....	135
Table 5.2:	Cronbach's alpha values for the measurement sets	138
Table 5.3:	Respondents' integrity and ethical conduct.....	140
Table 5.4:	Respondents' personal drive and resilience.....	141

Table 5.5:	Life balance competencies	141
Table 5.6:	Respondents' self-awareness and -development.....	142
Table 5.7:	Pearson correlation coefficients – integrity and ethical conduct as well as personal drive and resilience	143
Table 5.8:	Pearson correlation coefficients – work-life balance as well as self- awareness and -development	144
Table 6.1:	Overview of secondary objectives achieved.....	169

LIST OF FIGURES

Figure 1.1:	Chapter outline	17
Figure 2.1:	Three subfields within the classical perspective	29
Figure 2.2:	Five subfields within the behavioural approach	32
Figure 2.3:	Maslow's hierarchy of human needs	33
Figure 2.4:	Management hierarchy	36
Figure 2.5:	The management process	37
Figure 2.6:	Constructs forming part of the planning and administration competency of managers.....	41
Figure 2.7:	Constructs as part of the self-management competency of managers	42
Figure 2.8:	The planning process	48
Figure 3.1:	Steps involved in the empirical investigation	69
Figure 3.2:	Sampling plan.....	75
Figure 6.1:	Management theories.....	157

CHAPTER 1: INTRODUCTION AND BACKGROUND OF THE STUDY

1.1 DEFINING THE CONCEPT

This research focused on self-management as well as planning and administration competencies of managers in manufacturing business in South-Africa (SA). The following is an explanation of some of the key concepts.

1.1.1 Managerial competencies

Managers fulfil a decisive role in influencing the efficiency or failure of a business as it depends on managers to drive business strategies which increase efficiency and effectiveness, explore opportunities, and identify potential threats in the market (Anzengruber *et al.*, 2017:134). It is essential that managers possess specific skills and competencies to effectively reach business goals and objectives (Verle *et al.*, 2014:922). Managerial competencies are defined as sets of skills, knowledge, attitudes, and behaviour that a manager needs to be effective in, in the fulfilment of their jobs (Clark *et al.*, 2016:536; Jena & Sahoo, 2014:144). Sutton and Watson (2013:1024) explain that while there are various approaches to define managerial competencies further consideration must be given to distinguish between “superior” and “average” managers. Managerial competencies are important because it impacts individual managerial performance (Mohd-Shamsudin & Chuttipattana, 2012:271). However, while theory supports that managerial competencies contribute to manager’s individual performance it is essential to further recognise the influence that managerial performance has on the business performance (Sutton & Watson, 2013:1024). Business performance cannot only be measured by physical and financial measures, but it is essential how managers are able to link intangible assets such as the knowledge of employees, development and research (Verle *et al.*, 2014:922). Consequently, individual managerial performance influences the business performance (Mohd-Shamsudin & Chuttipattana, 2012:271).

Due to the ever changing business environment more attention is given to the specific competencies of managers because some of them are considered as essential aspects to ensure a competitive advantage over other businesses (Hellriegel *et al.*, 2012:23).

Competent managers are acknowledged as important performers leading to successful projects, activities and business operation (Bredillet, 2014:548). Managerial competencies

need to be developed and retained within the context of the business where it will be applied (Mohd-Shamsudin & Chuttipattana, 2012:260).

1.1.2 Manufacturing businesses

Manufacturing is the process where machinery, tools and labour are used to produce goods from inputs to outputs. This includes human activities (entrepreneurship, innovation, work & creative thinking) combined with capital goods (machinery) to transform input materials into outputs to form a final product (Botha & Musengi, 2012:17). The manufacturing management process consists of having knowledge of the production process, machines, tools, employees and space to produce products within certain parameters such as time, quality, and cost (Spinelli & Adams, 2012:284).

Ngulube (2014:5) explains that South Africa has developed an established, diversified manufacturing base that has shown its resilience and potential to compete in the global market. The manufacturing industry is the third largest contributor to the South-African Gross Domestic Product (GDP) with a contribution of 15.2% in 2013 (Statistics South Africa (Stats SA), 2015). This platform of manufacturing presents an opportunity to significantly advance the country's growth and development. Manufacturing in South Africa, according to Stats SA (2015), is dominated by the following industries namely food, beverages, tobacco, petroleum products, chemicals, rubber, plastic, metal products, machinery and equipment.

Improved growth projections for the future in manufacturing industry is mainly due to broad diversification, and where a strong relationship exist between the development in infrastructure investments and manufacturing output development (Ngulube, 2014:2).

1.1.3 Planning and administration

Planning provides employees with direction of what the business aims to achieve, it is therefore considered to be the starting point of the management process (Botha & Musengi, 2012:19). Planning involves organising activities within the business for employees to achieve future goals of the business. Planning and organising projects entails manufacturing managers working with employees to ensure that everybody knows what the objectives are and assign work accordingly (David, 2013:45). Planning is linked to time management since plans within a business must be executed within a specified period. The execution of the strategic plans are mainly larger plans converted into smaller plans that describe in more detail what is expected and deadlines which needs to be achieved (Wu & Passerini, 2013:335). Administrative management focuses on the responsibility of a manger towards information-gathering (De Janasz *et al.*, 2012:83). Administration competencies depend on

how the projects and operations in the business are managed. Managers should have a clear understanding about the objectives and strategic plans to work for the achievement of the business goals (Erasmus *et al.*, 2013:193).

1.1.4 Self-management

Self-management is defined as an individual's ability to take responsibility for their own action and behavior related to self-management (Daft & Marcic, 2014:57). It refers to an individual's ability to control misunderstanding, inefficiency, critical requests and feelings. De Janaz *et al.* (2012:79) refers to self-management as the ability to have control over your own decisions by identifying specific goals, problems and formulate strategies to solve those problems. Since self-management is learned, training provides management with the opportunity to improve individual performance through self-management (Ross, 2014:300; Bücken & Poutsma, 2010:266). Self-management competencies can be learned by means of training and experience in the associated business context (Daft & Marcic, 2014:57; Bennett, 2011:546). Learning self-management competencies contributes to the advantages an individual has by implementing the skills, therefore executing self-management competencies reinforces the ability to influence the specific behaviour towards effective performance (Ross, 2014:300).

Due to the rapid changing environment, professional and personal life requires to engage in more than one activity at a time which leads to self-management becoming more complicated. Through increased knowledge and experience managers learn by means of self-management that difficult tasks can be executed with greater achievement (Bennett, 2011:551). Effective self-management requires awareness of your own emotional and rational response. Frost (2014:126) recognised that managers affect their own decision-making -making and behaviours through self-management competencies, this research underlines that a manager's level of self-management influence the performance displayed by the employees. Managers who manage to successfully apply self-management create good outcomes and encourage development of growing networks and support structures (Griffin & Van Fleet, 2014:367). Only when individuals can lead themselves they will be able to lead others (Ross, 2014:300). In order for managers to implement self-management competencies it requires them to identify key factors influencing their role in the business, therefore contributing to the effectiveness of the outcomes.

1.2 INTRODUCTION

Modern time industries are continuously evolving due to influencing factors like globalisation, diversity of the workforce, increased competitiveness, improving technology, increased workload and the link between work and social life (Hasle *et al.*, 2012:831). Developing countries can gain from the way it needed to modernise its industries and use it as direction (Campbell *et al.*, 2011:156). The changing circumstances require new skills in management in order to address the growing challenges (Singh *et al.*, 2013:1442). As a result of the current progressive improvement and changing environment, further consideration is given to the characteristics of managers and their competencies (Verle *et al.*, 2014:922). It is therefore expected that managers continually monitor the business objectives which is an important determinant of obtaining a sustainable competitive advantage (Kirchmer, 2012:13). The approach managers use to influence, enforce and partake in business activities and tasks effects both the short- and long-term performance of the business (Clark *et al.*, 2016:534). The manufacturing industry in particular has experienced unpredicted change in recent times by means of a highly ambiguous environmental dynamism (Singh *et al.*, 2013:1442). As a result of the unpredicted change, businesses face unexpected challenges such as variations in customer demand and high fluctuations in material supply. Furthermore, manufacturing businesses became more competitive, since customers are demanding higher quality products, better service, and delivery in shorter time frames (Szwejcowski *et al.*, 2016:124).

The South-African manufacturing industry is currently facing significant competition. Ngulube (2014:2) explains that the changes in the manufacturing industry are of noticeable importance for South-Africa. The South-African manufacturing industry will peak when there is a climax in the investment infrastructure and an increase in mining projects (Ngulube, 2014:2). The manufacturing industry according to Stats SA (2015) is a source of economic growth and it contributes a great deal to the South-African economic empowerment and job creation.

The ability of the manager to adapt to the changes determines the success or failure of any business, including the manufacturing industry. Managers in manufacturing businesses must link and coordinate the different resources and competencies that enable them to be effective managers (Griffin & Van Fleet, 2014:9). Managerial competencies are considered important because they have an extensive effect on personal performance and accordingly on business performance.

Planning and administration has emerged as a managerial competency that is being used increasingly by managers to achieve business goals. It is therefore essential that managers

apply these competencies effectively. Those managers that use self-management effectively and adopt appropriate response strategies to challenges are more likely to succeed (De Janasz *et al.*, 2012:83). It is therefore essential that managers strengthen their self-management competencies and apply accordingly for improved work performance (Daft & Marcic, 2014:124). Since managers in manufacturing businesses are responsible for the performance of projects and therefore influencing the overall success of the business, the demand for skilful managers grows, and therefore an increasing interest arises for managers with experience and significant managerial competencies.

Although research has been done on managerial competencies little research could be found on specifically managers planning and administration as well as self-management competencies. The objective of this research is to investigate the managers planning and administration as well as self-management competencies.

1.3 LITERATURE REVIEW

In order to be a competent manager, it is essential to understand what is meant by managerial competencies (Anzengruber *et al.*, 2017:135; Jena & Sahoo, 2014:143). Clark *et al.* (2016:536) define managerial competencies as behavioural, which consists of actions that give direction to certain goals to be achieved. Furthermore, managerial competencies are defined as a combination of relevant knowledge, experience and skills that influence the ability of an individual to execute their job (Sutton & Watson, 2013:1024; Whetten & Cameron, 2011:9). Increasing evidences suggests that managers learn important competencies through their work experience (Verle *et al.*, 2014:924). Managerial competencies need to be developed and improved within the context of the business where it will be applied (Mohd-Shamsudin & Chuttipattana, 2012:260). When managers are able to identify their competencies and sufficiently blend these competencies together, there will be a clear difference in the role they fulfil within the business (Griffin & Van Fleet, 2014:10).

Managerial competencies consist of diverse competencies and according to Strydom *et al.* (2015:55) there are various key managerial competencies which include; planning and administration, teamwork, communication, strategic action, global awareness, emotional intelligence, and self-management. This research concentrated on two of these key competencies namely self-management as well as planning and administration.

The following section provides detailed explanation of self-management competencies as well as planning and administration competencies respectively.

1.3.1 Self-management

Daft and Marcic (2014:122) explain self-management as an individual's competence to undertake self-regulating thoughts and actions to manage difficult circumstances. The most effective managers know themselves and therefore know how to manage themselves. Botha and Musengi (2012:72-73) state that successful self-management depends on a manager's ability to know what to accomplish and which personal attributes they think are worth developing. Self-management represents a method that encompasses intrinsic motivation which leads to increased self-efficiency (Ross, 2014:301). Effective self-management requires an awareness of emotional or rational response or a strong level of emotional intelligence to encourage prompts adaptability (De Janasz *et al.*, 2012:79). Self-management can be developed by learning from past experiences where individuals generally ask the question of why it happened and what is the learning outcome of the specific situation (Bennett, 2011:551). Self-management as an essential element of managerial competencies consist of four components including, balancing work/life issues, ethical conduct and integrity, self-awareness and development, as well as personal drive and resilience (Hellriegel *et al.*, 2012:26).

1.3.1.1 Balancing work/life issues

The concept of work/life balance are associated with the manner which an individual balances 'work' which means paid employment and 'life' by means of domestic responsibility (Koubova & Buchko, 2013:700). The main aspect to consider is how managers approach the balance between their work and life schedules (Pasamar & Cabrera, 2013:962). According to Murphy and Doherty (2011:259) globalization and technology innovation are the two major factors that influence work/life balance. Globalization and technology innovation results in increased competition among businesses, hence the outcome is that employees need to work longer working hours and handle a great amount of stress, which raises the concern of achieving work/life balance (Koubova & Buchko, 2013:706; Wheatley, 2012:816). Achieving this balance forms a vital element to promote personal performance and enable a manager to handle personal challenges (Koubova & Buchko, 2013:706).

1.3.1.2 Ethical conduct and integrity

Despite the reality of significant competition among businesses and motivation to achieve business goals, managers should accept ethical standards and encourage employees to use ethics in the given business context (Daft & Marcic, 2014:231). Organisational and individual performance encourages commitment towards building trust which promotes workplace

security, productivity and improved life quality (Hugo & Badenhorst-Weiss, 2013:93). Ethical managers according to Daft and Marcic (2014:231) should have the ability to create a business environment that encourages employees to act reasonably. For this reason it is important that management strive to be effective and productive, based on an ethical foundation (Ho, 2011:517). Therefore both employees and managers require guidelines on how to act ethically where challenges arise. In order to maintain an ethical culture within the business, attention is on managers to convey conscious actions to create an environment where desired ethical norms can be maintained and accepted by employees (Verle *et al.*, 2014:925). Bredillet (2014:549) suggests that managers who are committed to ethical standards enhance general self-development competencies. Furthermore, Spinelli and Adams (2012:279) reflect that successful managers display a noticeable work ethic, integrity, honesty, and fairness that attract to keep the best talent in the business.

1.3.1.3 Self-awareness and development

The developmental quality of managerial characteristics is complex and combines the features of managerial tasks that provide opportunities for learning new skills, behaviours and perspectives. The development of self-awareness is recognised as being at the centre of many human resource development initiatives (Sutton *et al.*, 2015:611). Self-awareness and development effectively depends on the way which managers have personal drive and motivation to succeed. Whetten and Cameron (2011:11) state that managerial competencies can be developed through practise and criticism, managers therefor have the ability to grow from a less competent manager to a great manager. Understanding the effects associated with self-awareness development process enables managers and businesses to complete activities which improve self-management (Ross, 2014:300). For this reason it is essential for managers to identify their strengths and weaknesses and develop ways to build on features which will encourage personal and business success (De Janasz *et al.*, 2012:5-6). The effectiveness of balancing personal and professional goals is determined by self-awareness and development (Hellriegel *et al.*, 2012:26). Many managers must successfully adapt to changing demands, stress and uncertainty, meeting deadlines and achieving business objectives (Griffin & Van Fleet, 2014:63). Managerial competencies must therefore be able to influence the level of employee's performance to meet the desired business objectives and encourage the use of available resources efficiently.

1.3.1.4 Personal drive and resilience

Personal drive is described as the value of an individuals' attempt to reach a desired goal. Successful managers should own internal personal drive to compete, accomplish and excel within the given business activities (Spinelli & Adams, 2012:41; Warner & April, 2012:53). Resilience as termed by Warner and April (2012:53) is the typical attribute that has been developed for handling positive and negative situations in life. They further state that important factors to consider when developing personal resilience include, linking consistency of interest and perseverance, understanding and controlling thoughts as well as behaviour and with that accepting additional support. Managers should attempt to figure out basic personal characteristics and know how they influence employees' behaviour in the business. Spinelli and Adams (2012:42) further underlines that the best managers have great knowledge of their own strengths and weaknesses and hold a vital understanding of their surrounding and influencing factors. When managers develop a complex understanding of personal drive and know themselves, the result will lead to greater self-awareness therefore enable them to have better knowledge of others (Griffin & Van Fleet, 2014:35).

1.3.2 Planning and administration

Planning can be defined as the management task that has to do with deliberate reflection on the future objectives of business (Botha & Musengi, 2012:19). The resources and activities involved and the preparation and implementation of a plan makes the effective achievement of the goals possible (David, 2013:23). As modern time become more complex, managers must daily maintain more than one priority, therefore they tend to react negatively to unexpected events which then increase competitive demand in our personal and professional life (Erasmus *et al.*, 2013:193). According to Hellriegel *et al.* (2012:26) there are many factors influencing the success or failure of planning and administration managerial competencies. For the purpose of this research, planning and administration as key managerial competency included information-gathering, analysis and problem solving, planning and organising projects, time management as well as budgeting and financial management.

1.3.2.1 Information-gathering, analysis and problem solving

Spinelli & Adams (2012:285) describe a problem as any situation that is perceived to exist between what is and what should be. Problem solving as managerial competency is regarded as a converter that transforms business inputs as valuable outputs (Atuahene-Gima & Wei, 2011:82). Lech (2012:968) empathises that more focus should be given to

obtain good problem-solving competency as they are, within the wider context, the capability that contributes to the survival of the business. Creative problem solving is essential when management wants to achieve a certain goal or objective and has possible solutions to achieve the desired goals, but is not sure how to process the relevant information immediately (Atuahene-Gima & Wei, 2011:84). Kuratko, (2014:153) explains that the difficulty with problem solving and decision-making comes with uncertainty and a lack of information. Expert knowledge and relevant information-gathering competencies within the business is a benefit because it enables effective decision-making and problem solving (Yaw *et al.*, 2014:378).

1.3.2.2 Planning and organising projects

Planning according to Evans and William (2014:251) is to achieve strategic objectives, to understand the basic customer needs and business skills, to decide on long-term and short-term goals and reach them accordingly, to understand employees' perception about quality work and also to give them the opportunity to develop their competencies and to generate rewards in order to ensure effective work. The planning process is thus essential in modern times, it allows to be prepared for unforeseen circumstances and prompt response to solve any problems that may occur (Lech, 2012:968). Griffin and Van Fleet (2014:15) further state that planning and organising guide managerial effectiveness by contributing direction for future projects and activities in the business.

1.3.2.3 Time management

According to Grissom *et al.* (2015:775) time management is considered as one of the largest elements influencing effective management since it relies on coordinating and overcoming conflicting time orientations. Griffin & Van Fleet (2014:53) add that time management competency for managers is the ability to prioritise their time and resources in order to achieve their goals. Time as a dimension is defined by Söderlund (2012:621) as the degree how people feel they can manage their time as well as the relative concern on how to manage them in respect to their personal life linked to working schedules. It is therefore a management competency that refers to how managers spend their time which allows them to prioritise in order to achieve more objectives in the business and their personal life. Rao (2014:278) emphasize that effective time management increase productivity. An important aspect for managers is to be able to monitor and manage different time dimensions effectively. Time as a valued resource in any business is commonly used as key indicator for managers to plan, measure and assess business performance (Wu & Passerini, 2013:333).

1.3.2.4 Budgeting and financial management

The purpose of financial management is to make sufficient capital available at the lowest possible cost. In this way capital is used effectively to add maximum value to the business, with the lowest risk (Friis & Hansen, 2015:323). Implementing financial management gives managers a complete overview of the finances of the business, indicating the current and future state of the financial position (Wibowo & Alfen, 2013:407). Effective financial management requires managers to take costs and profit into account by seeking maximum return on equity and understand the factors that influence the financial position of businesses (Nieman & Bennett, 2014:189). Financial management is not only the link between all the actions in the manufacturing business, it is also the tool that guide the business to function effectively. It is a process that enables the producer to the most profitable and easiest way - and with the least risk - to achieve its intended goals. If a manufacturing business is able to obtain sustainability it will have the potential for the business to indicate to stakeholders that it is dedicated to achieve their goals and objectives successfully over time and therefor contribute to higher profit margins (Wibowo & Alfen, 2013:407; Haugh & Talwar, 2010:384). Without sufficient capital to meet the needs of the business in the short, medium and long term, production will to stop all actions (Kihn, 2011:214). Budget targets can be turned into a great way of performance evaluation and a way to encourage employees to work towards a goal (Elhamma, 2015:973).

1.4 PROBLEM STATEMENT

Lately, there have been significant changes influencing the context in which managerial work is executed. Globalisation, advances in innovation, increased rivalry, work overload, difficulty to find balance between work and family are changes that influence the work environment (Kalliath & Kalliath, 2012:730). The pace of increased changes implies that the correct manner to handle problems in the past may not work in the future. Problems arise as new or different situations present themselves and they often require unique solutions (Proctor, 2010:7). Taking care of these dynamic issues through managerial competencies is what distinguishes ordinary managers from excellent managers (Dogra, 2012:2).

According to the Small Enterprise Development Agency (SEDA) (2012:14), competition, from especially Chinese manufacturing businesses are increasingly dominating the world's manufacturing environment with mass production of cheap and efficiently manufactured consumer goods. This provides challenges to South African businesses; and opportunities need to be explored in niche areas, innovation and areas of specialisation where South Africa has a competitive edge. A new attitude of organised labour and a re-think of the

utilisation of technology is required. For this reason, it is important that managers establish ways to differentiate the business from competitors and maintain or even improve their current market standings (Spinelli & Adams, 2012:285). However, before this can be done it is essential for managers to possess certain competencies. One of the ways to ensure that managers develop competencies is to establish accountability, responsibility and develop self-management skills (Hellriegel *et al.*, 2012:23).

Due to the evolving nature of manufacturing businesses it has become essential for managers to apply planning and administration competencies, especially if they want to increase competitiveness in the market and create a good working environment for the employees (Kalliath & Kalliath, 2012:730). Lech (2012:967) further explains that management faces major dilemmas in terms of the amount of time, resources and information-gathering methods they use for effective planning and administration. Given that individuals spend a large extent of their lives at work, changes in the workplace can have significant impact on their wellbeing and prosperity, and therefore on their work and ultimately on business performance.

The planning and administration of operations are a core responsibility of managers in the manufacturing industry. Applying these competencies will lead to schedules being followed without any complications, goals and objectives will be reached on schedule and will be completed within the allocated budget (Daft & Marcic, 2014:139).

1.5 RESEARCH OBJECTIVES

The reason for this study was to uncover the planning and administration as well as, the self-management competencies of managers in manufacturing businesses, the objectives for the research will be discussed below accordingly.

1.5.1 Primary objective

The primary objective of this research was to investigate managers' planning and administration as well as self-management competencies in manufacturing businesses.

1.5.2 Secondary Objectives

In order to support the primary objective, the following secondary objectives were formulated:

- to determine a limited demographic profile of the respondents;

- to measure managers' information-gathering and problem-solving skills, as contributors to their planning and administration competency;
- to determine managers' planning and organising skills, as contributors to their planning and administration competency;
- to identify managers' time management skills, as contributors to their planning and administration competency; and
- to measure managers' budgeting and financial management skills, as contributors to their planning and administration competency.
- to investigate the extent of managers' integrity and ethical conduct as components of their self-management competency;
- to evaluate managers' personal drive and resilience as components of their self-management competency;
- to explore managers' work-life balance as a component of their self-management competency; and
- to appraise managers' self-awareness and -development as components of their self-management competency.

1.6 RESEARCH METHODOLOGY

1.6.1 Literature study

The literature review in this research is an important and in depth interpretation of previous research done. It included a summary and recap of the specific areas of research, allowing the reader to understand the reason for conducting the research (Joubert *et al.*, 2016:26). The required secondary research for was found in various resources such as journals, articles, and books. The books used included topics such as management competencies, management in manufacturing business, research methods and procedures. Journals and articles were accessed through databases' such as Emerald, EbscoHost, Sae Publications and Nexus. Google and Google Scholar were also used as resources in order to retrieve further information regarding the research.

1.6.2 Research design

The research design according to Berndt and Petzer (2013:31) is the procedures which will be followed by the researcher to ensure that they accomplish the research objectives. Therefore the research design indicates that the researcher will be able to meet the research objectives. There are three methods for obtaining data which include, causal, exploratory, and descriptive research (Zikmund & Babin, 2013:50; Aaker *et al.*, 2011:72-74). Causal research is used to collect data that allows researchers to measure cause-and-effect relationships between two or more variables (Hair *et al.*, 2013:118). Causal research is dependent on a strategic and organised plan which allows reduction in systematic errors and effectively utilising reliability including supporting conclusions about causality (Feinberg *et al.*, 2013:59). Descriptive research is conducted in order to answer who, what, when, where, why and how questions (Burns & Bush, 2014:103). A statement of the problem, particular research objectives and full information requirements results in effective descriptive research (Feinberg *et al.*, 2013:58). The purpose of descriptive research is to illustrate the findings of a large sample and predict variables (Burns & Bush, 2014:102). It is best used to measure the relationship between constructs in terms of explaining and predicting the influencing factors (De Vos *et al.*, 2012:65). In terms of this research, it will be where managers' gain experience, when do they use their competencies, what competencies do they use and how do they use the competencies.

Selecting a research design requires the researcher to choose between two research methods namely, quantitative and qualitative (Silver *et al.*, 2013:56-57). Quantitative research depends on the quantity, the research is therefore measured to use as a number or quantity (Bölte, 2014:67). The goal of quantitative research is to quantify the data to make an assumption, using the data collected and generalise the results statistically to the target population at the time of the research (Silver *et al.*, 2013:58; Malhotra, 2010:171). The purpose of qualitative research according to McDaniel and Gates (2013:80) is to obtain awareness and understanding of the research problem, mostly based on small samples.

In this research the researcher used a quantitative, descriptive research design which allows the researcher to interpret a statistical data analysis (Berndt & Petzer, 2013:47). Questionnaires are the general methods used to obtain quantitative research data (Saunders *et al.*, 2012:162). Questionnaires are used when many respondents are involved in the sample, which gives the researcher more information regarding who the respondents are and why their specific behaviour occur (Hair *et al.*, 2013:77; Burns & Bush, 2014:214).

This research was conducted using questionnaires as a research instrument to obtain the data. The research design for this research was cross-sectional, in other words the respondents were asked to complete the questionnaire at a specific point of time, and the respondents were therefore the representatives for the specific target population (Silver *et al.*, 2013:74).

1.6.3 Target population and sample

Respondents were selected based on a non-probability convenience sampling technique. In other words, the sample was drawn from a section of the population which was easily reachable for the researcher, due to budgetary reasons (Berndt & Petzer, 2013:174). The population for this research included middle and top-level managers in the Gauteng, North-West, Free State and Western Cape Provinces of South-Africa. The sample size consists of 343 respondents (see Table 1.1).

Table 1.1: Sampling frame representing the target population

Province	Businesses	Questionnaires
Gauteng	35	179
North-West	18	82
Free state	8	30
Western Cape	6	52
Total	67	343

1.6.4 Data collection

The researcher made use of trained fieldworkers to collect the data. The fieldworkers distributed the questionnaires to the selected target population. They also attended to problems that respondents encountered during the completion of the questionnaire. Thereafter they collected the questionnaires and handed them over to the researcher. Fieldworkers were urged to approach respondents on the basis of convenience and availability (Berndt & Petzer, 2013:174). The field workers include 12 Honours BCom students at the North-West University, Potchefstroom Campus in the School of Management Sciences.

1.6.5 Research instrument

A self-administered questionnaire was used to collect the required data. The advantage of this method is that it allows managers to complete the questionnaire on their own time with no assistance required from the researcher (Silver *et al.*, 2013:138). The questionnaire was developed by ensuring that the questions aligned with the objectives of this research. The different section of the questionnaire consists out of:

Preamble: This section summarised an introduction of the research, and a screening question was asked to ensure that the respondents qualify to participate in the research (Brown *et al.*, 2014:270).

Section A: This section of the questionnaire measured the respondents' demographic profile. Respondents were asked to indicate their gender, age, level of education and employment position within the business.

- Section B: This section measured the self-management as well as planning and administration competencies, and further their overall effectiveness or performance. Each of the items included was measured on a five-point labelled Likert-type scale, with 1 -representing 'poor', 2 -'fair', 3 -'good', 4 -'very good' and 5 representing 'superior'. Likert-type scale questions allow respondents to indicate their belief about the topic that is investigated (Berndt & Petzer, 2013:189). The overall effectiveness or performance of the managers was measured by a ten-point unlabelled Likert-type scale, with 1 representing 'poor' and 10 representing 'extraordinary'.

1.6.6 Data analysis

The Statistical Consultation Services of the North-West University's Potchefstroom campus assisted in the questionnaire development and established a certain number of questionnaires required for quality and accurate analysis. Data obtained from the completed questionnaires was analysed and recommendations were made from the interpreted data.

The researcher made use of the Statistical Package for the Social Sciences (SPSS) (Version 22 to capture, clean, edit and analyse the data obtained from the questionnaires (Pallant, 2013).

The following data analysis was conducted:

- An exploratory factor analysis (EFA) was used as data reduction technique to determine the dimensions or factors underlying the construct.

- This was followed by a confirmatory factor analysis (CFA) to determine the validity of the constructs. According to Pallant (2013:188) the most frequent types of validity used are content validity and construct validity. Content validity is the approximate calculation of the initial amount a measure represents every element of the construct (Sahu, 2013:42). Construct validity is the approximate truth of the conclusion that accurately reflects in the construct (Cooper & Schindler, 2014:257; Malhotra, 2010:320).
- Cronbach's Alpha coefficients were used to calculate the reliability of the constructs (Silver *et al.*, 2013:103).
- Descriptive statistics including frequencies and percentages were calculated to present the demographic profile and descriptive results for the constructs.
- The scale question was calculated using standard deviation and means scores (McDaniel & Gates, 2013:255).
- The correlation coefficient between the constructs was tested to achieve the research objectives (Cooper & Schindler, 2014:546).
- Statistical significance of the associations was determined by a Chi-Square p-value (Rubin, 2013:131). The p-value according to Silver *et al.* (2013:216) indicate the possibility that the relationship is due to chance. If the p-value equals 0.05 or less the value will be significant (Brown *et al.*, 2014:382).

1.7 ETHICAL CONSIDERATIONS

Participants participated voluntarily in the research. The fieldworkers gave a short explanation of the research in order for the participants to understand the purpose thereof. Participating respondents was entitled to withdraw at any moment. The researcher and the fieldworkers did not influence the situation of the participants that might have had an impact on the outcome of the participant answers. The research consists of factors related to the job or organisation effectiveness conducted in the organisational settings for which there is no risk to participants' employability, and the participants' confidentiality is protected. The needs of the participants were considered and their concerns were addressed accordingly. Information regarding the date when the research was completed and when feedback can be given was communicated to the participants.

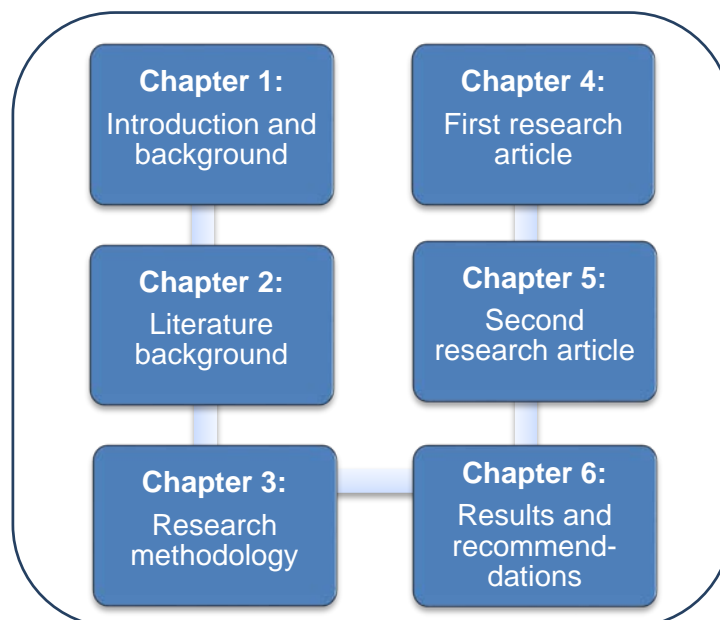
1.8 CONTRIBUTION OF THE RESEARCH

This research can be duplicated to managers in retail and services businesses, not just manufacturing businesses. Management can use the findings to distinguish if self-management as well as their planning and administration competencies has an influence on the businesses. The research will further contribute to existing research where managers understand the importance of developing managerial competencies to be able to adapt to the changing environment. A managerial competency framework can be developed to serve as a guideline to enhance managerial effectiveness to determine if managers possess the necessary competencies in managerial skills and more specific self- management, planning and administration. The research can be broadened to be duplicated in other countries or provinces within South- Africa, which is not part of the sampling frame.

1.9 PRELIMINARY CHAPTER CLASSIFICATION

The chapter outline of the research is presented in this section. Figure 1.1 illustrates what is expected within the research.

Figure 1.1: Chapter outline



Chapter 1 represented the introduction and background of the research. The chapter consisted of a comprehensive description and summary of what the research uncovered. It therefore described the approach that will be used to address the problem throughout the research. It also included the literature background regarding the research, the problem

statement and objectives formulated for the research, provided a short research methodology and concluded with an explanation of ethical considerations and contribution of the research.

Chapter 2 consisted of a thorough literature review, which presented secondary research on the different constructs represented in the two research articles accordingly.

Chapter 3 was a discussion of the research methodology. The research methodology comprised of an in-depth overview of the processes that were used to achieve the objectives of the research. This included the research design, data collection methods, sampling plan and data analysis of the data. Aspects addressed in this chapter include an explanation of the secondary data collected, the empirical investigation, the research design, the target population and sample size, the measuring instrument, and data analysis methods.

Chapter 4 was dedicated to the first research article which investigated the planning and administration competencies of managers in manufacturing businesses in South Africa. An in-depth investigation of the various identified constructs was discussed. The constructs included information-gathering and problem solving, planning and organizing, time management as well as budgeting and financial management skills.

Chapter 5 presented the second research article. This article uncovered the self-management competencies of managers in the South African manufacturing industry. The research article consisted of an in-depth investigation regarding the different self-management constructs. The constructs included integrity and ethical conduct, personal drive and resilience, work/life balance and self-awareness and –development components.

Chapter 6 summarized the results of the research and conclusions were made about the results obtained. The findings of the research were discussed and recommendations were given.

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CHAPTER 2: LITERATURE BACKGROUND

2.1 INTRODUCTION

This chapter presents an in-depth investigation into managerial competencies and specifically planning and administration, and self-management skills. Strydom *et al.* (2015:55) explain that it is important for managers leading the business to have various managerial competencies to be successful in achieving business goals and objectives. Key focus areas for managers in manufacturing businesses are linked to project management and the overall successful execution of related activities (Bhamu & Sangwan, 2014:4 & 39). As a result, the demand for successful managers raises – a, growing interest in managers with experience and considerable capabilities (Singh *et al.*, 2013:1443).

Competence refers to a potential understanding or a skill to administer in a given situation (Botha & Musengi, 2012:112). In other words, competencies focus on an individual's actual ability to react in a given manner in a particular situation. Verle *et al.* (2014:924) state that managers must require certain abilities before it is expected to achieve a competency. Particularly focused on competencies, various competencies are considered to be more important or valuable than other competencies, due to different factors influencing the value of a competency, thus taking into account the managerial position and hierarchy level held by the manager in the business (Anzengruber *et al.*, 2017:135; Folkman, 2014:1). According to Hellriegel *et al.* (2012:23) the focus should be on the characteristics of managers and their competencies for this ultimately leads the business to obtain a competitive advantage. The absence of certain competencies is linked to the inadequacy of managers which leads to having negative outcomes for a business (Daft & Marcic, 2014:5). Williams (2014:14-15) emphasises that managers need to be capable of completing many tasks as part of their position which includes interpersonal, informational, and decision-making aspects.

The primary focus of this research is to investigate the planning and administration as well as self-management competencies of managers in manufacturing business.

The discussion in this chapter thus primarily focuses to a greater extent on managerial competencies in specific planning and administration as well as self-management competencies by discussing their different elements accordingly.

2.2 MANAGEMENT AS A BUSINESS FUNCTION

Managers are essential for the success of any business in modern times (Lounsbury *et al.*, 2016:434). Yet, Mintzberg (1975) noted: "No job is more vital to our society than that of a

manager” (cited by Lounsbury *et al.*, 2016:434). This section will provide an in-depth overview of and background to management as a business function.

2.2.1 Overview of the business environment

The business environment is defined by Strydom *et al.* (2015:28) as the setting where businesses operate. The modern-time business environment is formed by various integrated macro-forces driving businesses to discover innovative methods of managing and refining business performance (Anzengruber *et al.*, 2017:135). The business environment in modern times faces increasing changes – the pace in which businesses operate is much faster and intense (Combe, 2014:25-26). Businesses comprise human activities, managed or operated by individuals (Pindyck & Rubinfeld, 2013:6). Since businesses operate in an open system they are affected by several forces in and outside the business environment (Strydom, 2012:29). Either internal or external forces can cause an unhappy or depressed working environment in the business. For this reason employees will be affected as well, managers need to respond to these types of situations for a positive outcome (Strydom, 2012:29). Unavailability of resources for producing products and of the kind of products are limitations businesses frequently face (Pindyck & Rubinfeld, 2013:5).

Businesses also face the challenge that emerges in the links among managers and businesses, coupled with the characteristics of the managers, as many individuals deal with diverse situations applying different techniques (Cunningham & De Kock, 2012:113). In particular, businesses are confronted by the need to grow into constant innovators with a view to build a business environment in which transformation, resourcefulness and creativity form part of the work force's way of thinking (Bessant & Tidd, 2011:6). DuBrin (2012:5) states that the success of any business lies in satisfying the customers' needs. Nowadays it is required from businesses to optimise the utilisation of resources and to ensure that innovation is in fact the driving force for competitiveness, attractiveness and sustainability (Mullins, 2013:110). Managers' responsibilities furthermore include creating increasing intentions to build teamwork in the functional department with collaborated effort to enhance determination and cooperation (Strydom, 2012:55). With these elements in place the team are able to be open and honest with one another in a way that creates a healthy balance between challenges and support (Frost, 2014:127). Frost (2014:127) elaborates by indicating that team members need to have the confidence to maintain themselves and to be capable of cooperating effectively and interdependently with other members of the team to reach the required outcomes, make decision-making s, and take ideas forward.

The ability to effectively communicate, manage and resolve conflict, inspire, motivate and lead teams and individuals, and the skill to liaise in teams all form part of exploring and applying managerial competencies within the business (Zhang & Fan, 2013:199). A sustainable business should develop an expansive, intricate and internally steady productive knowledge facility and integrate it with other strategic business capabilities in the interest of achieving sustainability without any major complications (Mullins, 2013:110).

In order to obtain differentiation in supplying a product or service in the manufacturing industry, the business should establish relationships in which they understand their target market and customers' demands and expectations (Singh *et al.*, 2013:1447 & Jabr, 2010:264). Hence, to achieve this, the focus should be on three elements within the business: knowledge, competencies and attitudes (Aitken & Von Treuer, 2014:153). Daft and Marcic (2014:5) contribute to this by stating that competencies at business level allow for adequate achievement of business objectives. The importance of business competency in manufacturing business thus is to identify competencies which are imperative for the success of the business (Aitken & Von Treuer, 2014:153).

2.2.2 Management Theories

Management and elements found within management are however not only current occurrences; it dates back as far as 5000 B.C. (Schermerhorn, 2013:34) – the time when ancient Sumerians supported governmental activities (Thekiso, 2011:49). The next section will provide a review of management development into the systems known these days.

The initial meaning and primary understanding of the term *theory* is a series of assumptions, suggestions or known facts that seek to offer a reasonable or rational description of cause-and-effect connection the method of activity is based on (Business Dictionary, 2016; Oxford Dictionary, 2016). Mainly, a theory is any individual's view or description of the nature of certain factors (Combe, 2014:36). Management theorists explain their work in ethical standings (Van Buren, 2008:633). In the past, management theory development has been in dispute and before the mid-1950s no universally developed and accepted theory existed, as confirmed by various management departments in that time period (Greenwood, 1974:503).

A general summary of the development of management theories is given in Table 2.1

Table 2.1: Management theories and time frames

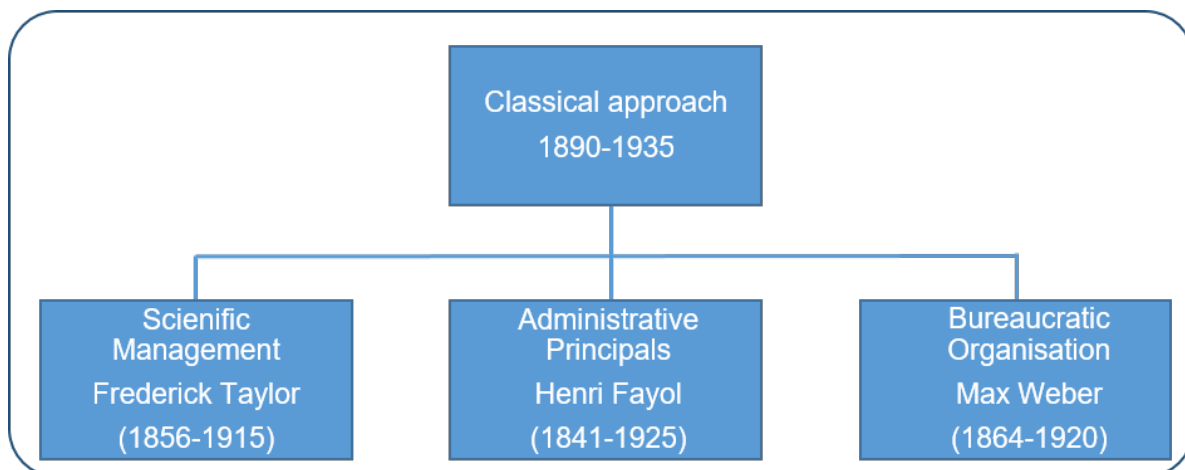
Theory	Theorists	Time frame
Management Philosophy – Business and Society Environment	Sheldon	1923
Production and Personnel Management	Anderson and Schwenning	1938
Management Science	Martindell	1950
Decision-making Theory	Bross 1953; Newman & Summer, 1961; Pratt <i>et al.</i> , 1965	1953-1965
Human Relations	Davis	1954
Management "Process" Principles and Theory	Koontz and O'Donnell	1955
General Theory of Administration	Litchfield; Green and Redmond	1956;1957
Operations Research	Churchman <i>et al.</i>	1957
Quantitative Methods and Models	Fetter	1957
Organizational Behaviour and Organization Theories	Lawrence <i>et al.</i>	1961
Systems Theory	Johnson <i>et al.</i>	1963
Comparative Theory – International and Intercultural	Richman and Farmer	1965

(Source: Author's Own compilation)

For purposes of this research it is essential to develop an understanding of the history of management and the development thereof to this day. A detailed review of the different approaches as part of the history, namely the classical approach and the behaviour approach, will follow.

2.2.2.1 Classical approach

The classical perspective, known today as the traditional management perspective appeared during the late nineteenth and late twentieth centuries (Lazenby, 2015:22). Fig. 2.1 indicates that the classical perspective includes three subfields, namely Scientific Management, Administrative Principles and Bureaucratic Organisations (Schermerhorn, 2013:35).

Figure 2.1: Three subfields within the classical perspective

Source: Adapted from Schermerhorn, (2013:35).

As depicted in Figure 2.1, Frederick Taylor (1856-1915) was best known for developing the methods of scientific management which highlighted scientifically determined jobs and management practices as the key to improve effectiveness and labour productivity. His main contribution to scientific management suggests that it is “the systematic study of the relationships between people and tasks to redesign the work for higher efficiency”. In other words, scientific management is the systematic study of relationships among people and tasks for purposes of reforming the work procedure to increase efficiency (Jones & George, 2011:35; Harry & Van Buren, 2008:634; Greenwood, 1974:504). Harry and Van Buren (2008:634) added to this by explaining that scientific management focuses firstly, on understanding that a specific task requires a particular method to be effectively performed; secondly, on selecting employees that can perform the specific task best; and lastly, on evolving and introducing a framework which enables maximum individual performance. Taylor (1967) also stated in the principles of scientific management that people should be rewarded in accordance with mental and physical difficulty of the task, meaning that every worker was paid according to their individual output. Taylor at that time was a manufacturing manager who turned out to become a consultant who educated other managers and taught them his scientific management methods. Scientific management focused on the productivity of the individual worker while administrative principles focused on the business as a whole (Lazenby, 2015:22). The highlight of scientific management was grounded on the principle that tasks would be performed more effectively if the minor employees understood exactly what had to be done within a specific time period (Combe, 2014:40).

The Administrative principal theory, as driven by Henri Fayol (1841-1925), is known to be another subfield in the classical approach (Wessels, 2015:25). This theory focuses on

management itself; various theorists expect that business ought to be designed according to the universal values of design (Fayol, 1949; Urwick, 1942). These theorists believed that a well-structured business would encourage efficiency. Fayol (1849) and Urwick (1842) as contributors to this theory were mainly concerned with discovering universally relevant values of business structures which could be used in a specific context. Figure 2.1 indicates that Fayol (1841-1925) mainly wrote about his concepts which were built upon his own experience. Nowadays management philosophy still is composed of several concepts. Fayol discussed in *General and Industrial Management* which includes for example: *Unity of command*, meaning that only one supervisor gives orders to each minor. In *Unity of direction* (yet another concept of Fayol's management philosophy) one manager is responsible for similar activities in a business (Daft, 2010:39). Fayol also believed that his concepts can be useful in any business situation. In modern times we still use the basic elements which he identified as being important in the field of management, namely *planning, organising, commanding, coordinating* and *controlling* (Daft, 2010:39). Fayol further suggested that all activities in a business can be divided into the following groups: technical activities, commercial activities, financial activities, security activities, accounting activities and managerial activities. These groups still apply in modern management (Combe, 2014:49). Administrative theorists believed that it is essential to manage employees, and furthermore, that employees want to be managed, they also stated that the economy needs to motivate individuals, and it is essential for managers to clearly outline tasks and expected results (Harry & Van Buren, 2008:634).

Another subfield within the classical perspective is known as the bureaucratic theory (Figure 2.1) created by Max Webber (1864-1920). One main difference between Max Weber's theory on management and other management theories is that Weber focused on the values of a perfect bureaucracy, he also outlined the threats and challenges bureaucracy could encounter. He also believed that a business based on rational authority would be more effective and flexible to transformation because continuity is associated with proper structure and position according to a specific individual, who may leave or die. Jones and George (2011:37) elaborate by saying that the bureaucratic system of administration was built on five principles, namely:

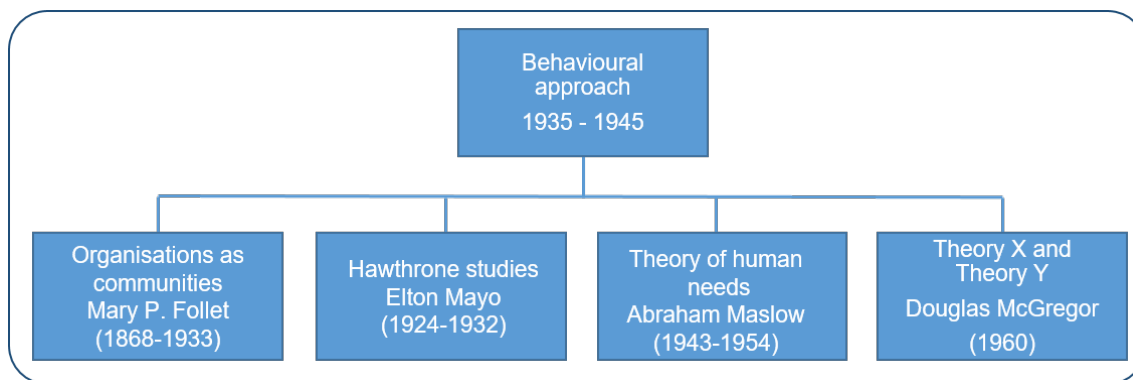
- The position a manager holds in the business is directly linked to the authority the manager possesses.
- Performance of employees should be the reason why the employees fill a position – not social standing or personal contact.

- The position held by an employee should be clearly defined as well as the associated authority and relations to other positions.
- A hierarchy should guide effective authority in a business for every employee to know whom to report to.
- In order for managers to effectively control behaviour in a business there must be clearly defined rules and procedures.

Weber further believed that implementing these principles in a bureaucracy will influence business performance. This foundation of Weber's bureaucratic system enables businesses to become extremely efficient and effective (Robbins & DeCenzo, 2008:26). Harry and Van Buren (2008:634) explain that considering all the key management theories of the twentieth century, the bureaucratic theory was most concerned with the requirement to focus on procedures within a business structure. Added to this, the capability of managers in a bureaucracy to act was strictly limited by its rules and outlined procedures.

2.2.2.2 The behavioural approach

Certo and Certo (2009:37) maintain that the behavioural approach to management highlights the growing understanding of people. The behavioural approach also believes that when managers understand the employees and adapt the business activities according to them, the result will be that the business will succeed. The emphasis on the human side in the business environment started to effect management thinking throughout the 1920s (Schermerhorn, 2013:38). Theorists, namely Mary Parker Follett, Douglas McGregor, Chris Argyris, Elon Mayo and Abraham Maslow were some of the main contributors to the behavioural management approach (Wessels, 2015:30; Saayman, 2009:52) as illustrated in Figure 2.2.

Figure 2.2: Five subfields within the behavioural approach

Source: Griffen (2014:381) and; Saayman (2009: 52).

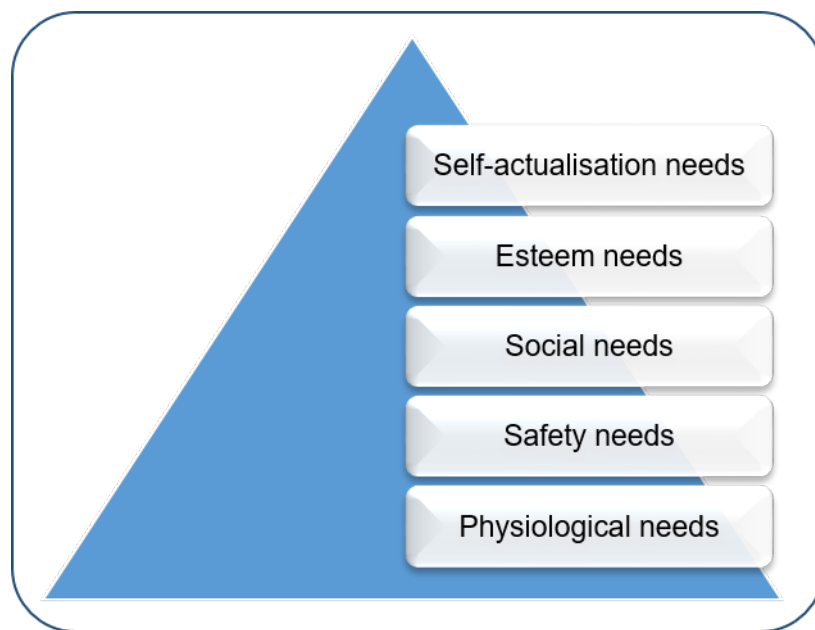
Follett (1868-1933) believed that Taylor was overlooking the human aspect of an organisation. She outlined that organisations should be viewed as communities (Figure 2.2), in which managers and employees should work together without one dominating the other and also having the freedom to communicate and together resolve conflicts and differences within the organisation (Schermerhorn, 2013:39). She was also an early believer of a more humanistic approach and focused on the importance of discovering and understanding more about human needs, behaviours and attitudes in the working environment including social relations and group activities (Daft, 2010:41). She further mentioned that managers frequently ignored the multitude of ways in which personnel can contribute to the organisation when managers agree to involve them in participation and in practising initiatives in the business. According to her, authority should go with knowledge – whether it is seen as downward or upward in the business structure (Jones & George, 2011:39), meaning that if lower level employees possess the relevant knowledge they should be facilitated and mentored by managers to control business systems rather than be supervised and monitored. Follett further believed that in order to help the business achieve its goals the power and knowledge should be given to employees who can best contribute to the success of the business.

The Hawthorne studies (1924-1932) led by Elton Mayo (see Figure 2.2) applied a scientific management perspective to obtain an understanding of how financial motivations and physical conditions of the work environment influenced the productivity of employees. Furthermore, the Hawthorne studies contributed by providing researchers with added evaluations focusing on the analysis of employees' relationships within the working environment, for example the social relationships amongst employees and managers or supervisors (Daft, 2010:41). Schermerhorn, (2013:40) argues that the Hawthorne studies' curiosity in the human relations facets expanded to contain employee attitudes, interpersonal

relations, and team dynamics and refers to the likelihood of an individual being singled out for special attention to perform as envisioned.

Another subfield within the behavioural perspective as illustrated in Figure 2.2 is the motivation theory, mainly referred to as Maslow's theory of human needs (Thekiso, 2011:58). Abraham Maslow (1943-1954) contributed with his theory by explaining human needs through his hierarchy of needs (Botha & Musengi, 2012:99), as illustrated in Figure 2.3.

Figure 2.3: Maslow's hierarchy of human needs



Source: Strydom *et al.* (2015:119) and Erasmus *et al.* (2013:12).

Botha and Musengi (2012:98-99) as well as Schermerhorn (2013:42) explain Maslow's hierarchy of human needs as the most important and primary needs from bottom to top. They saw physiological needs as those without humans cannot live, such as food, drink, shelter etc. Safety needs include the human need for safety and protection from any kind of destruction or threat. Businesses meet these needs by offering safe working environments as well as occupational security. The next level in Maslow hierarchy is social needs and refers to the human need for friendship, love, sense of belonging and community. By creating the opportunity of interacting with other employees' businesses meets the social human needs. The following level is esteem needs, which includes to which level we respect and value our self, and businesses fulfil this need by acknowledging the employees and affording them the opportunity of developing their careers. The last and highest level is self-actualisation needs, which refer to the need to develop one's talents and in so doing,

achieve our goals. Skills development and promotional achievements are ways in which businesses can contribute to the self-actualisation need.

Saayman (2009:184) points out that each level from bottom to top must first be met before the next level can be satisfied. Schermerhorn (2013:42) further explains that the theory indicates that employees will be more productive when managers understand and support employees' needs. For this reason Maslow's theory as well as the Hawthorne studies were major influences on Douglas McGregor's Theory X and Theory Y (Thekiso, 2011:62).

Douglas Mc Gregor's Theory X and Theory Y (see Table. 2.2) shift the focus away from human nature (Mc Gregor, 1960:42). Theory X assumes that managers believe that employees dislike work, are neither responsible nor ambitious and generally want to follow the leader and are therefore only motivated by incentives or recognition (Lazenby, 2015:33). On the other hand, Theory Y implies that managers believe employees are willing to learn and develop their aptitude whilst performing their given tasks, indicating that they are willing to work, be creative and take responsibility (Schermerhorn, 2013:42). Table 2.2 below summarises the differences in this theory as explained by Lazenby (2015:33).

Table 2.2: Difference in Theory X and Theory Y assumptions

Assumptions of Theory X	Assumptions of Theory Y
Management style is that of an authoritarian nature.	Management style is that of a participative nature.
The average employee hates work and tries to avoid it when possible.	The average employee is willing to work and does not hate work.
Employee wants to be led and avoids responsibility.	Employees accept responsibility and take initiative.

Source: Adapted from Lazenby (2015:33).

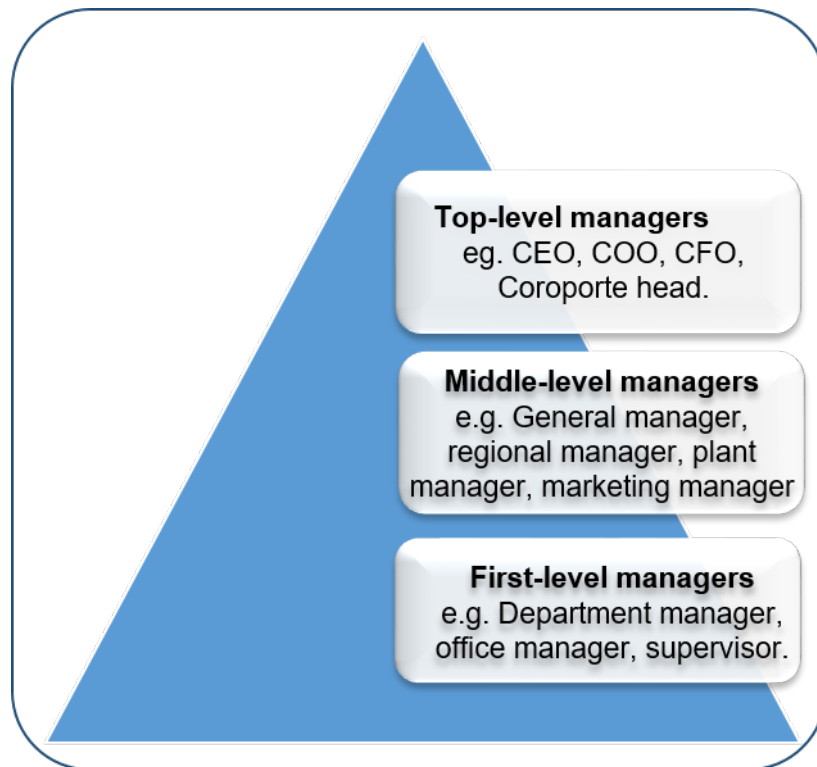
Studying the history and theories of management contributes to developing an understanding thereof. It also enables a broader way of thinking and discovering patterns which from 50 years ago reoccur today. The management theories over time change to meet new needs (Erasmus *et al.*, 2013:181). Lazenby (2015:41) confirms that management is facing great change and for that reason, management theories are still the building blocks of what is known today about management. The three key subfields of the classical, behavioural and modern approach were studied to illustrate the application of management in the twentieth-century. Developing knowledge and an understanding of management theories will support the modern view of the challenges of managerial roles and their competencies required in the business environment (Mullins, 2013:69). With the overview of

the management theories as background, the focus now will be on contemporary management; thus as it is today.

2.2.3 Review of Management

Management is referred to as the process of an individual in a higher hierarchy position in the business utilising business resources to successfully reach business objectives through planning, organising, leading and controlling (Strydom *et al.*, 2015:45; Griffin & Van Fleet, 2014:8-9; Hughes *et al.*, 2013:257). Effective management are essential for the success of any business (Burrow & Kleindl, 2013:7). Erasmus *et al.* (2013:171) as well as DuBrin (2012:7) state that management consists of a process which entails managers to use all the existing resources in the business in an operative manner and as a result the goals and objectives of the business can be achieved.

Management hierarchy refers to the three levels of management (see Figure 2.4) and are categorized from top to bottom in top-level, middle-level and first-level management accordingly (Strydom *et al.*, 2015:47-48; Griffin & Van Fleet, 2014:2-3). The responsibility of Top-level management is to guide the performance of all business functions and to accordingly establish business objectives and monitor the performance through middle-level management (Griffin & Van Fleet, 2014:2). Top-level management's basic responsibility is to supply strategic direction as well as strategic planning (Louw & Venter, 2012:124). Middle-level management refers to a group of individuals larger than the top-management group who are responsible and accountable for leading specific functional areas such as sales, human recourses, finances or marketing (Botha & Musengi, 2012:78). First-level managers on the other hand oversee employees who perform non-managerial tasks (Griffen, 2014:5). The management hierarchy consists of structures; hence the structure and performance of managers in the various levels involve continuous monitoring, change and improvement of the business tasks across the business functions (Svensson & Wood, 2011:23).

Figure 2.4: Management hierarchy

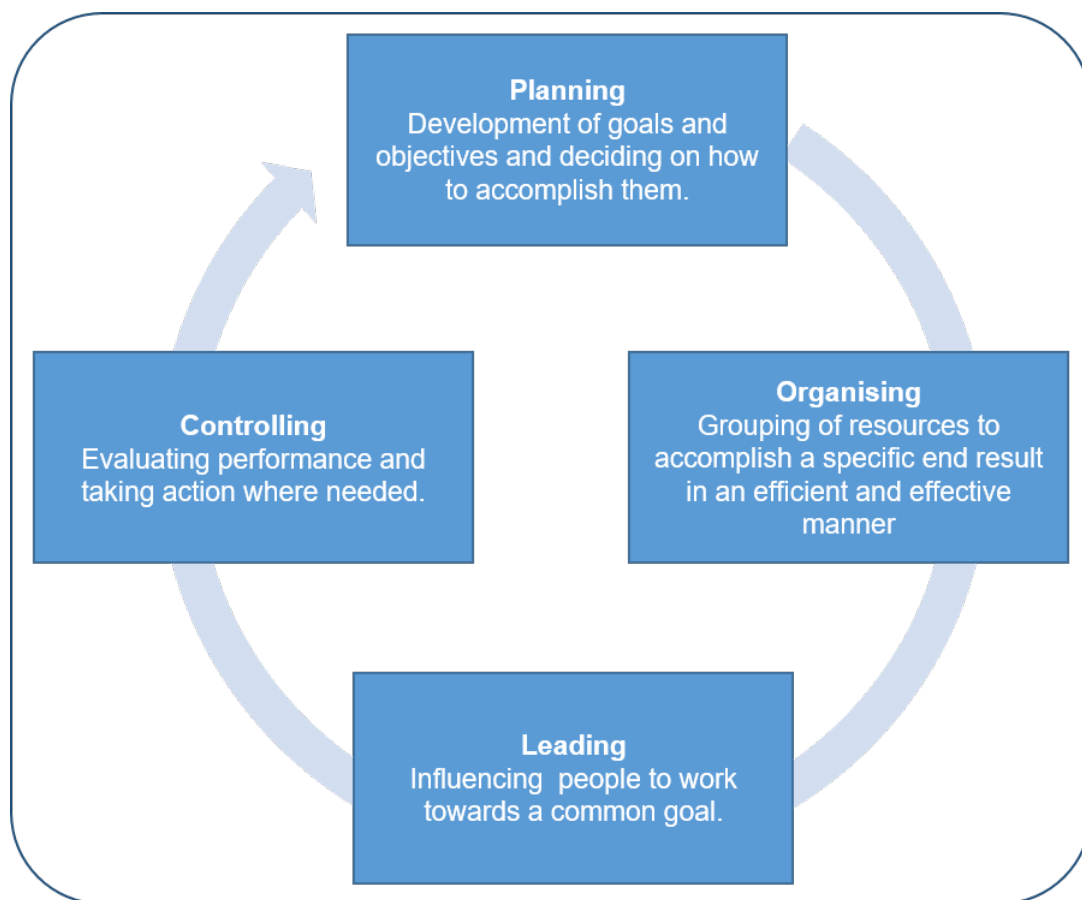
Source: Williams (2014:11) and Schermerhorn (2013:17).

All management levels in the management hierarchy and all business functions encompass the management process and the four functions of management (Schermerhorn 2013:18; Nieuwenhuizen & Rossouw, 2012:42). By developing proper structures, managers establish security; thus causing the business functions to endure and prosper and as a result achieve great performances in all functions of the business (Combe, 2014:372; Burrow & Kleindl, 2013:7). The management process is defined by Nieuwenhuizen and Rossouw (2012:156) as the necessary functions or important tasks required to be performed by all managerial levels so that the business goals can be successfully achieved. Williams (2014:5) notes that Henry Fayol's classic management functions are still recognised today by several researchers, which explain that the management process consists of the four functions as seen by Fayol, which include planning, organising, leading and controlling (Strydom *et al.*, 2015:45; Williams, 2014:5-6; Erasmus *et al.*, 2013:173).

Hughes *et al.* (2013:262) clarify that planning is recognised as the first step in the management process. Planning involves developing business goals and performance objectives and defining actions in order to achieve those goals and objectives (Louw & Venter, 2012:149). Planning in other words enables managers to identify desired outcomes and ways to accomplish those (Williams, 2014:6). Once plans have been established, they

need to be implemented. This starts with the process of delegating tasks, obtaining resources, and different tasks being coordinated with team members with a view to accomplish the plans (Williams, 2014:8). When organising takes place, it is essential for managers to then implement all plans and to ensure that all employees are supported and engaged in finalising their established tasks. Leading, as seen by Nieuwenhuizen and Rossouw (2012:62), is the process of influencing, providing directions, encouraging, and rewarding employees for their performance. Vora (2013:630) elucidates that management and leadership are not similar. Management is a broader concept while leading is the more specific one of the four functions in the management process (Erasmus *et al.*, 2013:225). The last function in the management process is control. Control is defined as the monitoring of development on the way to goal achievements and taking action when needed (Williams, 2014:9). The control process in other words comprises establishing standards to achieve goals, evaluating actual performance to the standards, and preparing changes as required (Bov   & Thill, 2013:154).

Figure 2.5: The management process



Source: Hughes *et al.* (2013:258).

The management process and the responsibilities must be successfully executed within the working environment in order for managers to be successful.

2.2.3.1 Managerial roles

Managerial roles is a general set of actions that is included in a manager's everyday tasks (Burrow & Kleindl, 2013:29). Williams (2014:14) notes that top-, middle-, and first-line managers engage in the four main management functions (e.g. planning, organising, leading, and controlling) but this does not necessarily label what they actually do. In other words, the roles managers have in a business outline what they essentially do. A managers' position can be labelled more meaningfully in terms of the different roles or planned sets of behaviour linked to an occupation (Mullins, 2013:435). Strydom *et al.* (2015:55) define management roles as the set of behaviours or detailed responsibilities that a manager is expected to complete. Henry Mintzberg (1970) recognised several roles relating to specific tasks that are essential for managers to complete, namely decision-making al roles, interpersonal roles, and informational roles.

2.2.3.1.1 Decision-making al role

Managers face various challenges, problems and opportunities and therefore decision-making is of the essence (Hughes *et al.*, 2013:271). Decision-making al roles involve the processes managers follow to strategically plan and attain resources to accomplish specific goals (Bovée & Thill, 2013:142). Mullins (2013:436) notes that decision-making al roles are divided into four subcategories: entrepreneurial role, disturbance handler role, resource allocator role and negotiator role. Entrepreneurial role is generally the decision-making role adapted by managers as soon as they and their teams are able to become accustomed to change. Disturbance handler role refers to the decision-making al role managers can perform when they face major problems that necessitate instant attention (Williams, 2014:16). Mullins (2013:436) adds that disturbance handler role entails that managers react unintentionally when unpredictable trouble occurs. Resource allocator role entails that managers use strict authority to make a decision-making on where work efforts will be added, and to decide on allocating business resources accordingly (Mullins, 2013:436). The negotiator role refers to that of managers representing the business at main negotiations (Lazenby, 2015:7).

2.2.3.1.2 Interpersonal roles

Interpersonal roles involve coordinating and interacting with the workforces, which is linked to providing direction to the business (Oosthuizen, 2017:32). Interpersonal roles are

categorised into three groups: figurehead role, leader role and liaison role (Oosthuizen, 2017:32). Figurehead role is associated with top-level managers when the manager must represent a function, team, or the business (Strydom, 2012:69). When managers provide motivation and direction to employees they adopt the leader role (Strydom, 2012:69). Once managers establish a working agreement in association with other businesses or manage activities or link resources among various parts of a business it is referred to as the liaison role (Mullins, 2013:436).

2.2.3.1.3 Informational role

Informational role is associated with collecting and transferring information for the management team of the business (Strydom *et al.*, 2015:6). Three main roles include that of monitor, disseminator, and spokesperson (Oosthuizen, 2017:32). As soon as the manager obtains an extensive total of internal and external information to create an understanding of the business and its environment it is referred to as the monitor role (Lazenby, 2015:7). Disseminator role on the other hand entails that the manager concentrates on allocating valuable information inside or outside the business (Oosthuizen, 2017:33). Since businesses do not operate in isolation from the rest of the world it is essential for a business to have a spokesperson to act on behalf of the business. Once the person accepts this role in speaking to the media, customers etc. they play the spokesperson role (Combe, 2014:15).

Lazenby (2015:6) suggests that top-level managers are more inclined to perform the roles of disseminator, figurehead, negotiator, liaison, and spokesperson. Furthermore, the leader role is more essential at the lower level of management; hence lower-level managers are further involved with subordinates. To gain a better understanding of how managers are to execute their responsibilities, more specific the managerial competencies will be discussed.

2.2.3.2 Managerial Competencies

Managerial competencies have been studied since the 1920s (Bloomfield, 1928), and systematic empirical research began addressing the said competencies in the 1970s (Kamel & Egan, 1976). Aitken and Von Treuer (2014:153) explain the term *competency* to be mainly based on performance while *competence* is generally used to represent a specific series of behaviours a person is able to perform in order to achieve goals and objectives in a specific profession. Furthermore the term *competence* refers to certain characteristics such as “knowledge, skills, aspects of self-image, social motives, feeling and acting” which are demonstrated by an individual to achieve the desired performance goal within the business (Jena & Sahoo, 2014:144). While there is a wide range of ways for defining managerial

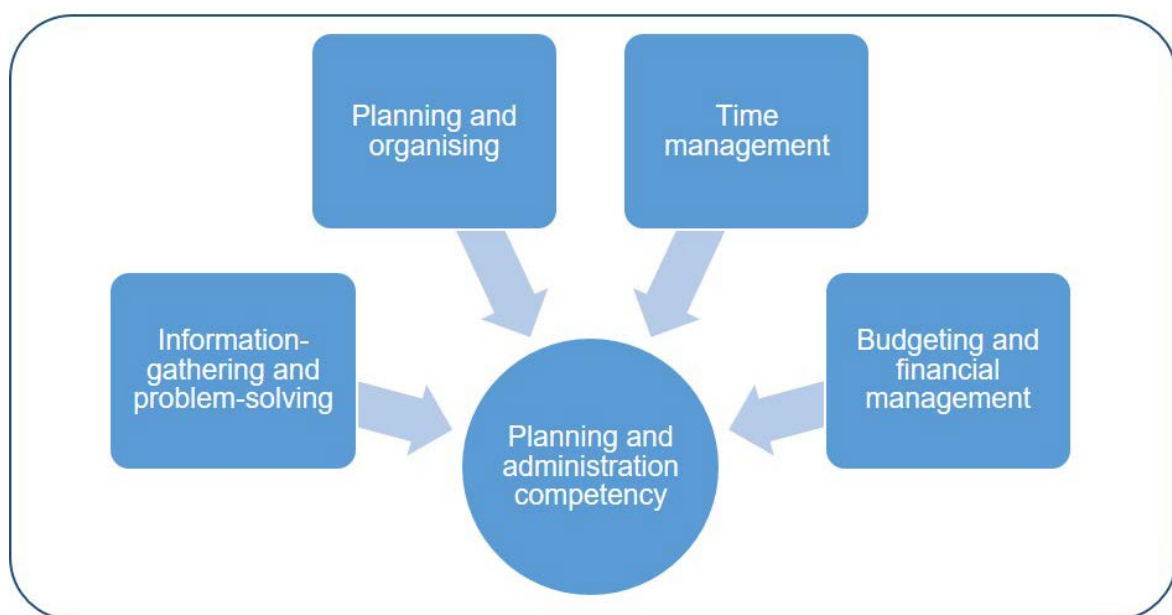
competencies, one of the most recognised definitions is those skills which distinguish “exceptional” from “ordinary” managers (Sutton & Watson, 2013:1024). This reference to the term *competency* is only one of numerous explanations available in literature. The definitions of the concept *competency* are generally based on two different viewpoints. Firstly, competencies are described as the control and extent of the authority of a specific individual or management team. Secondly *competencies* refers to a set of specific skills which include knowledge, abilities, traits, motives, attitudes or values that are frequently reoccurring over a specific time period (Verle *et al.*, 2014:923).

Daft and Marcic (2014:98) add that developing competencies involves four stages. The first stage is unconscious competence which occurs when an individual performs a skill naturally without added contemplation. The second stage is conscious competency which refers to the beginning stage of developing a new competency. Conscious incompetence is the third stage and refers to individuals knowing their skills limitation but are however aware of the actions to be taken in order to become competent. Finally the fourth stage is known as unconscious incompetence which refers to a skill being absent and the individual being unaware of this fact. In order for managers to be efficient an affective manager will strive to become unconsciously competent which refers to the first stage as mentioned above (Hellriegel *et al.*, 2012:23). Hence managerial development and improvement of managerial competencies and qualities are essential requirements for achieving success in any business (Karp, 2012:127).

The first and greatest recognised article written on managerial competencies was that of Robert Katz (1955). Katz outlined that managerial performance is subject to managerial competencies. Managers with the required competencies will be able to perform and therefore will have the ability to be effective and successful. Katz (1955) listed three vital competencies for managers to be successful, which include technical, human, and conceptual competencies. Technical competency is related to expert knowledge and proficiency and the ability to apply these techniques for achieving a specific outcome (DuBrin, 2012:17). Human competency involves the ability to work with different team members and the ability to build cooperation within the team (Williams, 2014:18). Managers with human competency work successfully within groups, inspire team members to participate and focus on efficient communication and listening skills. Williams (2014:18) further adds that conceptual competency enables managers to view the business as a whole, which refers to understanding that different business functions complement one another, that changes in one function affect other functions, and understand the effect environmental factors have on the business (DuBrin, 2012:18).

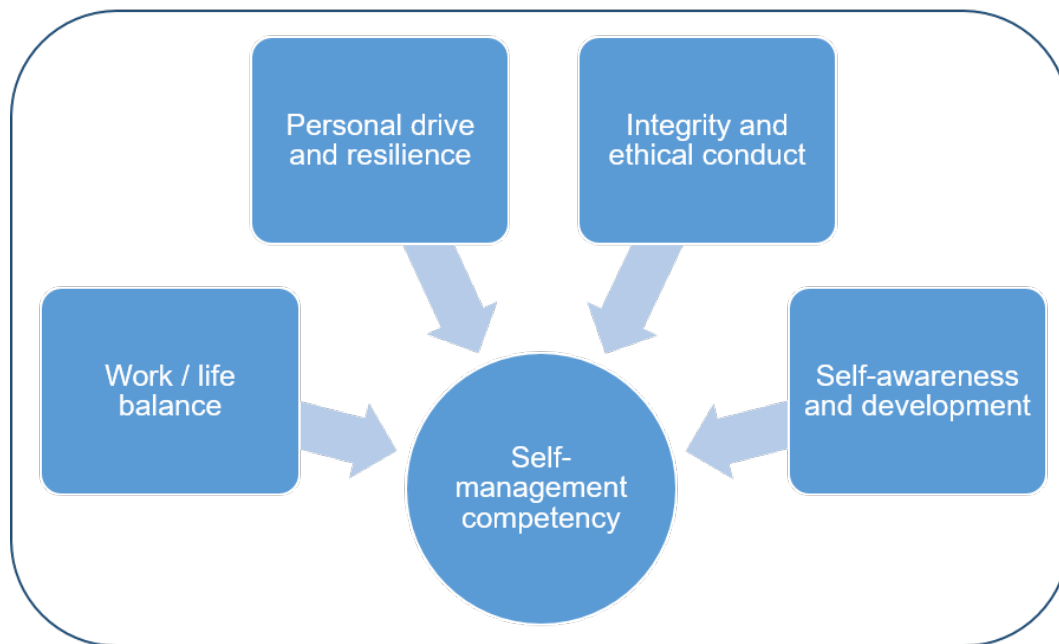
Since this research specifically focuses on planning and administration as well as self-management managerial competencies, the attention will focus on the particular set of skills which are continuously repetitive over time. Essential managerial competencies within a business as stated by Strydom *et al.* (2015:55) can include communicating, planning and administration, teamwork, strategic action, global awareness, emotional intelligence, and self-management. However, research has been done on general managerial skills and competencies that define an efficient manager, this research will be focusing on specifically the planning and administration and self-management competencies of managers. Hellriegel *et al.* (2012:43) indicates that planning and administration involve four different constructs: information-gathering and problem-solving, planning and organising, time management as well as budgeting and financial management (see Figure 2.6).

Figure 2.6: Constructs forming part of the planning and administration competency of managers



Source: Hellriegel *et al.* (2012:35).

Hellriegel *et al.* (2012:43) elaborate that on the other hand, self-management competency involves work/life balance, integrity and ethical conduct, self-awareness and -development as well as personal drive and resilience (see Figure 2.7).

Figure 2.7: Constructs as part of the self-management competency of managers

Source: Hellriegel *et al.* (2012:44).

2.2.3.2.1 Importance of managerial competencies

Managerial competencies are defined by Botha and Musengi (2012:112) as the knowledge and skills a person owns. In other words managerial competencies refer to outstanding and persistent personal characteristics which make an individual more suitable for a certain position. Hellriegel *et al.* (2012:30) add by describing managerial competencies as a collection of skills, knowledge, actions and behaviours require from an individual in order to be successful in various forms of managerial positions and different types of businesses. It is essential for managers to acquire several managerial competencies to be able to succeed in the modern business environment (Bov   & Thill, 2013:156). Business success depends profoundly on the competencies and knowledge of employees that are reliant on the knowledge and capabilities of managers (Verle *et al.*, 2014:924). Thus, managerial competencies are becoming an important element to the success of a business.

Managers need to be skilled in communication, planning and administration, teamwork, strategic direction, global awareness, emotional intelligence, and self-management (Hellriegel *et al.*, 2012:30). The utilisation of adequate executive competencies assists in productivity maximisation and motivates employees to organise their tasks more efficiently (Jena & Sahoo, 2014:144). Managerial competency has a direct effect on the performance measurements of a business. Competent workforces are not only related to enhanced

working environments but also assist in improving business performance as a whole. This has formed urgency between many businesses to develop their managers with adequate managerial competencies, in order for them to position these competencies effectively to develop greater performance in their respective jobs (Jena & Sahoo, 2014:143). More specific competencies provide manufacturing businesses to secure customer satisfaction, reliability, productivity, market share, profitability and all these components make the business sustainable, but these components are precisely affected by the quality of product, cost of product and maintenance initiatives (Singh & Khamba, 2016:139; Aitken & Von Treuer, 2014:150). It has further been observed that the performance of managers is strongly influenced by their competencies. Thus the success of an organisation largely depends on the manager's competencies. Rao (2014:65) found that one of the most important managerial competencies required to be a successful manager is job knowledge. Other competencies such as hard work, effective communication skills, team skills, and calmness are frequently found in manufacturing managers.

It is important for the manufacturing businesses to determine the competencies of its managers so as to fill the skill gaps and reach the necessary performance outcomes to benefit the business by promoting effective training and development programmes to increase its efficiency and effectiveness (Verle *et al.*, 2014: 923). Once managers have obtained a definite understanding of the above-mentioned competencies and theoretical constructs, it is essential for them to effectively execute them in different environments and adapt the implementation of these managerial competencies within varied groups. Regardless of the predominance and importance of managerial competencies, the transparency of their role, and indication concerning character traits to workplace success, the question of what character traits distinguish managers from non-managers rests mainly unaddressed in available, empirical research (Lounsbury *et al.*, 2016:435). As this research investigates the planning and administration as well as self-management competencies of managers an in-depth literature review of these specific competencies will follow.

2.3 PLANNING AND ADMINISTRATION AS MANAGERIAL COMPETENCIES

Hellriegel *et al.* (2012:35) indicate planning and administration as a managerial competency that consists of determining which business tasks must be completed, defining by which method they can be executed, assigning resources to allow them to be done, and then monitoring progress to ensure that they are done. They further explain that for many individuals, the planning and administration competency comes to mind first when they think about managers and managing. Administration on the other hand can be linked to some set of rules or procedures, which form part of the management process concerned with the

implementation of systems and procedures to assist in achieving the objectives as stated in Chapter 1 (Mullins, 2013:424).

Planning however, is defined by Erasmus *et al.* (2013:188) as the process of establishing how the business should operate to go where they aimed to be, and what actions to follow in order to achieve the formulated objective. Planning is therefore an essential stage in all businesses as specified that it directly supports the accomplishment of business goals and objectives. Planning and administration thus form the basis of most managerial tasks (Erasmus *et al.*, 2013:193) and are subdivided into specific aspects such as information-gathering and problem-solving, planning and organising, time management as well as budgeting and financial management skills (see Figure 2.7) as pointed out by Hellriegel *et al.* (2012:35). The literature discussion of the various aspects will follow.

2.3.1 Information-gathering and problem-solving

Information-gathering competency is referred to as being capable of obtaining and working with information to solve problems and is one of the most important managerial competencies (Schermerhorn, 2013:87). In other words, having the ability to discover, research, gather, assess, organise and analyse information in order to make decisions that would be advantageous to the business. This means not merely obtaining information; it means obtaining reliable and valued information, and utilising it properly (Kuratko, 2014:153). Information and research obtained connected to activities, goals and priorities can also be provided by consulting formal documents, for example detailed job descriptions, and from important performance pointers which are frequently defined through performance management methods and processes (Burrow & Kleindl, 2013:44). Consequently, management should develop matters that ask directly about the establishment of job descriptions and the management of performance (Burt *et al.*, 2010:653).

Gathering information and doing the necessary to solve specific problems can be categorised into six groups. Firstly, time available because gathering information and doing research requires substantial time. It is therefore essential to plan work tasks in accordance with specific time schedules required for doing research and gathering information on specific tasks or problems; secondly, specialist expertise seeing that research requires knowledge. Knowledge, amongst other effects, includes research methodology, statistical analysis and interpretation, economic analysis, forecasting techniques and interview skills. Full-time research employees would more probably partake in this form of expertise; thirdly, perspective, because experts in research and information-gathering are expected to see research tasks from a broad perspective; fourthly, available knowledge whilst it is essential

while gathering information and doing research for managers to mentor or lead the personnel involved. Managers are exceptionally well informed about all markets, trend as well as competing business. Researchers do not necessarily have this kind of knowledge and could for that reason disregard essential influencing factors; fifthly, decision-making because the final decision-making on implementing research recommendations lies with management. Successful implementation of developed plans to solve specific problems lie with management; and lastly, cost, seeing that information-gathering whether done through external parties or internal personnel usually includes high expenses. The cost of the information-gathering or research should be weighed against the quality of data that could be obtained.

Problem-solving, according to Spinelli & Adams (2012:285) is being capable of anticipating and investigating probable challenges, analysing these challenges for existent reasons and planning active action to solve these challenges; management should therefore be familiar with how to carefully deal with information on specific challenges and bring everything to conclusion. Cho (2016:147) define problem-solving competence as being the methods of searching and interpreting a multitude of selections of creative and cost-effective ideas and with that, assessing and applying the solutions following a well-timed method. The ability to recognise, analyse and solve business problems as they arise represents an essential management skill that enables managers to control the business by successfully guiding resources towards the accomplishment of business objectives (DuBrin, 2012:232). Numerous management challenges necessitate creative thinking and problem-solving in order to identify appropriate solutions (Combe, 2014:243 & Proctor, 2010:7). Management with valuable problem-solving competencies may generate excellent competitive advantage since competencies in discovering, understanding, and solving problems may allow the businesses to develop and market new products which meet the customers' needs (Atuahene-Gima & Wei, 2011:81). Problem-solving promptness promotes both product quality and product advantage because the discovery of several solutions ensures faster learning among project members about both customer and operational requirements (Atuahene-Gima & Wei, 2011:83). They also indicate that problem-solving promptness ensures that managers and employees involved in business projects conquer operational and technical challenges in a well-timed method, thereby increasing not only product quality but also product advantage.

Nowadays creative problem-solving has become more essential and the need for creative problem-solving surface frequently as a result of the shortfalls to assist in developing understandings into problems. In order to recognise and explain various problems that arise

in business it is essential to challenge the problem-solving skills of managers (Burrow & Kleindl, 2013:43). Usually the creative process is used to approach problems that should be controlled, limited and improved for the sake of developing new ideas and viewpoints (Brewer, 2013:9). The types of problems dealt with by managers and other employees range from relatively common and well-defined to the unusual and ambiguous (Nieman & Bennett, 2014:106).

Conducting research on the distinctive aspects of problem-solving practices in manufacturing businesses is a complicated struggle resulting from the complicated procedures and business dynamics that form an essential part of the manufacturing business (Aitken & Von Treuer, 2014:158). Nieman and Bennett (2014:107) explain that successful decisions are usually made when well-structured processes to follow are in place, including situation analysis and planning. Rational decision-making can therefore be described as a logical and systematic approach to identifying the problem, developing alternative solutions, and selecting the most appropriate solution (Daft & Marcic, 2014:11). Decisions are made under circumstances of certainty and uncertainty, subject to the levels of risk involved. Certainty is the condition under which managers are fully informed about a problem, alternative answers and solutions are clear and existing, and probable outcomes of each solution are evident.

2.3.2 Planning and organising

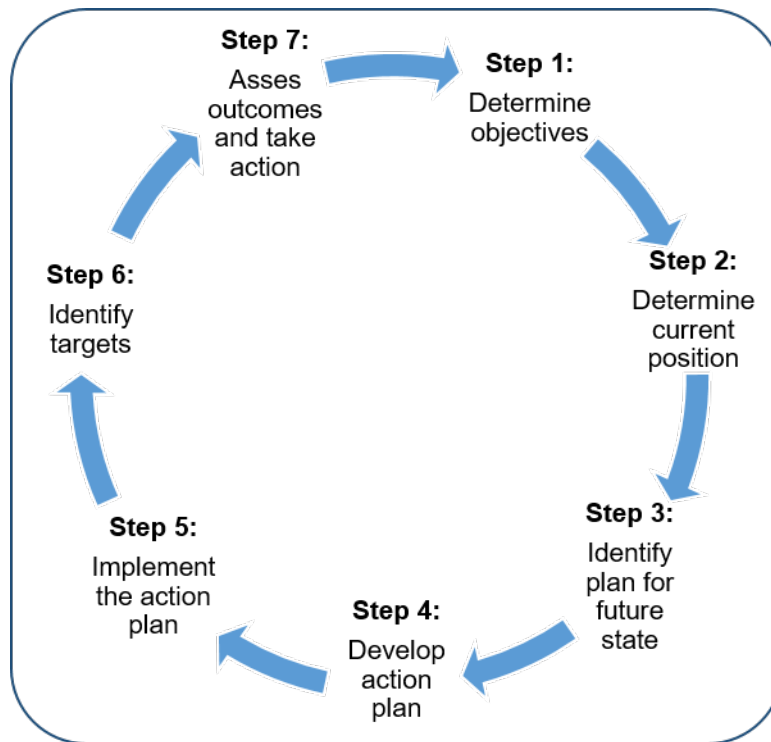
Schermerhorn (2013:112) indicates that there are four functions related to management: planning, organising, controlling and leading, of which planning is the most important. Schermerhorn (2013:112) further stated that when planning is perfectly executed it lays a strong foundation for the other management functions to be successful. Planning is the first action to be taken in any management process (Strydom *et al.*, 2015:73; Nieman & Bennett, 2014:189). Planning, as defined by Evans and William (2014:251), is developing a plan to achieve strategic objectives, to understand the basic customer needs and business skills, to set long-term and short-term goals and reach them accordingly, to understand employees' perception of quality work and also to grant them the opportunity of developing their skills and generating rewards in order to ensure effective work. Planning in other words refers to the process of defining objectives and then determining on what should be done to reach these objectives (Hugo & Badenhorst-Weiss, 2011:26). In essence planning therefore consists of decision-making on what the business goals and objectives are, and achieving these within a specific expected time period (Williams, 2014:119). Planning according to Strydom *et al.* (2015:65) enables management to develop a vision and mission statement, prepare a situation breakdown, develop strategic plans, consists of the competencies to

execute the formulated plans and thereafter be able to give feedback. Planning is long term and is in essence to be executed by top managers (Williams, 2014:113).

Erasmus *et al.* (2013:92) point out that planning is beneficial to managers, given that firstly, planning provides managers with direction to set goals and objectives in the interest of future growth; secondly, it takes into account the micro and macro environmental changes for maximum business output; thirdly, it encourages coordination so that all business functions work in unison towards planned long-term goals; fourthly, it ensures unity for management to manage the business as a total unit; and lastly, it guarantees that management facilitates control, given that effective control ensures goal achievements.

Moreover, Schermerhorn (2013:113) and Combe (2014:72) established that there seven steps need to be followed by managers to ensure effective planning (see Figure 2.8), which are:

- formulate objectives: managers must know their goals and have a clear plan of where they want to be and how they intend to achieve that;
- determine the current position: managers should have an idea of where they presently are in reaching their specific objectives, and identify their strengths and weaknesses regarding the achievement of their objectives;
- develop circumstances regarding future conditions: to generate future scenarios managers could find themselves in and think what can happen and identify a solution that may help the manager in progressing towards his objectives;
- construct a plan: managers must apply the best plan likely to succeed and help them achieve their objective; managers must describe what needs to be accomplished to successfully implement a plan that will work;
- implement the plan: action needs to be taken by managers by which they measure the progress they had made while implementing the plans and establish whether the progress is slow. If this is the case, the plan needs to be revised;
- identify targets: to evaluate outcomes and results; and
- assess: and if necessary, take corrective action.

Figure 2.8: The planning process

Source: Combe (2014:72) and Schermerhorn (2013:113).

Specifically for this study, planning and organising projects entail manufacturing managers working with employees to ensure that everybody knows what the objectives are, assign resources accordingly and reach consensus on completion dates (Hellriegel *et al.*, 2012:26). While mathematical modelling and theories were prominently focused on, researchers started to concentrate their research on human, organisational and management characteristics to address the planning and scheduling problems (Lin *et al.*, 2007:1213). After the shift from manufacturing planning being aided by mathematical modelling and algorithms it is today accepted within the academia and manufacturing industry that human planners and schedulers are critical elements of an effective planning and scheduling process. A study by (Fulton & Hon, 2010:353) established that advanced manufacturing systems require a human being to operate the system so that it can balance the setbacks of control algorithms. To emphasise the multi-disciplined method, some researchers have suggested that the result of the scheduling process was swayed by human, technological, and organisational aspects.

Schermerhorn (2013:115) as well as Burrow and Kleindl (2013:37) acknowledge that effective planning holds several advantages for managers of manufacturing businesses, which are: firstly, that it keeps the managers focussed and orientated; Planning helps keep managers flexible and advances their focus which leads to improved performance. A

business that has focus knows its strengths and weaknesses; secondly, it improves coordination and control because businesses consist of a large group of employees doing a variety of tasks and projects but if the business is intent on being successful, the various types of work must all come together effectively and efficiently; therefore good planning structures make it possible for all the different departments to be linked together in a hierarchy of objectives to obtain the company's overarching objectives. The hierarchy of objectives is based on a system by means of which lower-level objectives assist in achieving higher-level objectives; and thirdly, planning improves time management seeing that time management is the benefit of good planning done by managers because when good planning has been implemented good time management will follow. Time management comes down to discipline and priorities and is one of the most important managerial skills a manager can possess.

Organising on the other hand, includes managerial activities by which duties, responsibilities and authority are arranged within the business (Wessels, 2015:38). Organising is further defined as obtaining material and human resources and developing frameworks to enable business activities to be carried out (Mullins, 2013:427). Organising allows the development of structures within a business which contributes to employees achieving business goals (Nieuwenhuizen & Rossouw, 2012:58). Du Toit *et al.* (2012:193) add that organising provides managers with various benefits, which include assurance that resources are allocated effectively; employees understand their role in the business, workload is divided effectively in order to perform work tasks successfully; and that the reporting system is clearly defined within the business. Effective managers coordinate and organise work within the business in order to lead actions to achieve effective and efficient outcomes (Burrow & Kleindl, 2013:32). Organising can further include managerial activities by which duties, responsibilities and authority are arranged within the business (Wessels, 2015:38). Organising is also defined as obtaining material and human resources and developing frameworks to enable business activities to be carried out (Mullins, 2013:427). Organising allows development of structures within a business which contributes to employees achieving business goals (Nieuwenhuizen & Rossouw, 2012:58). Organising further ensure effective direction in the business; hence it provides structure in order for employees to reach business goals and objectives (Nieuwenhuizen & Rossouw, 2012:58). Therefore managers benefit from being organised as effective managers coordinate and organise work within the business in order to lead actions to achieve effective and efficient outcomes (Burrow & Kleindl, 2013:32). Generally managers equate the organising function to with developing an organisational chart where ideally the activities and resources are grouped

under various specialised departments (Griffin, 2012:7). Furthermore, Du Toit *et al.* (2012:193. explains that creating specialised departments includes the following benefits:

- employees are able to complete minor and understandable tasks and come to be exceptionally capable of undertaking each task.
- the transfer time between tasks decreases. If employees perform several different tasks, time is lost as they stop doing a task and move to the next task.
- the more narrowly defined a task, the easier it is to develop specialised equipment to assist with that job.

A manager's administrative skills involve the ability to manage different types of employees (i.e. culture and personality) and organise people to work effectively towards the vision of the business or the achievement of the departmental objectives (Botha & Musengi, 2012:119). Preparation, preventive maintenance, planning, building resiliency, and organising are all "not-have-to" activities that are crucial for long-term success. Because they are not urgent, however, they often get driven out of managers' time schedules. Important activities should be the top priority on the time management agenda (Whetten & Cameron, 2011:122).

2.3.3 Time management

Daft and Marcic (2014:122) define time management as a technique that enables more productive work in less time and is linked to improved business results. Effective time management is evidently a factor in job performance and can therefore contribute to any business success (Daft & Marcic, 2014:122). Engaging in time management, supports efficient control over tasks, increases effectiveness, improves work/life balance and enables proactively dealing with challenges (Mullins, 2013:480). Time management has become an important element; such that businesses started presenting workshops on how to manage time effectively (Mullins, 2013:480). Time is active, and has several special forms of representation, which may also be extensively categorised as objective time which is traditionally measured according to clock time as well as socially constructed time, with its subjective meanings in specific social and cultural contexts, such as the separation of work time and loved ones' time (Wu & Passerini, 2013:33). We live today in a fast-paced society in which everything has to be done at a rapid pace and even more so in the business environment and especially in the manufacturing businesses where products are being produced and need to be sold to the consumer, and consumer behaviour has also changed to a fast-paced environment where the consumer wants the product immediately (Rao, 2014:278). Taking the above into consideration it is clear that societies today find it difficult

to manage their time and even more so, managers of businesses (Mullins, 2013:480). Due to the rising expectations and aspirations from all sources constant pressure prevails on having to do too many things within a fixed time period (Rao, 2014:278).

Time as a dimension is described by Söderlund (2012:631) as the degree to which people feel they can manage their time as well as the relative importance of how to manage it with respect to their personal life linked to working schedules. Time management as a competency according to Söderlund (2012:623) is linked to decision-making when managers understand the importance of planning to make the correct decision-making within the given timeframe. De Janasz *et al.* (2012:82) describe time management for managers as the ability to divide their time and resources so that they can achieve their goals. It is thus a management skill that refers to how one spends one's time, which allows one to prioritise in order to achieve more objectives in the organisation and in life. Time management is therefore further defined as techniques managers apply to be more effective in their work tasks with better results (Lazenby, 2015:108). DuBrin (2012:645) advises that managers should work smarter not harder, which suggests that fewer time should be taken to carefully plan tasks focused on spending more time on higher quality out-put. Burt *et al.* (2010:652) raise another valid point stating that when employees have extensive knowledge of time management and are trained in time management activities they may struggle to apply these processes if the business environment is not supporting or facilitating effective time management. Managers could also facilitate time management by specifically engaging in building support for time management behaviours such as encouraging the use of time to plan on which work will be done on a specified day (Griffin & Van Fleet, 2014:10). Co-worker communication offers additional instruments by which activities, goals and priority information can be obtained and clarified to support time management. Moreover, given the growing occurrence of team-based work, it may be crucial for co-workers to deliberate activities, goals, and priorities if team affiliates remain to effectively organise their time use (Lazenby, 2015:108).

Time management then is considered one of the most important aspects of management for managers to be able to monitor and manage different time dimensions effectively (Daft & Marcic, 2014:126). Time is regarded as one of the most important resources of a manufacturing business – time has long been a gauge businesses use to plan, measure and evaluate their performances; thus time management becomes crucial not only for business orientated components but other components such as individuals, groups, organisations, and even societies (Wu & Passerini, 2013:333). To be a sustainable and successful business in today's dynamic business world, managers often pursue sufficient time

management strategies to complete their work on time (Wu & Passerini, 2013:333; Brown, 2013:465).

2.3.4 Budgeting and financial management

Financial management is a function in a business in which primary managing principles still apply (Sandalgaard, 2012:399). Planning, as mentioned above, is the first and utmost important step to take in the management process (Lazenby, 2015:93). Planning is also considered one of the most vital tasks of a financial manager (Strydom *et al.*, 2015:192). Decision-making on the other hand is also described by Wibowo and Alfen (2013:407) as a vital element in financial management. Financial decision-making is amongst other things linked to the constant changing business environment. Nieman and Bennett (2014:189) explain that continuous change takes place in the business environment and for that reason capital position of a business changes continuously; hence detailed breakdown of future capital is compulsory. Financial management refers to processes of obtaining sufficient finances at the lowest cost (Strydom *et al.*, 2015:193; Erasmus *et al.*, 2013:14). Financial management has long been acknowledged as being an essential management tool (Zayed & Liu, 2014:131). Planning for a firm's money needs and managing the allocation and spending of funds refers to financial management (Bov   & Thill, 2013:406).

Budgets, on the other hand, are commonly used as one of the most important planning and control methods, which are usually articulated in monetary terms, and mirror the actions of the business for a specific time in the future (Combe, 2014:204). Budgets can be defined as financial plans that provide the basis for directing and evaluating the performance of individuals or segments of organisations (Elhamma, 2015:973; Williams, 2014:118). The budget positions management's projected income, expenses, returns and profits which relate to adequate resources obtained and consumed and furthermore specify the estimated in sales (Griffin & Van Fleet, 2014:329-330). A comprehensive budgetary structure then leads to effective planning, given that it is built on realistic expectations (Nieman & Bennett, 2014: 189). Numerous resources contemplate the budget as a fundamental tool to the success of the many profitable businesses (Erasmus *et al.*, 2013:252). Kihn (2011:241) explains that the budget targets particularly determine business activities and objectives. Erasmus *et al.* (2013:252) explain that budgets have numerous strengths and weaknesses. Most importantly budgets coordinate efficient control on cash flow. However, budgets occasionally bound flexibility. Various forms of budgets exist to help managers in their financial planning. The cash budget is one of the essential budgets for guidance in the manufacturing industry.

A cash budget contains a projection of the outflow and inflow of cash expenses for a specific period of time in the future, and it is vital to new as well as existing businesses (Nieman & Bennett, 2014: 189). Cash flow control refers to managing cash outflow and inflow and estimating the future capital position in manufacturing businesses, and it is of vital importance to managers (Mullins, 2013:640). If there are any major differences between existing and estimated cash flow values, it is required of management to instantly bring the estimated plan up to date to match the estimated circumstances. Friis and Hansen (2015:336) assert that financial tools and elements are essential for solving business challenges on a constant basis. The most important tool available to manufacturing managers in order to manage the financial facets of business is cash-flow management. Cash flows influence the capability of a business to undertake investment activities (Hoelscher & Seavey, 2014:605). Managing cash flow is accepting the responsibility of managing business activities within certain monetary requirements which include the composition of cash controls, managing the firm's cash position, and being capable of recognising that a certain amount of capital is required, when and where the money will longer be, and when breakeven will arise (Spinelli & Adams, 2012:285). Nieman and Bennett (2014:189) further explain that past financial activities of the business are usually used to start compiling a budget. Financial expectations and probable cash activities play an important role.

Financial reports are essential when it comes to budgeting and financial management. Financial reports allow for a clear distinction to be drawn pertaining to the cash outcomes of operating, investing and other financial activities (Friis & Hansen, 2015:338). High-quality financial reports reveal projected outcomes more accurately to financial reports users and should therefore influence successive managerial decision-making to a higher level than do low quality reports (Hoelscher & Seavey, 2014:597). This suggests that improved control of financial reports may encourage risk taking by managers. They ought to have the skills to look further than financial reports to gain an understanding of emerging or present complications (Strydom *et al.*, 2015:193). Financial management also focused in a wide-ranging sense on the markets, economy, associations and securities and are involved with the transfer of money between individuals, businesses and governments (Pindyck & Rubinfeld, 2013:289). Kihn (2011:241) further explains the importance of financial plans as a guideline for managers and employees and for that reason it is manufacturing manager's responsibility to ensure the employees of the business with set budgets. Efficient cash management is mostly subjected to how good the manager is able to manage the business operations and cash structures (Griffin & Van Fleet, 2014:14). When assessing the financial performance of a business the focus of managers generally is on profit retention of the

business (Levy *et al.*, 2014:156). Moreover, the goal of financial management is to manage the cash cycle competently in order to continue low levels of cash investment, thus contributing to the maximisation of the business value (Griffen & Van Fleet, 2014:14). Successful implementation of financial management provides managers with a broad outline of the business finances and the present and future financial success of the business (Wibowo & Alfen, 2013:407).

The second competency investigated in this study is self-management and the following section provides an in-depth overview thereof.

2.4 SELF-MANAGEMENT AS MANAGERIAL COMPETENCY

Daft and Marcic (2014:57) define self-management as the method of an individual's ability to administer confusion, ineffective work, or destructive emotions and needs. For individuals to achieve a high level of self-management they need to be capable of identifying the importance of self-esteem and personal growth, which entails defences against destructive forces (Ross, 2014:304). According to De Janaz *et al.* (2012:79), considering the business framework, self-management also indicates an individual's attempt to deal with own tasks and decision-making by identifying and evaluating problems and creating specific goals and strategies to construct one's individual environment to face those problems. It is essential for managers to understand that if they are not capable of leading themselves, they will not be capable of leading others (Ross, 2014:300). Leadership involves an individual exercising responsibility and control to influence their own or others' personal actions (Griffin & Van Fleet, 2014:367). Leadership starts within the individual as a leader (Frost, 2014:126) and it therefore depends on how effectively the individual is capable of leading themselves and their personal values that describe them as a leader (Griffin & Van Fleet, 2014:367). When managers are able to lead themselves effectively they behave in line with their stated values. Possession of the qualities *self-management* and *self-awareness* leads to managers being more likely to approach difficult tasks (Karp, 2012:128). This means having the self-awareness to understand who they are and what is important to them as a leader, they will show enough courage to role-model values to others to set an example which brings unique qualities to their managerial abilities (Frost, 2014:126). Self-management as a managerial competency consists of certain specific components, namely work/life balance, personal drive and resilience, integrity and ethical conduct as well as self-awareness and self-development (see Figure 2.7). These components will be discussed accordingly.

2.4.1 Work/life balance

Wheatley (2012:815) underlines work/life balance as the factor which managers encounter in their attempt to find equality in work and life. Taking into consideration criticisms of current work/life balance concepts, this does not imply work/life imbalance. “Work” in this context is associated with remunerated employment in relation to working given hours per day for a business while “life” specifies non-work-related activities or time taken to participate in leisure activities or time spent with family and friends. When distinguishing between work and life, the problem arises when taking into consideration the time spent travelling to and from work, as this refers to time taken for work purposes but cannot be referred to as leisure time nor paid employment (Wheatley, 2012:814; Burrow & Kleindl, 2013:70).

Considering the research found on work/life balance, many describe work/life balance as achieving equality between home and work roles (Waller & Ragsdell, 2012:155-157). Kaiser *et al.* (2011:10) further define work/life balance as the satisfaction and positive functioning at work and at home with minimum role conflict. Managers and employees spend much of their lives at work, for that reason the factors which contribute to the changing environment have a major impact on their health and also on their performance at work (Kalliath & Kalliath, 2012:730). Wheatley (2012:815) highlights that professional business time demands and extensive working hours lead to having a negative effect on the manager’s ability to effectively balance work and life. Long working hours and the increasing need to work overtime cut in on a manager’s time available for family life; consequently the problem arises that managers are unable to fulfil their family responsibilities. Waller and Ragsdell (2012:155-157) further explains that when managers and employees achieve work/life balance they are in the same sense engaged in and equally satisfied with their work and family role. Managers ignoring the importance of work/life balance result in more implications for businesses and their employees (Hyvönen *et al.*, 2015:1034). There can be differences between managers with different personal work or career goals in the extent to which they experience their goals to be in conflict with other areas of life (Hyvönen *et al.*, 2015:1035). The aim should therefore be to gain knowledge of which personal work goals might be an identified risk to the work/life dilemmas.

2.4.2 Personal drive and resilience

This research draws attention to personal drive and resilience of managers, and whether the conflict experienced between set objectives and other areas of life has a specific association with the business being successfully sustainable. Ismail (2015:689) refers to personal drive as the value of a person’s motivation or attempt to achieve results. Lyons *et al.* (2015: 364-

365) add by defining resilience as a response to threat or risk, either recognised or accomplished, rather than purely as a response to experienced stress. Daniels *et al.* (2015:175) elaborate that resilience is also associated with consistency to sustain the determination to achieve goals and objectives over time. Competent managers are resilient, which means they have the ability to rapidly bounce back from disappointments (Matzenberger, 2013:193; DuBrin, 2012:383). Lyons *et al.* (2015:364-365) state that individuals with resilience would be able to bounce back whenever they face personal setbacks with regard to not achieving personal or career goals. Thus it is important for managers to demonstrate resilience so as to grow and strengthen as a result of this adjustment. Key elements in building personal resilience as described by Warner and April (2012:53) include grounding and connecting, understanding and accepting one's self, being in control of and choosing one's thoughts, controlling and choosing one's feelings and attitude, and giving and accepting support. Managerial resilience provides a positive framework for employees in all departments of the business when faced with difficult challenges (DuBrin, 2012:383). Personal drive and resilience affect the course, intensity and persistence of effort. Motivated managers focus effort in the right direction and work with intensity to sustain the effort (DuBrin, 2012:371).

Personal work goals and objectives bring new dynamic perspective to the interaction between managers' work environments since they reflect the expected, professional career-associated purpose which is balancing the challenges and opportunities of their career as well as in different life aspects (Hyvönen *et al.*, 2015:1036). Ross (2014:688) states that personal values have an impact on decision-making, corporate ethics, operational decision-making, interpersonal conflict, quality of working relationships, career choice and advancement, employee motivation, encouragement and commitment.

Motivated managers are goal-oriented because goals provide focus and reaching goals is a measure of achievement and contributes to a positive attitude (Ross, 2014:313). Managers have self-set personal goals in various career and life phases that could have an effect on organisational well-being (Hyvönen *et al.*, 2015:1036). Personal drive is therefore linked to several important areas in organisational functioning (Ismail, 2015:689). Sutton *et al.* (2015:611) added that personal development for manager is a common tendency in businesses, where they focus on developing self-knowledge and awareness. In order for managers to achieve a goal they are required to have or develop a series of connected and repeated behaviours within a specific time frame (Ross, 2014:313).

2.4.3 Integrity and Ethical conduct

Lazenby (2015:73) defines integrity as a concept that is more than ethics; it rather is about the character of the individual. According to Lazenby (2015:73) integrity is usually concerned with core values, and managerial integrity is closely linked to personal value and identity. Coulson-Thomas (2013:32) considers integrity necessary for establishing relationships of trust, within the organisation especially between managers and stakeholders. This is associated with honesty and trust in an individual's character (Lazenby, 2015:73). It is therefore essential for managers to be true and honest in engaging and connecting with employees, customers and stakeholders, which will lead to building lasting relationships and encourage networking. Furthermore Spinelli and Adams (2012:145) associate managerial integrity with being consistent, meaning that employees expect that managers essentially do what they expect of others, in other words saying what they mean what they say. The emphasis in development activity should be on making sure potential managers have a strong sense of who they are and what they stand for (Svensson & Wood, 2011:21-22). It is essential for managers to establish a balance between their internal values and those external values associated with the organisation and function which they manage.

Having extensive knowledge and engaging in valuable business ethics is an imperative component of a manager's profession (DuBrin, 2012:71). Practicing activities and decisions on an ethical basis signifies the principal values which direct the external and internal relationships of the business (Dubrin, 2012:75). External relationships refer to standards of fair transaction and relationships with, for example, customers, suppliers, and the general public. Internal relationships involve fair standards of employment and relationships with followers of the business (Mullins, 2013:662). Higher ethical values result in higher ambiguity regarding the right action or decision-making towards an ethical challenge or dilemma (Daft & Marcic, 2014:236).

Values include "honesty, integrity, competency, objectivity and fairness" (Kang *et al.*, 2014:556). Decision-making not only speaks for personal values but likewise speak for the values of the business the managers represent (Daft & Marcic, 2014:235; Williams, 2014:119). The criteria for evaluating ethical behaviour draws attention to the character of the person involved in the decision-making or action (DuBrin, 2012:74). Kang *et al.* (2014:551) state that ethical behaviour and values may change as managers advance during moral development which can be affected by experience and knowledge. Ethical or Moral behaviour consists of doing what is right, such as being accountable, taking responsibility for one's actions, and aspects involving expressing feelings, trust and treating people with respect (Kang *et al.*, 2014:551). Ho (2011:517) adds that ethical behaviour is

associated with being consistent with one's personal values and the basic standards held by the business and other managers or employees involved. Behaviour, according Griffin and Van Fleet (2014:288), is made up of beliefs, attitudes and values which work together as a system; thus referring to whenever one part changes, all systems will be affected by changing behaviour. Mullins (2013:664) as well as Lazenby (2015:71) add that the importance of ethical behaviour and integrity emphasises the level at which managers ought to attempt to alternate the fundamental standards and beliefs of individual teams and followings.

Today managers need to meet the ethical challenge if they are concerned about survival and competitiveness (Ho, 2011:517). Ethics, personal integrity, and individual values are important factors for managers in ethical decision-making (Mullins, 2013:683). Codes of conduct within a business support the ethical decision-making process for managers and provide a framework for the entire business for how to act. It is therefore essential for managers to see to it that provision is made for standards such as codes of conduct (Mullins, 2013:683).

2.4.4 Self-awareness and development

In modern times, managers in businesses have identified new methods of developing their competence and characteristics needed for success in today's changing business environment. Karp (2012:128) explains that this dynamic results in more businesses placing more responsibility on managers to develop themselves. Self-awareness and development is having the ability to recognise one's feelings and identify the effect it has on individual performance – in other words to be capable of understanding oneself (Zhang & Fan, 2013:199; Hellriegel *et al.*, 2012:44; Whetten & Cameron, 2011:79). Griffen and Van Fleet (2014:35) elaborate by stating that self-awareness involves being able to determine specific strengths and weaknesses correctly, considering it also measures whether an individual has a strong sense of his or her self-worth and competencies: hence self-awareness forms the basis of all other competencies (Daft & Marcic, 2014:57). Sutton *et al.* (2015:612) indicate that managers who are more self-aware are normally more productive and effective in their work and also have more satisfied employees working for them compared to managers that are less self-aware leaders. This association between self-awareness and positive life and work outcomes demonstrates that preparedness to improve self-awareness has the potential of bringing real benefits to both management and the business (Sutton *et al.*, 2015:612). Self-awareness and development therefore involves having the ability to learn about oneself and to master related important tasks (Hellriegel *et al.*, 2012:44-45).

Whetten and Cameron (2011:83) found that personal values, emotional intelligence, cognitive style, positioning towards change and core self-evaluation are important components in establishing effective self-awareness. The process of achieving self-awareness is therefore never-ending. In other words, one should always be prepared to develop qualities and competencies which involve having a better understanding of individual behaviour. Having the ability and the determination to ask oneself the substantial questions about self-awareness is established on many years of self-awareness development (Frost, 2014:126). He further clarifies that it is not easy to accomplish since it demands a method which makes the improvement of individual self-awareness and development a habit. Karp (2012:126) argues that self-control, self-esteem, and self-confidence are crucial factors for a manager who wishes to take leadership. Development of self-awareness is also recognised as being at the core of many human resource development initiatives (Cseh *et al.*, 2013:491). To know and understand oneself primarily is a powerful managerial competency which enables individuals to know and understand others (Frost, 2014:126).

2.5 SUMMARY

In this chapter a background to managerial competencies was discussed. There is a variety of competencies essential for managers in manufacturing businesses to have in order to be successful and productive. Effective and efficient managerial competencies provide a structure for managing aspects such as business culture, leadership, growth and success. Specific managerial competencies and their different aspects in the sense of planning and administration as well as self-management competencies were highlighted.

Compared to other types of competencies, having certain competencies are frequently described as the building blocks upon which best-practice leadership selection, development and performance management are grounded (Aitken & Von Treuer, 2014:153). Managerial competencies in manufacturing businesses are important elements. When used to describe the specific requirements of leadership positions within a business, competency models, also known as structures, provide clearness about the precise characteristics leaders have to exhibit to help their business in achieving its objectives.

Managers demonstrating improvement in managerial competency has been linked to better performance, which produces a more effective and efficient and more successful manufacturing business (Aitken & Von Treuer, 2014:153). Leading others means that the leader provides assistance, helps employees to focus on and identify how they should be working as one team. This integrates team standards, a combination of trust, respect and

support, cooperation and interdependence. Team standards signify the shared values of the entire team (Frost, 2014:127). A responsibility of managers is to build high levels of teamwork which means a combination of high levels of confidence and high levels of cooperation. By having these elements available the team is able to be open and honest with one another in a way that creates a healthy balance between challenge and support (Frost, 2014:127).

Daft and Marcic (2014:98) describes managerial competencies as continuously developing. Competencies are an essential part of managers' qualities and of the way they lead the business. These managerial competencies or human capital resources are further viewed as strategic assets; managers in particular are often identified as a key source of competitive advantage given their importance, a critical question arises as to what individuals need to learn to become more effective managers (Verle *et al.*, 2014:924). Companies in today's current business society, especially in the manufacturing industry, place strong emphasis on the required competencies of future employees. This is one of the reasons why companies are introducing specific competency criteria and requirements as part of the business' hiring process and then comparing the competencies the candidates possess with the specific competency requirements of the job. The best method to implement with a view to understand the candidate's competencies is by using the correct assessment implements actions that can accurately and reliably measure these competencies.

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CHAPTER 3: RESEARCH METHODOLOGY

3.1 INTRODUCTION

This chapter examines the research methodology and methods used to achieve the objectives of this research. Research is the term that refers to the method used to collect and analyse data from an identified sample and provide information regarding the recognised problem (Berndt & Petzer, 2013:3 & McDaniel & Gates, 2013:4). According to Burns and Bush (2014:34), research involves four vital elements namely designing, gathering, examining and reporting information to solve and identify researchable problems.

Research methodology, on the other hand, as explained by Sahoo (2013:5) refers to a systematic process of solving an identified research problem and represents the overall approach the researcher chooses according to which the research will be conducted. Furthermore, the research methodology describes the process the researcher will follow to obtain the data with which to achieve the results (Babin & Zikmund, 2016:449). Sahu (2013:3) explains that it is essential for the researcher to have suitable knowledge of the research methodology to accomplish the research goals in an accurate manner. Research methodology forms the foundation from which reliable and valid results can be achieved and conclusions can be drawn; hence it is essential to follow a properly organised research methodology. However, Burns and Bush (2014:71) note that time plays an essential role in research. It is therefore necessary to bear in mind the time element when conducting research. Babin and Zikmund (2016:20) highlight important elements to be considered when conducting research, namely time, data availability, core of decision-making and cost versus benefits.

For purposes of this research, the research methodology includes evaluating the literature research, identifying the empirical research, reviewing the objectives, formulating a research design, deciding on a sample plan, collecting and examining the data as part of developing a research report, data analysis and research report.

3.2 LITERATURE STUDY

The literature study presented the important background to the research topic as depicted in Chapter 2. This includes an investigation into what has previously been written about the research topic. Secondary research refers to research that is based on generalisations or interpretations, analytical or synthetic statements of other research conducted (Malhotra *et al.*, 2012:114).

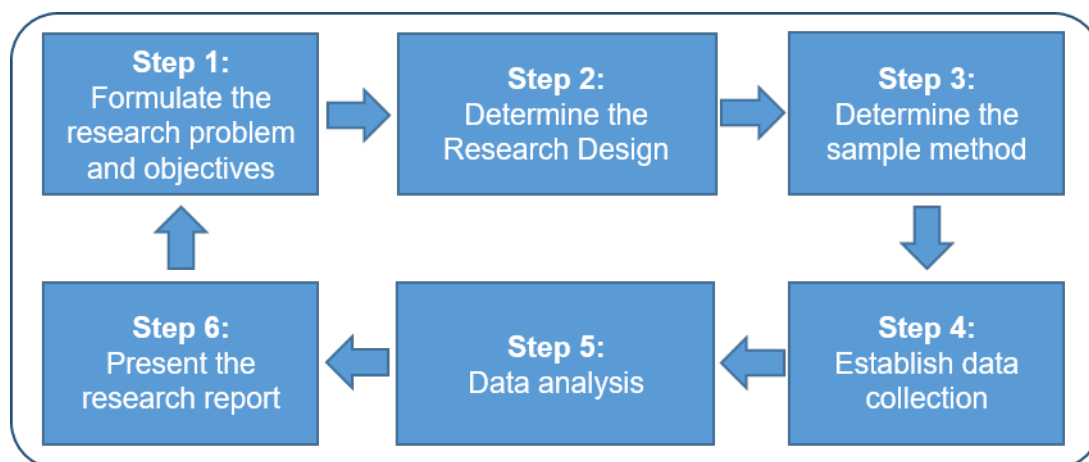
To put the concepts into perspective, the literature study was administered utilising accredited and scholarly journal articles, subject-related books and websites as databases to successfully obtain the theoretical background on the managerial competency constructs investigated in the research. The databases used included Emerald, Ebscohost, Nexus, Sae Publications, SACAT and ProQuest. Google scholar as electronic search engine was also used to obtain subject specific literature.

3.3 EMPIRICAL RESEARCH DESIGN

Joubert *et al.* (2016:26) define empirical research as research on real-life problems. It includes the social, political, educational, economic and health problems experienced in our daily lives.

Figure 3.1 presents the process followed step-by-step in order to implement the research (Berndt & Petzer, 2013:24).

Figure 3.1: Steps involved in the empirical investigation



Source: Berndt and Petzer (2013:24), Feinberg *et al.* (2013:30) and, McDaniel and Gates (2013:67).

3.4 FORMULATE THE RESEARCH PROBLEM AND OBJECTIVES

A research problem can be defined as concepts that can be empirically tested through research. The problem can be identified by taking into account factors that have already been studied and from there alternatives can be developed (Silver *et al.*, 2013:5). Once the problem has been formulated the research can be designed to present suitable information regarding the research objectives (Iacobucci & Churchill, 2010:59). The literature study identified certain gaps and the research problem was identified and discussed in Chapter 1. From the research problem a primary research objective was formulated for this research,

which is to investigate managers' planning and administration, and self-management competencies in manufacturing businesses. From the primary objective certain secondary research objectives were formulated to support the primary research objective.

The secondary research objectives formulated and discussed in the first research article were to:

- determine a limited demographic profile of the respondents;
- measure managers' information-gathering and problem-solving skills as contributors to their planning and administration competency;
- determine managers' planning and organising skills as contributors to their planning and administration competency;
- identify managers' time management skills as contributors to their planning and administration competency;
- measure managers' budgeting and financial management skills as contributors to their planning and administration competency.

The secondary objectives formulated and discussed in the second research article were:

- To compile a limited demographic profile of respondents that had participated in the research.
- To investigate the extent of managers' integrity and ethical conduct as part of their self-management competency.
- To evaluate managers' personal drive and resilience as part of their self-management competency.
- To explore managers' work-life balance as part of their self-management competency.
- To appraise managers' self-awareness and -development as part of their self-management competency.

Following the formulation of the research problem and objectives the research design needs to be determined and are discussed in the subsequent section.

3.5 RESEARCH DESIGN

The research design represents the action plan that defines the procedure which will be followed to collect and interpret the data (Feinberg *et al.*, 2013:54). Iacobucci and Churchill (2010:58) elaborates by referring to the research design as the foundation and structure which assists in answering the questions concerning the data collection method. Burns and Bush (2014:98) contribute further to the definition by explaining that the research design is essential for ensuring that the data obtained is valid, without error, appropriate and consistent with the research objectives. For this reason, it serves as a guideline which ensures that the research is applicable to the problem being investigated (Cooper & Schindler, 2014:125).

The choice of the research design depends largely on information already known about the identified problem, as well as the identified research objectives (Burn & Bush, 2014:98). All research designs normally consist of three general methods, namely casual, descriptive and exploratory (Babin & Zikmund, 2016:53-60; Aaker *et al.*, 2013:74-76).

3.5.1 Causal research

Causal research is used when the researcher needs to investigate the relationship between two variables (Berndt & Petzer, 2013:32). Causal research requires moderate confirmation that one variable influences another, without any other factors responsible for the relationship between the variables (Babin & Zikmund, 2016:57). The main reason for using causal research, as set out by Feinberg *et al.* (2013:59), is to collect information concerning cause-and-effect relationships.

They further state that the relationship between the variables are investigated, using trial tests to collect data.

3.5.2 Descriptive research

Descriptive research is used to acquire information concerning the situation of the research problem and to explain "what exists" concerning the variables or situations in the scenario. It is best used to answer questions of what, where, when and how (Babin & Zikmund, 2016:54; Burns & Bush, 2014:102). The purpose of descriptive research, as put forward by Feinberg *et al.* (2013:58), is to determine the relationship between two variables, which involves obtaining data that will provide a description of individuals, groups or situations. Interviews, observations and questionnaires are most commonly used to collect data in descriptive research. Using descriptive research is advantageous when the researcher seeks to predict

study findings to a larger sample (Burns & Bush, 2014:103). Cross-sectional and longitudinal studies are mainly associated with descriptive research. Conducting a cross-sectional research means that it will be done at a specific point in time; in other words it is used to measure data from the sample of the population at one point in time (Zikmund *et al.*, 2013:195; Feinberg *et al.*, 2013:58). In contrast, longitudinal studies continuously probe the same problem over a period of time (Berndt & Petzer, 2013:132).

3.5.3 Exploratory research

Babin and Zikmund (2016:54) explain that exploratory research aims at clarifying ambiguous situations or discovering ideas that may amount to true business opportunities. Furthermore, exploratory research can be utilised to obtain background information, defining specific elements, removing hypotheses and problems, and selecting research importance (Burns & Bush, 2014:101). An exploratory design may be implemented to reveal not only the symptoms observed in some situation but potential underlying problems causing those symptoms. Sahu (2013:10) refers to exploratory research as the tool that assists in uncovering unknown facts underlying everything. When conducting exploratory research the researcher attempts to seek insight into the general nature of the problem, the possible decision-making alternatives, and the relevant variables that need to be considered (Aaker *et al.*, 2013:74).

After a comprehensive consideration of the research problem and the objectives stated in Chapter 1, a quantitative, descriptive and exploratory research design was conducted for this current research. Depending on the research problems and objectives identified in the research, the researcher can choose between two research methods, namely qualitative and quantitative research. The two research methods are discussed below accordingly.

3.5.4 Qualitative research

Qualitative research seeks to develop an understanding of the participants. In other words, the researcher observes the participants within a particular situation and draws conclusions regarding their behaviour and actions (Silver *et al.*, 2013:57). This research method involves the evaluation of behaviours, attitudes and opinions of participants, which are associated with the researcher's insights and impressions. It therefore uncovers the results in a non-quantitative manner (Sarstedt & Mooi, 2014:30). Sahu (2013:7) contributes to the definition by stating that qualitative research investigates reasons for motivations, feelings, behaviours etc. of participants; this is usually done with the assistance and direction of psychologists and experts. This method is done using a small sample of non-representative cases

(Malhotra *et al.*, 2012:187). The qualitative research approach generally focuses on four methods for gathering the data, particularly by means of in-depth interviews, focus group interviews, observation techniques, and projective techniques (Brown *et al.*, 2014:62; Berndt & Petzer, 2013:46).

With in-depth interviews the purpose is to approach the research problem by means of one-on-one discussions; this encourages the participant to reveal issues since there is no pressure from other participants (Brown *et al.*, 2014:63; Bradley, 2010:234). A focus group discussion is the process of obtaining possible ideas or solutions to a problem from small groups of respondents discussing the topic (Aaker *et al.*, 2013:183). The observation technique, according to Sahu (2013:64), is normally done in a structured manner by means of carefully planned and selected experiments. The researcher usually observes the objects under study without asking any questions. The projective techniques involve the researcher asking the participants questions; the questions are, however, indirect and the main purpose is to uncover issues which the participants would not be upfront about (Berndt & Petzer, 2013:46).

3.5.5 Quantitative research

Conducting research using a quantitative research method means that the research objectives are considered by means of an analytical approach and numerical evaluation. It is structured and an objective measurement of the phenomenon (Joubert *et al.*, 2016:246). Aaker *et al.* (2013:111) note that “quantitative” practically suggests ‘quantities’ indicating the degree to which something either exists or not regarding frequency, numbers or amounts. They further indicate that quantitative research entails measuring, calculating and assessing theoretical constructs. The advantage of using this method is that it presents information which is unique to a specific research problem, since the parameters are developed from scratch (Berndt & Petzer, 2013:134). Quantitative research is conducted using a large sample of respondents and the questions are structured and the answers are predetermined (Hair *et al.*, 2013:77).

Quantitative research can be conducted by means of three different techniques, namely: interview-administered questionnaires, self-administered questionnaires or computer administered questionnaires (Malhotra *et al.*, 2012:187). With an interview-administered technique the interviewer asks the participant questions, developed by the researcher through a structured questionnaire. This must be done by means of engagement between the respondents and the interviewer, via a ‘phone or face-to-face (Berndt & Petzer, 2013:48). When using a self-administered and computer-assisted questionnaire the respondents

complete the questionnaire without the assistance of the interviewer. However, the response rate with these techniques is relatively small compared to interview-administered questionnaires but are low in cost (Berndt & Petzer, 2013:49).

As the primary method for obtaining data for this research, a quantitative research technique was applied. The purpose was to obtain data with a view to reach the objectives identified through numerical measurements and analytical methods (Babin & Zikmund, 2016:111). The quantitative method was applied by means of self-administered questionnaires. Quantitative research aims at quantifying the research problem by applying statistical methods so as to enable the researcher to draw conclusions regarding the research problem (Berndt & Petzer, 2011:47). The advantages of applying the quantitative research method include that it is exceptionally effective for obtaining demographic information (Saunders *et al.*, 2012:162).

3.6 SAMPLE PLAN AND POPULATION PLAN

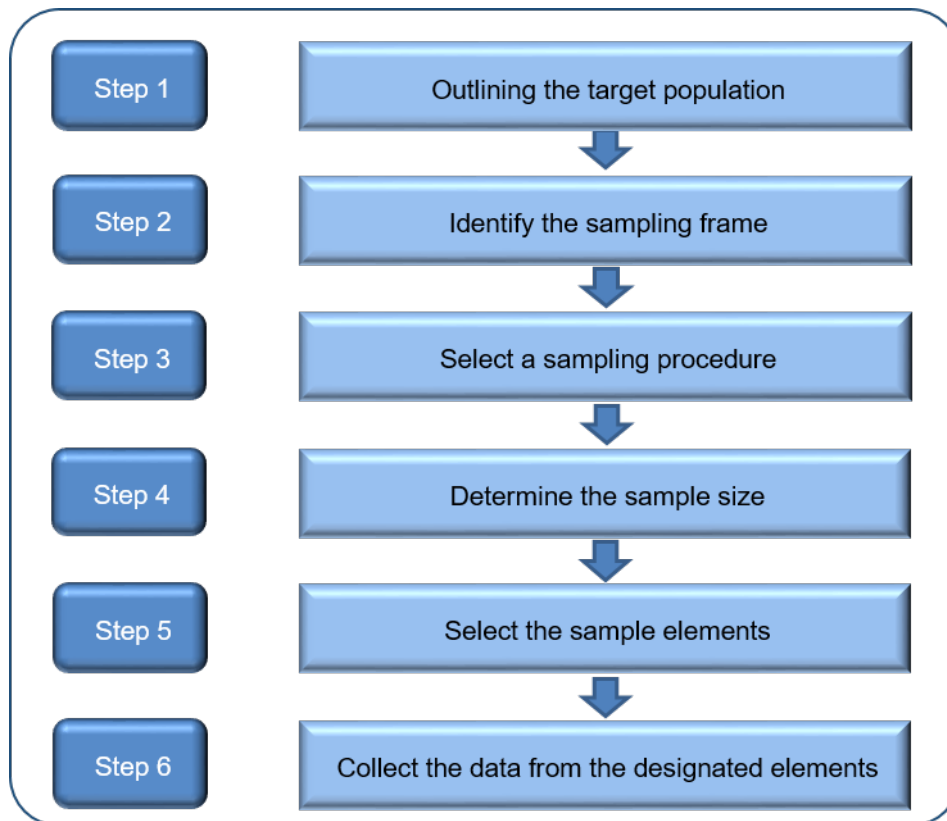
The purpose of a sample plan in research is to evaluate the target segment effectively by developing and completing a representative sample plan (Cooper & Schindler, 2014:338). Sampling therefore refers to the method used to select elements of an entire population for the purpose of representing the population in total; hence conclusions can be drawn on the subject of the population as a whole. It therefore allows the researcher to obtain information concerning characteristics of a population and establish a conclusion concerning the population (McDaniel & Gates 2013:278). The research data can be obtained by using the entire population or by selecting a smaller group within the population. When the entire population is used in the research it is known as a census and whenever a smaller group within the population is selected to participate in the research it is known as a sample (Babin & Zikmund, 2016:69; Berndt & Petzer, 2013:166).

Sampling involves lower cost, less time and effort than census. Sampling therefore is most commonly used to conduct research (Joubert *et al.*, 2016:95). Sampling allows the researcher to choose a sector of the relevant population, select the sample size and develop a sample frame, and specify a method and collect the data (Hair *et al.*, 2013:136). Berndt and Petzer (2013:165) acknowledge that sampling can be used to select some of the elements of the population and establish conclusive decisions about the population. It is not always possible for the researcher to get access to the whole population; therefore they can make use of a reachable and accessible population. A convenience sampling method implies that the researcher chooses respondents that are easily accessible, that the project will be affordable and the response will be swift (Joubert *et al.*, 2016:246 & Bradley, 2013:168). The convenience process was adopted given that this process allowed selecting

the sample elements quickly and easily. For this reason, it permitted the researcher accessible, cost-effective and less time-consuming data gathering.

The sampling procedure encompasses arriving at conclusions about the total population by taking measurements from part of all population elements (Zikmund & Babin, 2010:412). Accordingly, the sampling plan used in this study is shown below in Figure 3.2.

Figure 3.2: Sampling plan



Source: Iacobucci and Churchill (2010:283).

3.6.1 Sampling method

Developing a sample plan can be done by selecting between two extensive types of sampling techniques, namely probability and non-probability sampling.

3.6.1.1 Non-probability sampling method

Non-probability sampling, is not determined by utilising random selection. The non-probability sampling method offers a way to overcome the difficulties that arise from the inability to precisely specify how many individuals there are in the sample (Cooper & Schindler, 2014:343; McDaniel & Gates, 2013:282). During a non-random sampling, the

subjects are deliberately, according to their availability, approached for inclusion in the research (Joubert *et al.*, 2016:102). In addition, a non-probability sampling method is executed based on convenience and in a cost-effective way. However, the results cannot be generalised to the entire population with great certainty (Joubert *et al.*, 2016:102). Various non-probability sampling techniques have been identified which include: convenience sampling, judgmental sampling, snowball sampling and quota sampling (McDaniel & Gates, 2013:282).

Convenience sampling occurs when the researcher chooses the easiest and most suitable approach of data collection. The respondents and the region is therefore subjective (Burns & Bush, 2014:255). Silver *et al.* (2013:157) explain that convenience sampling is generally adopted considering that this method is less time-consuming and the least expensive by means of which to collect data. This research is especially suitable for exploratory studies. A detailed definition of the sample that has been compiled in this manner can, however, support the trustworthiness of the research results to a certain extent (Joubert *et al.*, 2016:103).

Judgmental sampling requires the researcher to subjectively choose the sample based on the researcher's insights, experience, and skills (Silver *et al.*, 2013:155). This method also refers to and is commonly known as purposive sampling. This method of sampling is the most uncomplicated method. However, this can lead to a biased procedure of sampling, depending on the skill of the investigator (Bradley, 2013:168). Clow and James (2014:232) contend that the purpose of judgemental sampling is to choose individuals or items that will represent the population in the research.

Snowball sampling occurs when the researcher receives referrals from one or two respondents – a process which leads to other potential respondents to target that would be relevant to the particular research (Sahu, 2013:60). In other words, one or two respondents assist the research in finding other respondents with the same specific aspects that are required for participation in the research. This method of sampling increases in size as the number of respondents grows.

Quota sampling requires the researcher to split up the population into sub-groups. The researcher then selects quotas of each subgroup based on judgement (Silver *et al.*, 2013:158). Sahu (2013:59) explains that quota sampling involves that the researcher interviews a certain number of respondents (quota) which are then used to represent the entire population. Tables 3.3 below depict the different sampling methods.

3.6.1.2 Probability sampling method

A probability sampling method involves determining a sample plan by means of random selection (Sahu, 2013:48). As a result, every unit included in the sample has an equal possibility of being selected to participate in the research. This method allows for the results to be generalised to the complete population (Sahu, 2013:48). The disadvantages concerned with this method include time consumption and expenses involved to develop the sample plan (Feinberg *et al.*, 2013:308). This method is based on random selection and therefore the researcher aims at whom should be included in the sample (Joubert *et al.*, 2016:97). Non-probability sampling is distinguishable in different methods namely simple random sampling, stratified sampling, systematic sampling and cluster sampling and is discussed accordingly (Aaker *et al.*, 2011:682).

Simple random method refers to when elements of the population have a fair chance to be chosen to participate in the research (Cooper, 2014:348). Therefore, every element in the population has an equal probability to be selected as part of the sample.

With the stratified random sampling method, the target population is divided into sub-groups. These groups are referred to as 'strata' (Sahu, 2013:55). Age, gender, income etc. are commonly used as stratifying determinants. The benefit of using this method are associated with the opportunity it provides for more detailed and accurate estimates than simple random and systematic sample methods (Feinberg *et al.*, 2013:336).

Systematic sampling methods require the commencement of the sample selection process to be done by using a random number. The rest of the sample is selected automatically according to fixed calculated intervals (Feinberg *et al.*, 2013:338). This interval is referred to as the sampling interval and provides an easy and cost-effective method of sample selection and assures randomness.

When a population is extensive, for example nationwide, and it is impossible to follow a stratified sampling method due to availability of information restrictions, a cluster sampling method is commonly used to select the sample (Sahu, 2013:56). Feinberg *et al.* (2013:337) define cluster sampling as any sampling plan which includes clusters of listing units. Every cluster within the sample plan is sampled through simple random sampling or census (Brown *et al.*, 2014:310).

Table 3.1: Forms of probability and non-probability sampling methods

Probability sampling methods	Description
Simple random sampling	The elements in the population have an equal chance of being selected as a part of the sample.
Stratified random sampling	The population is split up in subgroups with mutual characteristics, and a simple random sample is chosen from each sub-group
Cluster sampling	The population is split up in subgroups with mutual characteristics and a simple random sample is chosen from subgroups. Often associated with area sampling
Systematic sampling	Random selection of a digit (n) and then selection of sample element at every n th interval depending on population size and the required sample size
Non-probability sampling methods	The individuals in the population do not have an equal chance of selected for the sample and are generally less costly than probability sampling methods.
Convenience sampling	Any process where the researcher selects sample elements quickly and easily
Judgement sampling	The sample depends on the experience, skill, knowledge and insight from the one choosing the sample to provide accurate information
Quota sampling	The population is split up and assigned appropriate quotas based on prior knowledge and understanding of characteristics. Quota categories usually involve age, gender and occupation.

Source: Adapted from Silver *et al.* (2013:155).

A non-probability, convenience sampling method was adopted for purposes of this research, considering that no sample framework was available for assistance in the research process (Feinberg *et al.*, 2013:304). This method allowed the researchers to approach respondents according to the availability and ease of accessibility of the respondents. For this reason, the self-administered questionnaires were delivered or emailed to the respondents (i.e. managers in manufacturing businesses) by the field workers. For purposes of this research the convenience sampling method was used due to financial resource implications, time constraints and expected response rate. The questionnaires were distributed electronically, via the internet, or by means of self-delivery and collection (Saunders *et al.*, 2012:420).

3.6.2 Defining the population

The population is defined by Feinberg *et al.* (2013:301) as the total elements that will be researched with regard to the research objectives. In other words, the population consisted of the elements that the researcher included to study as part of the group of people who would participate in the research. Sahu (2013:45) explains that a population is studied by its characteristics. Characteristics of any population differ in nature. Hair *et al.* (2013:137) highlight the importance of defining the target population specifically. The purpose of this research was to uncover unknown truth about managerial competencies in manufacturing businesses. The target population for this research consists of top-level and middle-level managers from manufacturing businesses in South Africa in four provinces, namely Gauteng, North West, Free State and Western Cape. The researchers approached qualifying respondents and requested them to complete the self-administrated questionnaire.

The researchers used the Berndt and Petzer (2013:171) method to explain the target population in terms of elements, sampling units, extent and time. Table 3.2 gives an outlay of the method used to define the target population.

Table 3.2 below defines the target population for this research.

Table 3.2: Target

Element	Managers in South-Africa in four provinces- Gauteng, North West, Free State and Western Cape.
Sampling unit	All manufacturing businesses
Extent	Top- and middle-level managers
Time	June 2015 to September 2015

Source: adapted from Berndt and Petzer (2013:171)

3.6.2.1 Sampling errors

Burns and Bush (2014:241) describe a sampling error as any error that might occur because a sample is used. Feiberg *et al.* (2013:326) outline that non-sampling errors include any form of bias which may arise from inaccuracies made by the researcher. Sampling errors, according to Silver *et al.* (2013:152), exist whenever the sample of the research does not represent the entire population. Considering that this research adopted a non-probability convenience sampling method there is no opportunity to calculate which element in the target population will be selected to participate in the study.

3.6.2.2 Sampling size

The sample size is determined when the sampling method has been specified (Sarstedt & Mooi, 2014:43). The sample size is frequently established before the data collection commences. However, in several research tasks it could be determined once the data collection had started (Bradley, 2013:175).

According to Feinberg *et al.* (2013:322) the sample size illustrates the real number of elements that are included in the research. The sample size will be the determining factor for the accuracy of the research (Burns & Bush, 2014:266; Silver *et al.*, 2013:159). Brown *et al.* (2014:301) explain that the only perfectly accurate sample method is census because the data are collected from every member of a population. However, using a census as sample plan requires a great deal of the researcher's time and money. Burns and Bush (2014:266) argue that larger samples provide more accurate information. It is therefore important to determine the sample size before the initial fieldwork process commences (Sarstedt & Mooi, 2014:43). For purposes of this research the sample size required was 300 respondents.

The target population comprises middle- and top-level management of manufacturing businesses in South Africa in four provinces, namely Gauteng, North West, Free State and Western Cape. Stipulating the sample size entailed first selecting the sampling method. A non-probability convenience sampling method was used to approach respondents (Berndt & Petzer, 2013:174). Hence the sample was drawn from a section of the population that was easily reachable for the researcher, given that there was a strict budget. The non-probability convenience sampling technique also ensured that the researchers only reported on the specific sample and that no generalisation took place. Table 3.3 indicates that a total of 343 (n=343) usable questionnaires were returned with 236 (68.8%) being males and 107 (31.2%) females from four different provinces. Tabachnick and Fidell (2007:613) explain that it is essential that there should be at least 300 respondents to enable factor analyses to be performed.

3.6.2.3 Sampling frame

For purposes of this study, no sampling frame was available and therefore a non-probability sampling technique was used along with a questionnaire which had a screening question to confirm that respondents were employed in top- or middle-level management positions. Table 3.3 represents the sampling frame for the target population.

Table 3.3: Sampling frame representing the target population

Province	Businesses	Questionnaires
Gauteng	35	179
North West	18	82
Free State	8	30
Western Cape	6	52
Total	67	343

3.7 DESIGN THE DATA COLLECTION METHOD

The type of research design determines the type of data to be collected as well as the method according to which data will be collected. Data collection refers to the eventual implementation of the plans already made for the research (Sahu, 2013:28). Data collection in other words involves that the respondents, identified in the sample, are approached by the researchers to participate in the research (Joubert *et al.*, 2016:112). Data collection involves two essential aspects to be borne in mind: data must be collected consistently, i.e. the researchers must particularly perform the same research process for collecting the data. Secondly, the way in which researchers approach the respondents affects the quality of the responses; thus this aspect should also be taken into account regarding the data collection method (Berndt & Petzer, 2013:203).

Aaker *et al.* (2013:78) note that data can be collected by applying one of two different approaches, namely primary data collection and secondary data collection methods. Sahu (2013:63) refers to primary data as those that are original in nature; thus those that have never been available or collected from existing sources. Secondary data on the other hand are those that have been collected by someone else, such as agencies, for additional purposes (Sarstedt & Mooi, 2014:48).

Berndt and Petzer (2013:203) identify various methods for collecting data, which include human methods, electronic methods, self-completion questionnaires and hybrid methods. The *human method* involves all methods that require fieldworkers to collect the data by personally interacting with the respondents. *Electronic methods* refers to any technology being used to collect the data, such as computers, telephones etc. The term *self-completion questionnaire* refers to the questionnaires being distributed to the respondents with instructions for them to complete it without any additional assistance.

3.7.1 Data collection instrument

Siver *et al.* (2013:138) describe a research instrument as a tool that is used for collecting data. The purpose hereof is to supply the researcher with information required for data analysis. The quality of the data gathered reflects directly on the quality of the research instrument (Berndt & Petzer, 2011:182). It is therefore essential that the research instrument is designed in such manner that it provides answers to the research questions.

The most common research instrument used for descriptive research is questionnaires (Silver *et al.*, 2013:138). Sahu (2013:67) defines a questionnaire as an important instrument, prepared to gather data through respondents answering questions. McDaniel and Gates (2013:107) explain that a questionnaire assists in gathering insights, attitudes and evidence with regard to the research topic. Burns and Bush (2014:214) outline the vital functions of questionnaires: Firstly, it converts the research objectives to questions which are required to be answered by the respondents. Secondly, it serves as standard questions posed to obtain information from each of the respondents who all answer the same set of questions. Thirdly, it depends on the type of questionnaire; it can speed up the data analysis process of the research; and lastly, the researcher uses the questionnaire for quality control purposes.

As discussed in the sample plan, a quantitative data collection method was followed for purposes of this research. Therefore this research was conducted systematically and controlled based on measurements (Hult *et al.*, 2014:115). The research instrument used for this current research was a self-administered questionnaire.

3.7.1.1 The questionnaire design process

The questionnaire design process is defined by Burns and Bush (2014:214) as a systematic set of steps that requires the researchers to make certain decisions. Joubert *et al.* (2016:300) advise researchers to pay attention to the following when a questionnaire is developed: Instructions for completing the questionnaire, the appearance of the questionnaire, duration linked to the completion of the questionnaire, and the order and wording of the questions. A survey method is suited to include a large number of respondents by means of a structured questionnaire (Burns & Bush, 2014:172). Survey questions are carefully selected, arranged and precisely asked of each respondent (Cooper & Schindler, 2014:219). Surveys provide a fast, less costly, efficient and accurate means of obtaining information regarding a population (Babin & Zikmund, 2016:168). McDaniel and Gates (2013:119) recommend that a researcher select a survey method that can provide required data types, quality and quantity at the lowest cost possible. Surveys can be done by

means of telephone interviews, personal interviews, mail interviews and electronic interviews (Malhotra *et al.*, 2012:210).

The questionnaire can consist of structured questions, open-ended questions or a combination of the two types of questions (Berndt & Petzer, 2013:186). Structured or closed-ended questions require the respondent to answer with a specific option as to what the answer will be, such as 'yes' or 'no' questions. Researchers generally present statements to the respondent and allow the respondent to indicate to what degree they either agree or disagree with the statement. Open-ended questions allow the respondent to answer the question by airing their own opinion; thus the researchers will have no known indication of what the answers to the question will be. Open ended questions are useful where the researcher seeks to obtain deeper insight into the problem (Malhotra *et al.*, 2012:464). Structured questions were developed for purposes of this research. McDaniel and Gates (2013:253) categorise structured questions into four categories:

- Multiple-choice questions limit the respondent to selecting one answer (Babin & Zikmund, 2016:309). This allows the researcher to restrict the responses to two or more options (Feinberg *et al.*, 2013:268).
- Dichotomous questions require the respondent to select from fixed answers in addition to multiple-choice questions the options are limited to two possibilities. This question type works best with questions respondents can answer with either yes or no, or for questions to which only one answer exists such as "Male / Female (Babin & Zikmund, 2016:309).
- Scale-response questions are used when the researcher wants to determine the intensity of respondents' opinions or attitudes towards certain questions (McDaniel & Gates, 2013:255). The scale can be structured from positive to negative or from negative to positive. The scale can be used to ask respondents how much they agree or disagree with a particular statement or to judge how often certain events occur (Joubert *et al.*, 2016:299).
- Joubert *et al.* (2016:300) explains that Likert-style questions use adjectives on a point scale to determine the feelings or views of the respondent. Likert-style questions were used for purposes of this research. A five-point labelled Likert-scale was used to construct the questions in this research. Forty-six questions were unlabelled Likert-scale, requesting that respondents indicate the extent to which they agreed or disagreed with the statements. A ten-point unlabelled Likert-scale was used in the final question to measure respondents' own rating on their managerial competencies.

3.7.2 Question wording

When developing the questions it is necessary for the researcher to consider choosing the wording for questions carefully. McDaniel and Gates (2013:257) note that each question should be clear and motivate the respondents to participate in the research. Berndt and Petzer (2013:188) further state that the wording should be in the basic vocabulary and grammar of the respondents; thus using words that the respondent will understand.

For the purpose of developing the questions for this research, the focus was centred on presenting the respondent with clear instructions and information regarding the purpose of the research and providing structured questions to avoid discomfort and confusion. Wording chosen for this research was selected based on the vocabulary and grammar which the respondents could understand. Hereby the possibility of guessing was reduced (Berndt & Petzer, 2013:188). The questions were oriented with similar topics grouped together for easy reply.

3.7.3 Questionnaire design and layout

The identified research objectives served as guidelines for the formulation of the questions. This means that the focus was on aligning the questionnaire with the literature review, problem statement and research objectives. Babin and Zikmund (2016:318) note that order bias occurs when the answer to the previous question influences the answer to the next question. Order bias prevention was considered when designing the questionnaire.

To prevent order bias, the layout of the questionnaire was determined with great care. Zikmund and Babin (2010:380) explain that when the answer to previous questions influences the manner in which succeeding questions are answered, order bias occurs. In this study, the questionnaires were designed based on information obtained from literature and results obtained from the pilot testing. Pilot testing was required to point out any problems with the questionnaire, instances where items are not clear, and formatting and other typographical errors and/or issues. To avoid order bias, 3 experts in the field of managerial competencies were consulted to ensure objectivity and a pilot study with participants further ensured that issues were identified and addressed. Concerns such as wording and order of the questions were piloted.

A self-administered questionnaire was developed to collect the required data. Cooper and Schindler (2014:225) emphasise that the advantage of a self-administered questionnaire is that it permits respondents to complete the questionnaire in their own time with no assistance needed from the researcher. The questionnaire was developed by ensuring that

the questions were aligned with the objectives of this research. The different sections of the questionnaire used in this research consist of:

- Preamble: This section summarised an introduction of the research, and a screening question was posed to ensure that the respondents qualify to participate in the research (Burns & Bush, 2010:424).
- Section A: This section of the questionnaire measures the respondents' demographic profile. Respondents were requested to indicate their gender, age, level of education and employment position within the business.
- Section B: This section measures the self-management and planning as well as the administration competencies, as well as their overall effectiveness or performance. Each of the items included in the scales was measured on a five-point labelled Likert-type scale, with 1 -representing 'poor', 2 -'fair', 3 -'good', 4 -'very good' and 5 representing 'superior'. The overall effectiveness or performance of the managers was measured by a ten-point unlabelled Likert-type scale, with 1 representing 'poor' and 10 representing 'extraordinary'. Berndt and Petzer (2013:189) explain that a Likert-type scale allows respondents to show their confidence in the matter that is investigated.

North-West University's Potchefstroom Campus Statistical Services examined the constructs and ensured accurate measurements for the research. Some experts also analysed the questionnaire to ensure content validity.

3.7.4 Data collection

Twelve qualified fieldworkers were selected to gather the required information from respondents. The fieldworkers were BCom Honours students in the field of Business Management. Each fieldworker was assigned to choose 30 respondents, which reach the given criteria, within the predetermined industry. To qualify as fieldworkers, these students were required to have completed an under-graduate module in marketing research. The data were collected during the second semester which was during the period of June 2015 to October 2015. The fieldworkers distributed the questionnaires based on convenience using a non-probability sampling method. For the purpose of financial resource implications, time constraints and expected response rate the fieldworkers distributed the questionnaires electronically, through the internet, or by means of self-delivery and collection (Saunders *et al.*, 2012:420).

3.8 DATA ANALYSIS

Once data collection is done, data analysis is performed in order to give understanding and meaning to raw data (Burns & Bush, 2014:7). Burns and Bush (2014:77) note that the purpose of data analysis is to use statistical methods to present data in a way that indicates that the research objectives were considered. Data analysis consists of reducing accumulated data to a smaller size, making it easy to manage; and therefore to use it for creating summaries, patterns and application of statistical methods (Cooper, 2014:86).

Jonker and Pennik (2010:166) explain that good research is established by how the link between data analysis and theory are portrayed, it is therefore argued that the theory supports the meaning given to the data.

Once the data was collected, it was prepared and placed in a format which allowed for data analysis to be done next. Preparing the data requires validation and refinement of data collected followed by data coding (De Vos *et al.*, 2012:252). The data analysis process consists of statistical analysis to examine the data to draw a conclusion (Berndt & Petzer., 2013:34). The data analysis process consisted of a four-step process which was to validate the data, edit and code the data, enter the data and tabulate it.

Consequently, a number of main findings were formulated in Chapters 4 and 5 taking into account the results obtained after data analysis with the aim of addressing the secondary objectives in each article.

3.8.1 Data validation

Data validation is a procedure used to support scientific theories to be accepted (Jonker & Pennik, 2010:160). The purpose of the data validation process, as McDaniel and Gates (2013:326) point out, is to detect fraud or failure and prevent it from being included in the questionnaire's main orders.

Refer to section 3.8.8 (psychometric properties)

3.8.2 Data coding

After validating and editing the data, the following step involved coding the data. Coding involves grouping and assigning numeric codes to responses to every question (McDaniel & Gates, 2013:331). This research used closed-ended questions and were pre-coded, in other words the questions had numeric codes allocated to the different responses in the

questionnaire. With coding, the data collected was transformed into symbols that were used for data entry (Sreejesh & Mohapatra, 2014:57).

3.8.3 Data entry

Once the data validation, editing and coding was done, the third step commenced, which was data entry. Data entry is the process of changing the data into an electric format (McDaniel & Gates, 2013:333). For this research, data entry was completed by the researcher and the Statistical Consultation Services of North-West University. The data were entered into a software system that was programmed for intelligent entry.

3.8.4 Data cleaning

For data cleaning to commence, all data obtained from the questionnaires were captured and processed. McDaniel and Gates (2013:334) suggest that logical data cleaning is the final digital-error inspection before the data will be processed for statistical analysis through statistical Package for the Social Sciences (SPSS) version 22 by IBM program, which was used for statistical processing in this current study. SPSS is a computer-based quantitative data analysis package and universally used by researchers to assist in dealing with large datasets and are relatively user-friendly (Sarstedt & Mooi, 2014:112).

3.8.5 Descriptive statistics

Descriptive statistics refers to samples of topics regarding variables or combinations of variables (Tabachnick & Fidell, 2014:39). Descriptive statistics are referred to as being powerful and are used to summarise responses from a large number of respondents in a few straightforward statistics (Brown *et al.*, 2014:376; Hair *et al.*, 2013:257). Descriptive statistics, as described by Feinberg *et al.* (2013:396), serve as a concise measurement of data established in all the elements of a sample. Furthermore Feinberg *et al.* (2013:396) explain that these statistical techniques summarise, organise and simplify data. Descriptive statistics is the most effective method for summarising the features of large data sets (Sarstedt & Mooi, 2014:191).

For purposes of this research the descriptive statistics used in it are illustrated in Table 3.4 below:

Table 3.4: Descriptive statistics

Descriptive statistical techniques	Definition
Frequency distribution	Babin and Zikmund (2016:363) describe frequency distribution as organising the data set by summarising the number of times a specific value for a variable occurs.
Percentage distribution	With percentages, frequencies are additionally summarised through percentage value associated with exact values of a variable (Babin & Zikmund, 2016:363).
Means	Hair <i>et al.</i> (2013:268) define means as the typical value within the distribution and the most frequently used measure of fundamental tendency (Zikmund <i>et al.</i> , 2013:413).
Standard deviations	Standard Deviation presents the average distance of the distribution values from the mean (Hair <i>et al.</i> , 2013:272).

For purposes of this research the means and standard deviations were determined for each of the statements founding the scales measuring the planning and administration, and self-management skills.

3.8.6 Inferential statistics

Inferential statistics is a type of statistical analysis that depends on a sample so as to arrive at a conclusion regarding a larger group (Feinberg *et al.*, 2013:393). Zikmund and Babin (2010:440) posit that the main objective of inferential statistics is to make a judgement about a population or the whole collection of all elements about which the researcher needs information. Pallant (2010:239) states that probability is the basis of inferential statistics. As is the case with descriptive statistics, selecting the correct inferential statistical test also depends on the scale level of the data that need to be analysed (Feinberg *et al.*, 2013:404). For purposes of this study, the following inferential statistical methods were used:

Independent-samples t-test is utilised when the researcher needs to compare the mean score on some constant variable for two distinct groups of participants (Pallant, 2010:239). Babin and Zikmund (2016b:420) further state that the researcher will use independent-sample t-test to assess the variances between means drawn from two independent samples or groups. Analysis of variance (ANOVA) is the correct statistical instrument to use when comparing the means of two or more groups or populations (Zikmund & Babin, 2010:573). Silver *et al.* (2013:211), sees the aim of ANOVA as being to determine whether samples

originate from two or more populations with equal means. When using ANOVA, the researcher needs to determine whether a statistically significant difference exists between the means for any two groups in a sample with a particular variable, irrespective of the number of groups (Burns & Bush, 2013:367).

3.8.7 Factor analysis

A factor refers to the hidden variables that are difficult to be detected. However, factors are defectively evaluated against their relationship with additional variables (Malhotra *et al.*, 2012:774). Factor analysis is a specific technique used to either combine questions or variables to generate new factors or combine items to form new groups, individually (Aaker *et al.*, 2013:518). Zikmund *et al.* (2013:595) explain that factor analysis is used to reveal whether one group significantly varies from another group or hypothesis testing. Factor analysis, as described by Aaker *et al.* (2013:519), can be used for two main purposes, namely to identify primary constructs in the data; and to minimize the number of variables to a reduced and more controllable set. Another purpose of Factor analysis is to attempt to recover inadequate research (Tabachnick & Fidell, 2014:660). In other words, factor analysis is used to simplify data (McDaniel & Gates, 2013:376). *Factor analysis* consists of two main methods, which are exploratory and confirmatory factor analysis (Sarstedt & Mooi, 2014:236; Pallant, 2013:188).

For purposes of this research Kaiser's Measure of Sampling Adequacy (MSA) was performed to look into the suitability of the factor analysis.

3.8.7.1 Exploratory Factor Analysis

As the name suggests, the exploratory factor analysis (EFA) is generally used to explore the inter-relationships in a variable set during the early steps of the research (Pallant, 2013:188). Sarstedt and Mooi (2014:236) explain that an EFA is used to present the number of factors and variables that fit to identified factors. An EFA furthermore seeks to capture variance with a small number of elements while trying to make the dimensions easy to interpret in terms of the original variables (Feinberg *et al.*, 2013:54).

Sarstedt and Mooi (2014:242) suggest that essentially it is not crucial to clarify the matrix precisely but, as a substitute, turn to two measurements grounded on the notion of anti-image; the Kaiser–Meyer–Olkin (KMO) statistic and the Bartlett's test of sphericity. KMO measure of sampling adequacy takes the variance into account by calculating the unit of measurement of the variance among variables whereas Bartlett's Test of sphericity specifies whether the correlation matrix significantly varies from an identity matrix (Field, 2012:685).

Sarstedt and Mooi (2014:242) point out that KMO statistics is also referred to as measure of sampling adequacy (MSA), specifies whether the correlation among variables are clarified by the various variables included in the dataset. Sarstedt and Mooi (2014:243) further notes that the KMO statistic presents the overall mean of every item-specific MSA value.

3.8.7.2 Confirmatory factor analysis

Pallant (2013:188) explains that the confirmatory factor analysis (CFA) is generally used later in the research process; it involves a more detailed and complex set of procedures to, as the name suggests, confirm identified hypotheses which involve the specific variable set. CFA is used when the researcher has a clear expectation regarding the factor structure and is therefore used to test whether the specific structure is present (Sarstedt & Mooi, 2014:236). Furthermore, Malhotra *et al.* (2012:866) explain that the CFA is used to assess the measurement type. The specific variable set is carefully chosen through theory. Next the CFA is used to observe whether it consigns as projected on the predicted number factors.

3.8.8 Psychometric properties of the measuring instrument

A measurement used by the researcher should be reliable and valid (Burns & Bush, 2014:2014; Hult *et al.*, 2014:114). Research depends on “good” measures, in other words, measures that measure what is expected to be measured and with that, do it consistently (Sarstedt & Mooi, 2014:34). A discussion on reliability and validity follows next.

3.8.8.1 Reliability

Reliability testing involves consistency when measurements are done continually (Sahu, 2013:42). When an instrument is reliable it does not mean that the instrument will have a valid test, in other words the reliability does not contribute to the validity of the test. Reliable instruments offer constant measures at different times and under different situations (McDaniel & Gates, 2013:215). Feinberg *et al.* (2013:128) add that reliability involves consistency, precision and predictability.

Malhotra *et al.* (2012:434) explain that the reliability can be tested using two different methods, namely split-reliability and coefficient alpha (Cronbach's alpha coefficient). Cronbach's alpha establishes whether the various items join each item independently for variability. When items are not scored dichotomously, internal consistency can be established by applying the Cronbach's alpha coefficient method. When scales show that Cronbach's alpha coefficients ≥ 0.70 it is viewed as having a decent reliability. Scales with Cronbach's alpha coefficients ≤ 0.60 show poor reliability (Hair *et al.*, 2013:166). In this

research, Cronbach's alpha reliability coefficients ≥ 0.70 were calculated in order to determine the reliability of all the scales measuring the planning and administration and self-management competencies of managers. The formula for Cronbach Alpha is:

The Cronbach alpha values of the evaluated questionnaires for the research are indicated in Table 3.5. Field (2012:679) explains that a value ≥ 0.7 shows a reliable instrument. In this research, both deep and surface learning displayed Cronbach alpha values >0.7 . The measuring instrument was therefore considered reliable.

Table 3.5: Cronbach alpha values for the two factors

Factor	α
Planning and administration competencies	.825
Self-management competency	.765

Source: Calculated from own survey results

3.8.8.2 Validity

In order to ascertain validity, the research technique should measure exactly what it is designed to measure (Hult *et al.*, 2014:114).

Brown *et al.* (2014:257) note that validity involves the testing the accuracy or the level to which a test accurately serves as a representation of the concept, and whether the measurement truly measures what it was supposed to measure (Zikmund *et al.*, 2013:303; Field, 2012:12). Researchers should consider the validity, given that the reliability of a scale does not mean that the scale is valid (Hair *et al.*, 2013:166). Sahu (2013:42) explains that validity in literature can be done in two ways, namely (a) content validity, (b) construct validity.

Aaker *et al.* (2011:678) explain that when the argument is made that the measure reflects the various aspects of a phenomenon in a manner that there can be little disagreement with it, it refers to content validity. Furthermore, the extent to which an operationalisation measures the concept which it is formulated to measure refers to construct validity (Malhotra, 2010:27).

For the purpose of this research the focus will be on (a) and (b) as mentioned above.

Table 3.6: Represents the definitions of the various types of validity

(a) content validity	Content validity is associated to measure the acceptability of the content of a scale and how well it is representative of a topic being studied.	Sahu, 2013:42; Zikmund <i>et al.</i> , 2013:304
(b) construct validity	Construct validity reports the characteristic or construct in fact measured by the scale Construct validity compares the results of a specific research study with those of other works.	Cooper & Schindler, 2014:257; Sahu, 2013:42

For purposes of this quantitative research, content and construct validity were established by considering the level to which the items in the questionnaire truly measured the constructs, namely planning and administration, and self-management competencies of managers in manufacturing businesses.

3.8.8.2.1 Validity of the quantitative data

Content validity involves an in-depth analysis and evaluation of the items to confirm that the items are representative of the specific construct. An expert in the field established the content validity of the test and evaluated every test. The questions were developed from literature and derived from existing questionnaires.

To assess construct validity of the scales measuring planning and administration, and self-management managerial competencies, a CFA (confirmatory factor analysis) was conducted to ensure the basic structure of the data (see section 3.9.6.2). Hence a discussion on factor analysis follows next.

3.9 RESEARCH REPORT

Once the data had been collected and analysed the following step was to interpret the main findings that were examined. The findings are discussed in Chapter 6 which also includes a summary of the results, and recommendations are also provided.

3.10 SUMMARY

For purposes of this research, a descriptive research design was followed. The research was obtained by means of primary research to collect data as specified so that valuable interpretations and representations could be made of the data obtained. The literature background was done by means of secondary data collection by utilising electronic

databases and scholarly handbooks to successfully acquire definitions for the theoretical background to the managerial competency constructs investigated in the research.

A self-administered questionnaire was developed to obtain data from respondents. The questionnaires were designed, based on information gathered from literature and results obtained from the pilot testing. The self-administered questionnaire contained multiple choice, closed-ended and scale questions. The data obtained was analysed using SPSS – a computer-based statistical programme. The questionnaires were distributed by trained fieldworkers and they followed the developed sampling method. The sampling method was obtained by selecting a specific population which was relevant to this research, identifying the size of the sample, specifying the required sampling methods and collecting the data by using a variety of research instruments. The sample size was determined in accordance with the minimum sample size required for research to be valid. The population of this research consisted of top- and middle-level managers in manufacturing businesses in South-Africa. Regarding the reliability of all scales measuring managers' planning and administration, and self-management competencies, Cronbach's Alpha value was calculated to test the reliability of the coefficients. Furthermore, to assess construct validity of the scales measuring self-management competencies of managers, a CFA was conducted to confirm the underlying structure of the data. For purposes of this research, descriptive statistical techniques were used by examining frequency and percentage distribution. In conclusion, the research methodology has addressed important questions regarding the manner in which research for this research was conducted. It furthermore clarifies the reason for choosing these methods. Chapter 6 will presents the results obtained from this research process.

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CHAPTER 4: ARTICLE 1

4.1 INVESTIGATING THE PLANNING AND ADMINISTRATION COMPETENCIES OF MANAGERS IN MANUFACTURING BUSINESSES

This chapter is the first article of the study, and it measure the extent of planning and administration competencies of managers in the manufacturing industry in South Africa. This article was submitted to the Journal of Contemporary Management (a Department of Higher Education and Training (DHET) accredited journal) and was **accepted for publication**. In this chapter, these recommendations have been considered and applied accordingly. It should be noted, however, that the heading numbers, table numbers, figure numbers referencing, page margins, font and font size were kept uniform to the rest of this dissertation. The author guidelines for manuscript submissions to are available at:

https://journals.co.za/upload/Guidelines_for_Authors/jcman_auth.pdf

Investigating the planning and administration competencies of managers in manufacturing businesses

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ABSTRACT

Planning and administration as managerial competencies of managers in manufacturing businesses are important for effective management due to the continuous evolving business environment. This study aimed at measuring the extent of planning and administration competencies of managers in the manufacturing industry. Variables investigated were information-gathering and problem-solving, planning and organising, time management, and budgeting and financial management.

The sample consisted of 343 respondents from 67 different manufacturing businesses in four provinces of South Africa. A quantitative, descriptive research design was implemented, while a non-probability sampling technique was applied. The data were collected through a self-administered questionnaire compiled by the researchers.

Results indicated that managers revealed a good to very good level of planning and administration competency which embraced information-gathering and problem-solving, planning and organising, time management as well as budgeting and financial management skills. Further to this, a significant and positive relationship exists between managers' information-gathering and problem-solving, as well as planning and organising competencies, and also between managers' time management, and budgeting and financial management competencies. The main contribution of this study is that if managers have good knowledge of the identified competencies and associated key elements they can enhance their personal and business performance.

Keywords:

Manufacturing businesses; managerial competencies; managers; planning and administration

4.2 INTRODUCTION

Industry growth rates depend on many factors, and the South African manufacturing industry is no exception. The state of the local and global economy and the rand exchange rate are some of the factors that are watched closely when assessing the performance of manufacturing production (Stats SA, 2016:1). Given this unstable and strong dynamism, businesses encountered an unpredictable environment characterised by increasing changes in technologies, several differences in client demands, as well as changes in the global environment, therefore managers is to learn new things daily to keep up with the changing environment (Lazenby, 2015:15-16). Manufacturing is no longer about just producing physical products. Many challenges such as changes in consumer demand, the nature of products, the economics of production, and the economics of the supply chain have led to a fundamental shift in the way manufacturing companies execute their business (Hagel *et al.*, 2015:1).

Furthermore, South Africa has developed areas but likewise reduced infrastructure. Statistics South Africa (Stats SA) (2016:3) reports that the principal constructive contributor to growth in Gross Domestic Product (GDP) in the second quarter of 2016 was manufacturing. Furthermore, Stats SA indicated a growth of 8.1% in the number of manufacturing industries, which contributed 1.0% to GDP. This is mainly due to noticeable increases in the areas of petroleum products, chemicals, plastic and rubber (Stats SA, 2016:3).

Considering the value of the manufacturing industry in the South African economy, establishing the degree of the importance of managerial competencies and the inevitability of being aware and developing these competencies became an important subject of managerial competency investigation, which also bears relevance to the Small Enterprise Development Agency (SEDA) (2012:14). Businesses will not be able to succeed without competent managers (Williams, 2014:24). Having competent managers not only enables an improved work environment, but additionally supports the improvement of the business success as a whole.

For this reason, numerous businesses generated an urgency to develop their managerial competencies in order to allow managers to advance superior performance in their

corresponding profession (Sahoo, 2014:143). As a result of the current developing, improving and changing environment, added focus is on the characteristics of managers and their competencies, since they are considered an important determinant in obtaining a sustainable competitive advantage (Hellriegel *et al.*, 2012:23).

Every organisation needs effective managers to be successful in today's highly competitive and dynamic business environment. Good managerial competencies can give companies the necessary competitive advantage over their competitors (Velu & Manxhari, 2017:59). In other words, managerial competencies provide the basis upon which effective management is shaped.

Hence the focus is on aligning managerial competencies with the internal and external environmental factors which manufacturing managers come across, so as to avoid any uncertainties (Campbell *et al.*, 2011:156).

Wanza and Nkuraru (2016:191) emphasise the importance of managerial influence on businesses' ability to adapt to the changing dynamic environment by stating that if the managers are capable and competent the process of organisational change will be more effective and successful. Manufacturing businesses – especially in South Africa – need to adopt strategic flexibility to counterbalance the internal and external pressure presented at a frequent level. The increasing growth of the number of manufacturing businesses poses further challenges, as they remain the core driver of Gross Domestic Product (GDP) and employment, resulting in a crucial need for managers to become and remain aware of their competitors and retain a competitive advantage (Zalk, 2014:1).

4.3 PROBLEM STATEMENT

The continuous changing environment and increased competition among manufacturing businesses pose enormous challenges for managers to deal with (SEDA, 2012:4). In a study by Edwards and Jenkins (2015:452) it was found that Chinese competition has had a significant impact on the South African manufacturing industry and that most of the increase in Chinese penetration of the South African market has been at the expense of local production. Strategies need to be developed to ensure a well-established and diverse base of South African products which, in addition, are globally competitive.

Dogra (2012:2) explains the difference between excellent and ordinary managers as the ability of the first-mentioned to use their competencies effectively to adapt to this fast-changing environment, as opposed to that of the ordinary managers. Campbell *et al.* (2011:157) points out that the manufacturing industry, especially within South Africa, faces

increased competition; therefore a manager should be capable of keeping up with the rapidly changing environment.

Many management thinkers believe that planning and administration of operations are the most fundamental responsibilities of managers in the manufacturing industry (Bhardwa, 2016:47). Lech (2012:967) underlines that management faces major dilemmas in terms of the amount of time, resources and information-gathering methods they use for effective planning and organising, which could benefit significantly effective administration.

Due to the evolving nature of manufacturing businesses it has become critical for managers to apply successful planning and administration competencies, especially if they wish to increase competitiveness in the market and create a good working environment for their employees (Kalliath & Kalliath, 2012:730). According to Olaoye & Saheed (2016:28) practicing managers need to be competent in basic financial management because among the most crucial decision-making in a business are those which relate to finance. Understanding of the theory of the financial management provides business managers with conceptual and analytical insights to make such decision-making skilfully.

Applying these competencies will lead to schedules being followed without any complications, consequently reaching the set goals and objectives on schedule and completing these within the allocated budget (Whetten & Cameron, 2011:122). It is therefore necessary for managers to sharpen their planning and administration competencies so as to keep abreast of the ever-changing challenges in the manufacturing industry. The research question was: 'What is the extent of planning and administration competency of managers in the manufacturing industry?'

4.4 RESEARCH AIM AND OBJECTIVES

The primary aim of this research is to measure the extent of planning and administration competencies of managers in the manufacturing industry.

Leading from the primary aim, the secondary objectives were to:

- determine a limited demographic profile of the respondents;
- measure managers' information-gathering and problem-solving skills, as contributors to their planning and administration competency;
- determine managers' planning and organising skills, as contributors to their planning and administration competency;

- identify managers' time management skills, as contributors to their planning and administration competency; and
- measure managers' budgeting and financial management skills, as contributors to their planning and administration competency.

Directed by the literature research conducted, the following alternative hypotheses have been formulated for this current study:

- H1:** There is a significant and positive relationship between managers' information-gathering and problem-solving skills and planning and organising skills, as contributors to the planning and administration competencies.
- H2:** There is a significant and positive relationship between managers' time management skills and budgeting and financial management skills, as contributors to the planning and administration competencies.

4.5 LITERATURE REVIEW

Referring to Henry Fayols' theory of management (1949), which still fits well within the current management theories (Rahman, 2012:35), management is seen to be the method of using business resources to achieve business goals through planning, organising, leading and controlling (Lazenby, 2015:3; Williams, 2014:5-6). Schermerhorn (2013:4-5) states that a hierarchy exists in management which is presented from top to bottom for three categories, namely top, middle and first-level managers.

For purpose of this research the focus is on top and middle-level managers. Lazenby (2015:5) refers to top-managers or executive management as the highest level of the organisation and are responsible for making decisions and establishing goals and plans that affect the entire organisation. These managers are thus accountable for providing strategic direction and strategic planning (Schermerhorn, 2013:5), whereas middle-level managers are responsible for finding the best ways to achieve organisational goals as effectively and efficiently as possible by implementing the policies and strategic plans (Lazenby, 2015:5).

With regard to management, Mitchelmore and Rowley (2010:92) explain that the link between management competencies and the success and development of a business is vital. People are considered competent managers when they are able to demonstrate that they are capable of achieving goals within the specific occupation.

Competency, as Sahoo (2014:144) describes it, includes attributes such as knowledge and personal characteristics an individual possesses with the aim of achieving particular outcomes within the business. The application of these competencies supports the maximisation of productivity, and guides employees to perform their tasks effectively (Sahoo, 2014:144). It is essential for managers to be competent in communication, planning and administration, teamwork, strategic direction, global awareness, emotional intelligence and self-management (Hellriegel *et al.*, 2012:30). For purposes of this article the focus is on the planning and administration competencies of top and middle-level managers. The managerial competencies on which this research focused are displayed in the conceptual framework (Figure 1).

4.5.1 Planning and administration competencies of managers

Planning is referred to as developing business goals and objectives, and determining how it will be achieved (Nieman & Bennett, 2014:189). In other words, planning is often seen as the first step in the management process since other management roles are subject to planning. Administration competency involves the skill of managers to be able to manage several employees in order for them to perform together effectively and achieve departmental objectives to ultimately reach business goals.

It is therefore essential to possess the skill to manage diverse types of employees (i.e. culture and personality) and arrange tasks for the employees to work effectively towards the business goals or towards the accomplishment of the objectives of the department (Cunningham & De Kock, 2012:119).

Strydom *et al.* (2015:55) confirm that planning is the first action to be taken in any management process and therefore it usually comes to mind when considering management. Planning and administration competency has four sub-dimensions namely, information-gathering, problem-solving, planning and organising projects and activities, time management, and budgeting and financial management (Bhardwaj, 2016:47). These skills are of importance to this research and are subsequently discussed.

4.5.2 Information-gathering and problem-solving

Information-gathering involves an on-going investigation and resource gathering through wide-ranging reading, and working with individuals in unrelated fields produces new knowledge (Kuratko, 2014:153). In other words, this concept is referred to as obtaining resources in order to gain the best value from existing information for a specific purpose.

Information-gathering is essential when managers face important decision-making within a business.

Management faces major problems with respect to the amount of time, resources and information-gathering methods used to make decisions which should also be compatible with the prime business systems (Lech, 2012:967). Lech (2012:968) expands on it, by noting that this activity poses certain challenges when it comes to decision-making. The problem occurs when managers are required to make a decision concerning the total time that ought to be spent to gather enough information to make good decisions. Furthermore, questions emerge around how businesses should manage the information-gathering task to obtain maximum information accuracy.

Proctor (2014:61) describes a problem as any situation that is perceived to exist between what is and what should be and problem-solving involves the processing of gathered information. Combe (2014:243) explains that managers with good problem-solving competencies may generate excellent competitive advantages for the business. Problems occur within a business when the outcome does not meet the identified business goals (Daft *et al.*, 2010:323). Therefore problem-solving is the skill applied when action is taken to achieve identified business goals and objectives (Daft & Marcic, 2014:15).

Weaknesses will always exist within manufacturing businesses, created by factors such as irrelevant information, time delay, changes in the environment and manager incompetency, which all add to the problems management is accountable for (Lech, 2012:968). Problem-solving for managers is less time consuming and more effective when they have the necessary expertise and experience regarding that specific problem.

Managers are required to delegate tasks effectively in order to enable delegates to join in on problem-solving. In doing so, managers gain knowledge concerning all the business processes and improve their managerial competencies (Griffen & Van Fleet, 2014:58). Managerial success profoundly rests upon good decision-making particularly concerning business structures, methods, and the availability of information (De Janasz *et al.*, 2012:306). A study by Jones and Hood (2010:387) shows that problem-solving is more effective and less time-consuming when the managers have knowledge of the subject or have access to relevant information. Wu and Pagell (2010:578) state that the complexity with problem-solving comes with uncertainty and lack of information.

4.5.3 Planning and organising competencies

The management process includes planning, organising, leading and controlling resources, which enable management to achieve the set goals of the organisation (Alsemgeest *et al.*, 2017:25; 123). Given the importance of planning and organising in the management process, Hellriegel *et al.* (2012:35) explain that it is essential for managers to collaborate with employees to clarify broad objectives, discuss resource allocation and establish completion dates as contributors to planning and organising competencies. Planning is defined by Alsemgeest *et al.* (2017:25) as the starting point of the management process as well as the setting up a series of steps to achieve a specific goal.

Furthermore planning, according to Schermerhorn (2013:195), involves taking into account the overall business activities including long-term and short-term goals and compiling a framework for completion. Organising on the other hand involves the stage where management group their resources in such a way that they meet the business objectives (Alsemgeest *et al.*, 2017:25). The effectiveness of planning and organising depends on whether the goals and objectives at the top level of the business support the goals and objectives at the middle and bottom level of the business. In essence, planning and organising work best when the business as a whole aims at achieving the same set of goals and have corresponding action plans (Williams, 2014:113).

The main purpose of middle-level managers is to establish short-term plans, execute the plans within the specific framework and establish rules to ultimately achieve long-term plans made by top managers (Nieuwenhuizen & Rossouw, 2012:45). Management avoids complications or design methods that remove challenges through effective planning and organising (Whetten & Cameron, 2011:122). Long-term success therefore depends on managers' ability to be prepared, build resilience, plan and organise business activities.

Hazir (2015:812) highlights one of the most important aspects for managers in manufacturing businesses, namely project management. This includes monitoring how successful tasks are completed. Understanding planning and scheduling is a necessity for any manufacturing manager to achieve the specific goals and objectives of an undertaken project (Williams, 2014:299).

The most common challenge faced by managers with regard to project management is the effective development of schedules that can tolerate uncertainties (Hazir, 2015:812). Inability of managers to schedule projects effectively results in poor performance (Whetten & Cameron, 2011:328). Scheduling in businesses depends heavily on simulation to establish

the work load and distribute priorities. A wide variety of computer programs are available for running this simulation and generally one schedule cannot work for all departments. Each department needs its own schedule to eliminate problems for the business and for the customer (Kamauff, 2010:2). In essence, scheduling supports effective time management to complete specific projects.

4.5.4 Time management

The dynamic business environment presents various challenges and in an attempt to succeed managers often seek appropriate time management tactics to ensure their work is done on time (Passerini, 2013:333). Efficient time management comprises an individual's ability to arrange tasks and activities in accordance with importance and urgency (Griffen & Van Fleet, 2014:10, 57). Lazenby (2015:108) explains time management as the skill which allows managers to do more in less time with better achievement of goals and objectives.

Time management is further essential to control work tasks, sustain equilibrium among work and personal life and decrease stress levels. While time management presents several benefits, interruptions occur which influence the efficiency of time management (Passerini, 2013:333). Interruptions include any obstruction which adversely influences efficient time management such as continuous telephone calls, unscheduled visitors and meetings. Daft and Marcic (2014:126-127) describe four techniques that enable productive performance using effective time management skills.

Firstly, the use of alphabet letters to arrange tasks and activities from most important to less important. The second technique refers to Pareto time-management which is referred to as the 80/20 rule. This rule specifies that 20 percent of tasks and activities results in 80 percent of the work time (Lazenby, 2015:109). A third technique embraces taking 10 minutes at the end of each day for work review purposes as well as for planning a to-do-list for the next day. Lastly, individuals should do only one task at a time so that all attention is focused on one task to improve the results.

De Janasz *et al.* (2012:82) explain that these techniques are not applied every minute of the working day. It suggests allocating adequate time to complete tasks and plan successfully to allow time for unforeseen situations that are unavoidable. De Janasz *et al.* (2012:82) further describe managers' time management as the ability to distribute their time and resources effectively in order to achieve their goals. It is thus a management skill that refers to how one spends one's time which allows for prioritisation in order to achieve more objectives in one's

business and personal life. Jones and Hood (2010:386) emphasise that correct and effective time management ultimately increases productivity.

4.5.5 Budgeting and financial management

Financial management has long been recognised as an important management tool (Zayed & Liu, 2014:171). Financial management can be described as the process of establishing value in a business and thus being capable of making the correct decisions (Bowdin *et al.*, 2011:301). For managers to make effective financial decisions it is essential for them to consider costs and profit by seeking maximum return on equity and to understand the factors that influence the financial position of businesses.

Implementing financial management gives managers a complete overview of the current and future state of the financial position (Elhamma, 2015:977; Wibowo & Alfen, 2013:407). Financial management includes cost control in order to achieve profit and adding value to products and services (Thompson & Martin, 2010:133). Furthermore, financial control can be maintained by using budgets. In essence, budgeting requires the authorisation and delegation of budget activities between individual managers and other employees (Mullins, 2013:640).

Budget targets can be understood as financial plans and calculated estimates of expected future outcomes agreed on by the management team (Combe, 2014:204). Budget targets determine managements' estimated revenue and expenditure which links to sufficient resources purchased and consumed and also indicate how much will be expected in sales (Zayed & Liu, 2014:171).

Kamauff (2010:22) adamantly professes that, management in manufacturing businesses should be able to productively identify alternative solutions to work. They need to be able to identify what the financial potential, costs to produce and the return on investment of the products that the business offers would be. Kihn (2011:214) states that business activities and goals revolve around the budget targets; therefore it is managers' responsibility to ensure the employees of the business commit to given budgets. It is consequently important for the budget targets to be communicated to employees in the business so that all employees know what is expected of them (Kihn, 2011:217).

4.6 RESEARCH METHODOLOGY

4.6.1 Research design, target population and sampling

A quantitative descriptive research design was implemented in this research to investigate the planning and administration competencies of top and middle-level managers in the manufacturing industry. Burns and Bush (2014:102) explains the purpose of descriptive research as being to find answers to questions such as where, when, who, what and how. Descriptive research is also used to present findings of a large sample to predict variables (Burns & Bush, 2014:102). Berndt and Petzer (2013:47) explain that this method is best used to measure the relation between constructs in terms of explaining and predicting influencing factors.

The target population included middle and top-level managers of a wide range of manufacturing businesses in four provinces of South Africa, namely Gauteng, North West, Free State and Western Cape. Respondents were approached based on a non-probability convenience sampling technique (Berndt & Petzer, 2013:174); therefore excluding the possibility of generalisation. Consequently, due to budgetary restrictions, the sample was drawn from a section of the population that was easily reachable for the fieldworkers.

Table 4.1 discloses that a total of 343 ($n = 343$) usable questionnaires were returned by 236 (68.80%) males and 107 (31.20%) females from the four provinces. According to Tabachnick and Fidell (2007:613), the rule of thumb is that it is comforting to have at least 300 respondents for a factor analyses.

Table 4.1: Sampling representing the target population

Province	Businesses	Questionnaires
Gauteng	35	179
North-West	18	82
Free State	8	30
Western Cape	6	52
Total	67	343

Source: Calculated from survey results

4.6.2 Research instrument and pretesting of the questionnaire

Data was collected by means of a self-administered and structured questionnaire compiled by the authors. The advantage of this method was that it allowed the respondents to fill out the questionnaire in their own time with no assistance required from the researcher (Cooper & Schindler, 2014:225).

The first section (Section A) of the questionnaire measured respondents' demographic profile. The second section (Section B) measured the planning and administration competencies, namely respondents' information-gathering and problem-solving, planning and organising, time management, as well as budgeting and financial management. Each of the items included in the scales was measured on a five-point Likert-type scale, with 1 - representing '*poor*', 2 - '*fair*', 3 - '*good*', 4 - '*very good*' and 5 - '*superior*'.

The questionnaire was developed by ensuring that the questions were aligned with the objectives of this study. A pilot study was done in which 30 respondents, who did not form part of the sample for the final study, participated in the questionnaire pretesting with the purpose of identifying possible problems such as wording or difficulty among respondents to complete the questionnaire (Burns & Bush, 2014:229). After various slight adjustments had been made, the questionnaire was finalised and distributed by trained fieldworkers.

4.6.3 Data collection procedure

Trained fieldworkers were used to distribute the questionnaires to the given target population. They ensured that the target population met the identified criteria. They also attended to problems encountered by respondents while completing the questionnaire and collected the questionnaires once completed. The fieldworkers were twelve Honours BCom students studying at the North-West University, Potchefstroom Campus School of Management Sciences. They gained experience in research in their pre- as well as postgraduate years.

4.6.4 Data analysis

Data from the questionnaire was explored using the Statistical Package for the Social Science (SPSS) version 23 to capture, clean, edit and analyse the data obtained. The demographic profile of respondents (Section A of the questionnaire) was investigated using descriptive statistics, including frequencies and percentages. Results of the items in the four main constructs (Section B of the questionnaire) were calculated using means (\bar{x}) and standard deviations (SD).

The following analyses were executed:

- Construct validity was tested by using a Confirmatory Factor Analysis (CFA), followed by an examination of the content validity.
- Cronbach alpha coefficients were computed to determine the reliability of the questionnaire.
- Frequency analyses, mean scores and standard deviations were computed for all the items in the questionnaire (see Tables 4.3 to 4.6).
- The Pearson's Product Moment Correlation test (Pallant, 2010:122) was used to test the formulated hypotheses (see Tables 4.7 and 4.8).

4.6.5 Psychometric properties of the measuring instrument

The **psychometric** properties of the measuring instrument were examined by assessing construct and content validity while reliability was examined by computing Cronbach alpha coefficients for the four variables.

4.6.5.1 Construct validity

Construct validity is used to establish whether the measuring scales effectively measure what the researcher intended it to measure (Iacobucci & Churchill, 2010:257). The content was developed by studying researched theory and articles (Dogra, 2012; Kalliath & Kalliath, 2012; Kamauff, 2010) and the constructs were developed accordingly. A CFA was conducted on each of the four dimensions of managers' planning and administration competencies, using a principal component analysis with direct oblimin rotation.

With regard to the first construct 'managers' information-gathering and problem-solving skills' a Measuring Sample Adequacy (MSA) (Kaiser-Meyer-Olkin measure of sampling adequacy) of 0.740 was obtained, which was well above the acceptable limit, namely 0.50 (Field, 2013:695). The results of the CFA confirmed that the five items measuring this construct could be reduced to one factor, explaining 61.43% of the variance, with communalities on the various items varying from 0.408 to 0.575. With regard to the second construct 'managers' planning and organising skills' an MSA of 0.769 was obtained.

The CFA confirmed that the five items measuring this construct could be reduced to one factor, explaining 65.67% of the variance, with communalities on the various items varying from 0.438 to 0.584. The third construct 'managers' time management skills' obtained an

MSA of 0.781. The CFA confirmed that the five items measuring the construct could be reduced to one factor, explaining 50.10% of the variance, with communalities on the items varying from 0.390 to 0.585.

For the last construct 'managers' budgeting and financial management' an MSA of 0.833 was obtained. The CFA confirmed that the five items measuring this construct could be reduced to one factor, explaining 66.74% of the variance, with communalities varying from 0.598 to 0.763.

All of the MSA scores were well above the required 0.50 (Field, 2013:695) and the measuring instrument could be considered construct valid due to sufficient explanations of the variances and high communalities on the items.

4.6.5.2 Content validity

Zikmund and Babin (2013:258) explain that content validity is used to measure whether the content ties into the proposed concept's description. For item development purposes researched theories, articles and books mainly focusing on the planning and administration competencies of managers were used.

An in-depth analysis and evaluation was carried out to ensure that the items in all four scales of the questionnaire were a valid representation of the specific constructs being tested. Five experts within the field of business management were requested to evaluate the items that measured the constructs and found that all the items fell within the boundaries of the content domain and that the items in each sub-scale represented the concept sufficiently. Consequently, the instrument was deemed content valid.

4.6.5.3 Reliability

Pallant (2010:7) refers to reliability as the resemblance of results obtained by independent but comparable measures of the same object, attribute, or construct. In other words, the reliability of an instrument is an indication of the extent to which the measuring instrument can be used consistently and can be assessed by computing Cronbach alpha coefficients. An instrument can be considered reliable if the same variable in the same test conditions with the same instrument at repeated measurements yields the same result (Joubert *et al.*, 2016:288). Reliability testing was subsequently undertaken using Cronbach alpha coefficient to determine whether the four constructs were indeed reliable (Pallant, 2010:97).

Table 4.2 below indicates the reliability of the constructs according to Cronbach alpha coefficient values.

Table 4.2: Cronbach alpha coefficient values for the factors

Construct	Number of items	Cronbach alpha coefficient
Information-gathering and problem-solving	5	0.70
Planning and organising	5	0.74
Time management	5	0.75
Budgeting and financial management	5	0.87

Source: Calculated from survey results

It is evident from Table 2 that the Cronbach alpha coefficients are equal to or greater than 0.70, which indicates a high level of reliability (Field, 2013:679) for all four scales that measure the planning and administration competencies of managers, with the scale that measures budgeting and financial management being exceptionally reliable. The measuring instrument was therefore considered reliable.

4.7 RESULTS OF EMPIRICAL STUDY

The results are presented in accordance with the objectives. The first objective was to investigate the demographic information concerning the respondents.

4.7.1 Demographic profile of respondents

A clear male dominance (68.80%) was evident in this study. Regarding age, most of the respondents (41.2%) were between 40 and 49 years old, followed by 28% that were 30-39 years of age, and lastly 18.9% that were 50-59 years of age. Only 30.3% of the respondents had completed matric, while 27.7% had a business degree or diploma. Furthermore, the majority of the respondents (63.8%) were appointed at the middle management level.

4.7.2 Results regarding the findings of the four constructs

Information-gathering and problem-solving, planning and organising, time management and budgeting and financial management are the four constructs under investigation. The mean scores and standard deviations for each item in the four constructs are presented in Tables 4.3 to 4.6, where 1 = poor performance and 5 = superior performance.

4.7.2.1 Managers' information-gathering and problem-solving skills

The second objective was to determine the managers' information-gathering and problem-solving skills as contributors to their planning and administration competency, and the findings are depicted in Table 4.3.

Table 4.3: Information-gathering and problem-solving skills

Information-gathering and problem-solving skills	N	\bar{x}	SD
I monitor information that is relevant to on-going projects and activities.	343	4.02	0.69
I obtain and use relevant information to identify symptoms and underlying problems.	343	4.01	0.74
I make decisions on time.	343	4.01	0.76
I am able to anticipate negative and positive consequences when taking risks.	343	3.93	0.76
I know when expert knowledge is needed and ask for it to solve problems	343	4.21	0.71
Average	343	4.04	0.73

Source: Calculated from survey results

Table 4.3 shows that the average mean score ($\bar{x} = 4.04$; $SD = 0.73$) with regard to respondents' information-gathering and problem-solving, indicating that top and middle-level managers are of opinion that their planning and administration competencies are on a very good level. Information-gathering includes obtaining resources in order to gain the best value from existing information for a specific purpose. Information-gathering is essential when managers face important decision-making within a business (Kuratko, 2014:153).

The items 'I know when expert knowledge is needed and ask for it to solve problems' achieved the highest score ($\bar{x} = 4.21$; $SD = 0.71$) and 'I am able to anticipate negative and positive consequences when taking risks' achieved the lowest score ($\bar{x} = 3.93$; $SD = 0.76$). This signifies that managers are not scared to ask for expert knowledge with a view to solve problems. Although managers rated the statement that they can anticipate negative and positive consequences when taking risks, the lowest, it still reflects a positive score which means they have the ability to foresee the results when taking risks.

4.7.2.2 Managers' planning and organising skills

The third objective was to investigate managers' planning and organising skills as contributors to their planning and administration competency of which the results are presented in Table 4.4.

Table 4.4: Planning and organising skills

Planning and organising skills	N	\bar{x}	SD
I develop plans and schedules to achieve specific goals.	343	3.89	0.74
I prioritise tasks in order to stay focused on those that are most important.	343	4.03	0.76
I can organise people around specific tasks to help them work together toward a common objective.	343	4.03	0.78
I delegate responsibility for tasks to co-workers.	343	3.78	0.93
I anticipate possible problems and develop plans in order to deal with them	343	3.85	0.75
Average	343	3.92	0.79

Source: Calculated from survey results

Table 4.4 depicts an average mean score of $\bar{x} = 3.92$ and $SD = 0.96$ for planning and organising, indicating that the respondents are of opinion that their planning and organising skills vary from good to very good. Planning, according to Nieman and Bennett (2014:189), is essential for developing business goals and objectives, and defining how it can be achieved. Planning is therefore often seen as the first step in the management process since other management roles are subordinate to planning.

The mean scores for the questions varied between $\bar{x} = 3.78$ and $\bar{x} = 4.03$ which are moderately consistent. The items 'I prioritise tasks in order to stay focused on those that are most important' and 'I can organise people around specific tasks to help them work together toward a common objective' achieved the highest mean score of 4.03 and a standard deviation of respectively 0.76 and 0.78. This implies that managers prioritise tasks to attend to the more important ones and that managers can organise their people to work towards common objectives.

4.7.2.3 Managers' time management skills

The third objective was to identify managers' time management skills as contributors to their planning and administration competency and the findings are reflected in Table 4.5.

Table 4.5: Time management skills

Time management skills	N	\bar{x}	SD
I handle several issues and projects at the same time, but do not over commit	343	3.67	0.84
I monitor and keep to a schedule or negotiate changes in the schedule if needed	343	3.76	0.80
I work well under time pressure	343	4.05	0.85
I know when to permit interruptions and when to screen them out	343	3.65	0.89
I know when to renegotiate established deadlines in order to deliver satisfactory results	343	3.75	0.80
Average	343	3.78	0.84

Source: Calculated from survey results

Table 4.5 reflects an average mean score of $\bar{x} = 3.78$ and $SD = 0.84$ for the time management dimension, portraying that managers feel that their time management skills are good. Efficient time management comprises an individual's ability to arrange tasks and activities in accordance with importance and urgency (Griffen & Van Fleet, 2014:1057). The item 'I know when to permit interruptions and when to screen them out' achieved the lowest mean score ($\bar{x} = 3.65$, $SD = 0.89$) but although the lowest scored it is still well above average which means that managers indeed know how to handle interruptions. The item with the highest mean score ($\bar{x} = 4.05$; $SD = 0.85$) was 'I work well under time pressure', indicating that this is a strong point in their time management skills.

4.7.2.4 Managers' budgeting and financial management skills

The fourth objective was to measure managers' budgeting and financial management skills as contributors to their planning and administration competency, and the results are portrayed in Table 4.6.

Table 4.6: Budgeting and financial management skills

Budgeting and financial management skills	n	\bar{x}	SD
I understand budgets, cash flow and financial reports.	343	3.86	0.94
I use budgets and financial reports to make decisions.	343	3.75	1.03
I ensure that accurate and complete financial records are kept.	343	3.69	1.00
I create budgetary guidelines for co-workers.	343	3.31	1.01
I work well within the budgetary guidelines given.	343	3.78	0.86
Average	343	3.68	0.97

Source: Calculated from survey results

Table 4.6 depicts an average mean score of $\bar{x} = 3.68$ and $SD = 0.97$ for the budgeting and financial management construct, indicating that managers are convinced that they have the ability to manage budgets and financial aspects. The mean scores for this construct varied between $\bar{x} = 3.31$ and $\bar{x} = 3.86$ on a five-point Likert scale.

The item 'I understand budgets, cash flows and financial reports' achieved the highest mean score of $\bar{x} = 3.86$, which implies that managers feel they understand financial aspects quite well. The item 'I create budgetary guidelines for co-workers' achieved the lowest mean score of $\bar{x} = 3.31$.

- Respondents ranked budgeting and financial management as the lowest of these four competencies, yet managers indicated that they understand budgets, cash flow and financial reports. This finding is consistent with findings of another empirical study on management competencies regarding budgeting and financial management reported in the literature (Kihn, 2011:231). This may indicate that managers don't feel it is very important to provide their workers with budgetary guidelines. This is contradictory to the opinion of Kihn (2011:217) who states that it is important that the budget targets be communicated to employees in the business so that all employees know what is expected of them.

4.7.3 Hypotheses testing

For the testing of the hypotheses, a correlation analysis was conducted based on Pallant's criteria for significance (Pallant, 2010:134-135). Pearson Product Moment correlation coefficients are reported in Table 8 and Table 9.

4.7.3.1 Hypothesis 1

A significant and positive relation exists between managers' Information-gathering and problem-solving as well as between planning and organising skills as contributors to the planning and administration competency.

Pearson product-moment correlation coefficients were used to investigate the relation between the two constructs, 'information-gathering' and 'problem-solving', and planning and organising competencies. The results are indicated in Table 4.7.

A small p-value ($p \leq 0.05$) indicates strong evidence against the null hypothesis, therefore the null hypothesis can be rejected), whereas a large p-value ($p > 0.05$) indicates a weak evidence against the null hypothesis; thus the null hypothesis cannot be rejected.

Thus if $p < 0.05$, the hypothesis (H1 or H2) cannot be rejected, if $p > 0.05$, the hypothesis (H1 or H2) can be rejected. It is evident from Table 4.7 that $p < 0.05$, which indicates a significant and positive relation between the two variables. There was a strong, positive correlation between the two variables, namely information-gathering and problem-solving, and planning and organising ($r = 0.567$, $p < 0.05$). Consequently Hypothesis 1 can be accepted.

Table 4.7: Pearson correlation coefficients

		Information-gathering and problem-solving	Planning and organising projects
Information-gathering and problem-solving	Pearson correlation	1	0.57**
	Sig. (2-tailed)		0.00
	n	343	343
Planning and organising	Pearson correlation	0.57**	1
	Sig. (2-tailed)	0.00	
	n	343	343

**Correlation is significant at the 0.01 level (2-tailed)

Source: Calculated from survey results

4.7.3.2 Hypothesis 2

A significant and positive relation exists between managers' time management on the one hand and budgeting and financial management skills on the other as contributors to planning and administration competency.

Pearson product-moment correlation coefficients were also used to determine whether a relation exists between the two constructs time management and budgeting and financial management. The results are reflected in Table 4.8.

Table 4.8 indicates that $p < 0.05$, which reflects a significant and positive relation between time management, and budgeting and financial management. The strength of the correlations between the two variables is medium, because $r = 0.49$. A medium, positive correlation found between time management, and budgeting and financial management ($r = 0.49$; $p < 0.05$). Thus hypothesis 2 can also be accepted.

Table 4.8: Pearson correlation coefficient

		Time management	Budgeting and financial management
Time management	Pearson correlation	1	0.49**
	Sig. (2-tailed)		0.00
	N	343	343
Budgeting and financial management	Pearson correlation	0.49**	1
	Sig. (2-tailed)	0.00	
	N	343	343

**Correlation is significant at the 0.01 level (2-tailed)

Source: Calculated from survey results

4.8 RECOMMENDATIONS

For managers to be competent in managing the business and therefor improve the success of the business in the ever changing environment the following practical recommendations based on the findings are provided:

- To succeed in adapting to the changing business environment, managers need to develop and display effective managerial competencies such as planning and administration, which include constructs such as information-gathering and problem-solving (Table 4.3), planning and organising (Table 4.4), time management (Table 4.5) and budgeting and financial management (Table 4.6).
- Managers need to keep up to date with all relevant information regarding trends, fluctuations, market aspects etc. to be able to make informed decisions in the business. This is especially important when managers need to take important decisions regarding the business. Managers also need to be able to use the relevant information to identify

and solve applicable problems. Managers therefore must not be afraid to involve experts in to interpret certain information before making important decisions.

- Managers must use effective planning and management schedules to make sure that set objectives are reached. Managers need to be able to plan and organise teams and team leaders to complete projects to meet the specific objectives set. In order for managers to do effective planning and organising they should assign responsibility, transfer authority and establish accountability. They must therefore learn to trust the co-workers in such a way that they are not scared to delegate some tasks.
- Managers must attend time management courses because efficient time management embraces an individual's ability to arrange tasks and activities in accordance with importance and urgency. They must also learn the necessary skills to be able to work under pressure by applying effective time management in crisis situations.
- Managers must have the ability to know when to allow interruptions and when to ignore them. Managers are advised to have 'available' and 'unavailable' times, implying that certain times for interruptions should be allowed and when unavailable the managers should indicate that only urgent cases may be dealt with, thereby minimising the interruption time during important work.
- It is also recommended that several aspects regarding budgeting and financial management should be incorporated in managers' skills development plans to enhance their planning and administration competencies. They can attend basic financial management courses to help them interpret some financial statements and make them more competent to imply financial information in some decisions.

4.9 LIMITATIONS

The results of this study are subjected to some limitations. The population was limited to top and middle level managers in manufacturing business. It is suggested that future research must investigate low level managers as well. Furthermore it is suggested that not only manufacturing business must be included. Despite the random selection of managers in the manufacturing business the study was limited to convenience sampling and it is acknowledged that the results cannot be generalised. Only selected provinces were included in the population. It is therefore suggested that for future studies the sample must be extended to the whole South Africa.

4.10 CONCLUSION

Top and middle management level managers in this study revealed good to very good planning and administration competencies which embraced information-gathering and problem-solving, planning and organising, time management as well as budgeting and financial management skills. Findings of the hypotheses testing showed positive relations between some of the skills. It seems that in the manufacturing industry there need not be a great concern about managers' general planning and administration competencies but a few specific aspects can be attended to such as the fact that most managers are male and fall within the older age range.

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MAIN FINDING ARTICLE 1 (CHAPTER 4)

Main finding 1.1: It is apparent that most respondents were male (68%) and the largest response came from respondents aged between 40 and 49 years. The majority were appointed in a middle management level position and only 27.7% of respondents possessed a business degree or diploma.

Main finding 1.2: The planning and administration competency includes decision-making regarding what tasks need to be done, determining how it should be done, selecting the correct resources to enable them to be done and evaluating the progress of the outcome. This competency comprises information-gathering and problem-solving, planning and organising competency, time management, and budgeting and financial management competency.

Main finding 1.3: The results indicate that managers are competent in planning and administration.

Main finding 1.4: A significant and positive relationship exists between managers' information-gathering and problem-solving, as well as planning and organising competencies, and also between managers' time management, and budgeting and financial management competencies.

Main finding 1.5: The results indicated that managers were most competent in information-gathering and problem-solving. Specifically a high indication is evident that they know when expert knowledge is needed and ask for it to solve problems.

Main finding 1.6: Managers' planning and organising skills as contributor to their planning and administration competency scored above average. Indicating that managers are of opinion that their planning and organising skills vary from good to very good.

Main finding 1.7: It is evident from the results that managers are of opinion that their time management skills are good. Managers indicated they are uncertain regarding when to permit interruptions and when to ignore them.

Main finding 1.8: Managers scored the budgeting and financial management lowest of the planning and administration competencies. Managers indicated that they are not specifically.

CHAPTER 5: ARTICLE 2

5.1 INVESTIGATING SELECTED SELF-MANAGEMENT COMPETENCIES OF MANAGERS IN MANUFACTURING BUSINESSES

This chapter is the second article of the study, and it measure the extent of self-management competencies of managers in the manufacturing industry in South Africa. This article was submitted to the Journal Acta Commercii (a Department of Higher Education and Training (DHET) accredited journal) and was **accepted for publication**. It should be noted, however, that the heading numbers, table numbers, figure numbers referencing, page margins, font and font size were kept uniform to the rest of this dissertation. The author guidelines for manuscript submissions to are available at: <http://www.actacommercii.co.za>

INVESTIGATING SELECTED SELF-MANAGEMENT COMPETENCIES OF MANAGERS IN MANUFACTURING BUSINESSES

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ABSTRACT

It is important for a manager to possess managerial competencies so as to be successful and with that, establish the successful running of a business. Self-management serves as an essential managerial competency. Self-management competencies entail taking responsibility for one's own actions and behaviour. Managers that do not have self-management competencies in their gift may affect business adversely. For purposes of this research the focus will be centred on investigating selected self-management competencies of managers in the manufacturing industry of South-Africa. The manufacturing industry plays a vital role in South Africa's diverse economy. The research was done in manufacturing businesses in South Africa. This research aims at obtaining comprehensive information pertaining to self-management competencies of top-level and middle-level managers and at determining whether a relation exists between integrity and ethical conduct, between personal drive and resilience, as well as between work-life balances on the one hand and self-awareness and -development on the other – all of which are components of their self-management competency. This quantitative research followed a descriptive design and data were obtained using well-structured self-administered questionnaires. Overall 343 questionnaires were examined. The results revealed that a significant and positive relation exists between managers' integrity and ethical conduct, and between personal drive and resilience, as well as a significant positive relationship between work-life balance on the one hand and self-awareness and -development on the other – all of which are components of their self-management competency.

Key phrases

Integrity and ethical conduct, manufacturing, personal drive and resilience, self-awareness and -development, self-management competencies, work-life balance.

5.2 INTRODUCTION

There is no uncertainty about the fact that the twenty-first century will continuously be characterised by chaotic, transformational and rapid change regarding technological, political and economic transitions (Whetten & Cameron, 2011:3). Singh *et al.* (2013:1442) argue that the manufacturing industry in recent times has undergone unusual change due to the uncertain environmental dynamism. Evidence of the twenty-first century's changing dynamism in the manufacturing environment is found in technology businesses that are becoming manufacturers, for example the driverless cars developed by Google and ride share apps such as Uber and Lyft (Ngulube, 2014:4). Due to the unpredictable rapid changing dynamism, businesses face a variable environment characterised by fast transformation in technologies, common differences in the demand of customers and strong fluctuations in material supply (Singh *et al.*, 2013:1442).

Ngulube (2014:2) notes that variation in the manufacturing industry is vital for increasing future growth projections. When comparing South Africa's manufacturing industry with those of the Philippines, China, India and Brazil, this sector faces essential boundaries that can prevent it from taking advantage of favourable market conditions (Pan-African Investment & Research Services, 2011:5). Statistics South Africa (Stats SA, 2017:2) reports that the total income of the manufacturing industry has increased by 9% per annum compared to that stated in the 2011 conforming survey. The increasing growth affects the success of a business' performance on the market and emphasises the importance of managerial competencies (Singh & Kamba, 2016:140). Given these anticipated and unpredictable changes in the competitive manufacturing environment, managers have identified competencies and abilities essential to prosperity in the dynamic environment (Karp, 2012:127). Owing to this dynamism, businesses are encouraged to bestow greater responsibility on managers to develop their self-management competencies (Boyce *et al.*, 2010:161). Furthermore, Singh *et al.* (2013:1442) recognise the importance of managerial competencies which enable the alignment of flexibility development when considering the challenges for manufacturing managers presented by the external environment.

5.3 PROBLEM STATEMENT

Management involves a process of tasks performed by managers to achieve business goals and objectives using employees and business resources such as financial and physical assets (Erasmus *et al.*, 2013:171). All managers, despite their management level, need to possess specific important competencies to perform optimally in a management position (Lazenby, 2015:6). Erasmus *et al.* (2013:171) state that management is of vital importance

to keep the business in balance with its environment. For managers to be responsible for their life at work and outside of work, it is essential for them to have strong self-management competencies at their command (Hellriegel *et al.*, 2012:43). In the business context, this entails that managers should be capable of developing their own goals as well as opportunities and to obtain resources that will enable them to adapt to the work environment (Symington, 2012:46). Ross (2014:300) adds that if managers can lead themselves they will be equally able to lead others. Strydom *et al.* (2015:55) confirm that self-management is an essential competency required from managers to be successful and with that, to contribute to business success. Hellriegel *et al.* (2012:43) suggest that self-management as a managerial competency entails four vital competencies, namely integrity and ethical conduct, personal drive and resilience, balancing work-life dimension, and self-awareness and -development.

Within the business environment integrity is vital for developing relationships of trust between managers and investors (Coulson-Thomas, 2013:32). When managers do not portray integrity, relations with investors will be damaged which will result in them selling their shares, the dwindling of customer numbers and employees possibly not working effectively or resigning (Coulson-Thomas, 2013:32). Ethics are essential when decision-making is considered; ethical decision-making therefore is essential when setting goals for business success (De Janasz *et al.*, 2012:57).

Hellriegel *et al.* (2012:43) explain that the two traits, personal drive and resilience, are essential when a manager sets out to do something no one else has done before and which could possibly result in setbacks and failures.

The work-life balance dimension embraces managers' competency, despite their gender or age, to integrate work and everyday tasks effectively (Wheatley, 2012:815), resulting in decreased struggle between work and non-work activities and improving the manager's role, either associated with work or non-work related activities (Kaiser *et al.*, 2011:10).

For business success, it is also vital for managers to be self-aware, assuming that self-awareness is conducive to a manager's understanding of the business environment, which in turn will lead to increased productivity, suitable career and life goals being set, and adding to the favourable outcome of the business (De Janasz *et al.*, 2012:6). Sutton *et al.* (2015:612) state that the attention in the workplace is increasingly focused on observing the benefit of self-awareness, recognising that self-aware managers are more effective and that they have subordinates that are more satisfied than do less self-aware managers. Hence the

aim of this research study is to examine selected self-management competencies of managers in manufacturing businesses in South Africa.

5.4 RESEARCH AIM AND OBJECTIVES

The main aim of the study was to obtain insight into the self-management competencies of managers in the manufacturing industry.

To achieve the main aim of this study, the following objectives were formulated:

- To compile a limited demographic profile of respondents that had participated in the study.
- To investigate the extent of managers' integrity and ethical conduct as components of their self-management competency.
- To evaluate managers' personal drive and resilience as components of their self-management competency.
- To explore managers' work-life balance as a component of their self-management competency.
- To appraise managers' self-awareness and -development as components of their self-management competency.

The following alternative hypotheses were formulated for the study:

According to Walumbwa *et al.* (2017:14) ethical leadership can be describe as the demonstration of normatively appropriate conduct through personal drive and interpersonal relationships. Without good ethics it is extremely difficult for a leader to develop integrity, authenticity, an identity or other traits that produce effective leadership Walumbwa *et al.* (2017:14) found a positive correlation between ethical leadership and job dedication, which is a major element of work engagement. Work ethics is part of ethics and it refers to the moral principle of employees towards their work and while engaging in performing their work and they also state that integrity affects most of the individual work behaviour (Zarim & Zaki, 2016:132-133).

H1: A significant and positive relation exists between managers' integrity and ethical conduct, on the one side and personal drive and resilience on the other side both of which are components of their self-management competency.

This association between self-awareness and positive work/life balance demonstrates that preparation to improve self-awareness has the potential to bring real benefits to management as well as the business (Sutton *et al.*, 2015:612). In order to strengthen a work/life balance culture and thus positively influence innovative performance businesses must be effective in developing their staff (Cegarra-Navarro, 2015:375). Friedman *et al.* (2017:1) mention that for them it's not so much about striving for a work/life balance, but more so striving for self-awareness.

H2: A significant and positive relation exists between managers' work-life balance on the one hand, and self-awareness and -development on the other – all of which are components of their self-management competency.

5.5 LITERATURE BACKGROUND

Management, as Botha and Musengi (2012:73) see it, is essential in any business with regard to ensuring that business successes are achieved. Mullins (2013:424) explains that management encompasses all activities of the business and is not separated as an individual function. In other words, management cannot be departmentalised or centralised. Williams (2014:5) defines management as arranging activities so that it can be performed by others. Managers' tasks therefore mainly involve enabling employees to work together with a view to accomplish specific business goals and objectives (Mullins 2013:424). Chuttipattana and Shamsudin (2011:119) note that the success of managers usually is associated with their competencies.

Managerial competencies entail recognisable sets of actions implemented by an individual, which will then lead to specific results (Whetten & Cameron, 2011:9). Competency is defined as a primary characteristic of an individual which involves motives, skills and attributes or knowledge and experience applied by an individual (Chuttipattana & Shamsudin, 2011:119; Jena & Sahoo, 2014:144; Organisation for Economic Cooperation and Development, 2010:4). Managerial competencies have a valuable purpose and serve as the improvement of the specific management method, which includes advantages for the business and the employee alike (Krajcovicova *et al.*, 2012:1122). For this research the attention will be drawn to managers' self-management managerial competencies, and in particular their set of competencies which are continuously applied and recur over time.

5.5.1 Self-management

Botha and Musengi (2012:73) suggest that before people can become managers for businesses they should know who they themselves are. Knowing who you are relies heavily

on your capacity for self-management (Schermerhorn, 2013:10). Self-management involves intentionally undertaking activities that complement personal attributes such as honesty, trustworthiness and reliability (Botha & Musengi, 2012:73). Self-management is defined as an individual's determination to exercise control over decision-making and behaviour (De Janasz *et al.*, 2012:79). Within the business context, Daft *et al.* (2015:24-25) describe that self-management embraces individuals' efforts to manage their personal activities and decision-making by assessing complications and formulating detailed goals and tactics in order to address those problems. Symington (2012:46) adds that career self-management includes formulating one's own goals and opportunities as well as being able to search for new resources to enable easier adaption to the work environment. Thus it is essential for managers to be capable of leading themselves to be competent towards leading others. Leadership entails that one can take responsibility for and have control over one's personal actions (Ross, 2014:300).

According to Hellriegel *et al.* (2012:53), self-management as a managerial competency involves ethical conduct and integrity, personal drive and resilience, self-awareness and -development as well as work-life balance. For purposes of this research the focus will be centred on these four competencies to fully understand what is required of managers with regard to self-management.

5.5.1.1 Integrity and ethical conduct

Nowadays managing ethics is considered a key issue in business. Ho (2011:519) suggests that in philosophy, ethical behaviour describes an individual's character as representing "good" or "right" behaviour. To be ethically and socially accountable is considered to be important for numerous businesses in order to uphold viability and for the business' license to operate (Valentine *et al.*, 2014:692). De Janasz *et al.* (2012:57) explain that ethics is critical, considering the various methods of decision-making and goal-setting managers come across, either as a group, a business, an individual, or a stakeholder of a business.

Initially, ethical decision-making involves acknowledging that a situation comprises identifying an ethical issue, considering an ethical ruling, deciding on choosing to act ethically and finally, acting ethically (De Janasz *et al.*, 2012:59). Ethical values have a major effect on managerial decision-making and it is therefore imperative for managers to understand that their ethical principles influence their decision-making, which is linked to behavioural approaches such as policies and propensity for risk (Daft *et al.*, 2015:175). Due to these outlooks, it has become vital for managers to employ individuals who hold the dynamics to be ethical, as well as to create value-driven ethical approaches (Valentine *et al.*,

2014:693). Ethical challenges are frequently linked to issues that managers face regarding their behaviour towards several stakeholders, colleges, clients, suppliers, shareholders, the government and the public (Valentine *et al.*, 2014:695).

In business context integrity is essential for establishing relationships of trust, specifically between managers and stakeholders (Coulson-Thomas, 2013:32). It is therefore essential for managers to be trustworthy and honest in order for them to engage and connect with employees, customers and stakeholders, which will lead to developing permanent relationships and to inspiring networking. Coulson-Thomas (2013:32) emphasises that not having integrity involves the following consequences: harm-established long-term relationships with stakeholders, investors deciding to sell their stock, customers taking business to another business and employees possibly underperforming or resigning.

5.5.1.2 Personal drive and resilience

Alam *et al.* (2015:388) define personal drive as an individual's acceptance (or self-assurance) concerning his or her capabilities to gather enthusiasm, mental resources and development of tasks required to effectively accomplish a detailed activity within an agreed framework. In a managerial context, personal drive involves managers' motivation and beliefs in being able to achieve particular managerial responsibilities to perform the behaviours essential for an efficient job, to completely fulfil all the demands attached to a job description (Bennett, 2011:550). When an individual holds a high level of personal drive it is believed that the individual will see the negative feedback as motivation and reverse it into a more positive manner to encourage better job performance (Alam *et al.*, 2015:388). Hellriegel *et al.* (2012:43) explain that both personal drive and resilience are essential when a manager sets out to do something no one else has done before and therefore can possibly face setbacks and failures. Resilience is regarded as a set of characteristics that is developed when an individual faces negative as well as positive changes in life. (Warner & April, 2012:53).

Personal work goals and objectives introduce a new dynamic perspective on the interaction between managers' work environments since they reflect the expected, professional career-associated purpose, which is balancing the challenges and opportunities of their career as well as different life aspects (Hyvönen *et al.*, 2015:1036). Since objectives provide improved focus and present a stable framework for goal achievement, managers are more goal-oriented, and achieving goals enables an achievement evaluation and supports positive attitude growth (Ross, 2014:313).

5.5.1.3 Balancing work-and-life dimension

Work-and-life balance has turned out to be a universal discussion about management and business life (Koubova & Buchko, 2013:700). Defining work-and-life balance is relatively straightforward. For purposes of this research the work-and-life balance represents an individual's understanding of whether his/her work and non-work actions are well-suited and support growth with his/her current life concerns and priorities (Koubova & Buchko, 2013:700; Pasamar & Cabrera, 2013:961). Wheatley (2012:815) adds that being able to achieve this successfully, one is competent in achieving work-life balance. Moreover, work and life does not allude to an equivalent weighting of work and life, but instead indicates a suitable, constant link between the two. However, work-life balance will possibly vary noticeably amongst individuals. Wheatley (2012:815) further explains that the balance may change, depending on the individual or employer demands. This concept becomes complex when considering an individual's restricted resources such as time, energy and money. A problem emerges when an individual attempts to have a successful personal life as well as to be able to deliver good work that leads to excellent results (Koubova & Buchko, 2013:700).

Managers and employees spend much of their lives at work; therefore the variables which add to the changing environment has an influence on their wellbeing and furthermore on their work efficiency (Kalliath & Kalliath, 2012:730). Kaiser *et al.* (2011:10) argue that when managers implement work-life balance successfully, a set of advantages can be detected, which leads to conflict reduction among work and non-work areas as well as to enhancing the manager's role, regardless of whether it is work or non-business related. Moreover, Kaiser *et al.* (2011:3) adds that professional individuals are mostly challenged in balancing their work-life areas. Mitsakis and Talampekios (2014:44) note that in business context, in order to promote work-life balance enhancement, businesses should lay down policies in the employment and retention process as well as in the working environment, which will then lead to better realisation of employee efficiency in that they then understand these policies.

5.5.1.4 Self-awareness and -development

Self-management competencies are related to and build upon self-awareness. Developing self-control, such as clearly formulating priorities and goals, supports individuals in giving direction to their own lives (Whetten & Cameron, 2011:57). Frost (2014:126) refers to self-awareness as a continuous venture; being able to question yourself at any specific point in time is built upon large amounts of self-awareness development experience. Sutton *et al.* (2015:611) point out that self-awareness is a noteworthy notion which indicates the degree

to which individuals are knowingly conscious of their relations or associations with others and also of their inner conditions. Whetten and Cameron (2011:57) add that being able to effectively manage time and stress enables individuals to adapt and structure their surroundings.

In business context, De Janasz *et al.* (2012:5) explain that self-awareness is the initial dynamism which enables work productivity, built on the belief of experiencing work satisfaction. Self-awareness is also linked to vital results such as increased job fulfilment (De Janasz *et al.*, 2012:6) and more effective career decisions (Sutton *et al.*, 2015:612). Self-awareness additionally enables an in-depth understanding of the business in which individuals are working, which leads to improved efficiency, successful management of subordinates, relationship development, suitable career- and life-goal selection, which all contribute to business success (De Janasz *et al.*, 2012:6). Given the association between self-awareness and positive life-and-work outcomes, it is clear that developing the improvement of being self-aware holds the potential of bringing real benefits to individuals and businesses (Sutton *et al.*, 2015:612).

In essence, being self-aware facilitates individuals in understanding their own behaviours and in realising the impact of their behaviours on others' work and personal life (Daft & Marcic, 2014:57). The benefit of self-awareness is being observed to a greater extent in business, in recognising that self-aware managers have more satisfied subordinates than do managers with limited self-awareness (Sutton *et al.*, 2015:612).

5.6 RESEARCH METHODOLOGY

The design and methods according to which the study was executed as well as procedures for data analysis are presented below.

5.6.1 Research design

To gain insight into the self-management competencies of managers in the manufacturing industry, this research applied a quantitative, descriptive, exploratory research design. McDaniel and Gates (2013:66) explain that the purpose of descriptive research is to answer "who", "what", "when", "where" and "how" questions. By using a quantitative research method, a rich descriptive type of research (conclusive research) was conducted in an objective and systematic method which was used to sample a target market and the responses were measured using a structured data collection method (Feinberg *et al.*, 2013:234).

5.6.2 Target population and sampling

For purposes of this research the target population was identified as top- and middle-level managers of manufacturing businesses in South Africa. The targeted areas included four provinces in South-Africa, namely Gauteng, North West, Free State, and Western Cape Provinces. A detailed definition of the target population is essential (Neelankavi, 2015:234), given that a target population has an influence on the validity of the research (Whitley & Kite, 2012:485).

A non-probability sampling method was followed. Feinberg *et al.* (2013:304) suggest that a non-probability sampling technique can be used when the population element is grounded on the judgement of the researcher, given that only top- and middle-level managers of manufacturing businesses were identified. A non-probability sampling method allows data collection, on condition that the possibility of a respondent being selected is unknown (Whitley & Kite, 2012:486). A convenience non-probability sampling method was utilized because the sample selected was not complex, associated with reduced cost and was voluntarily available to the fieldworkers (Feinberg *et al.*, 2013:304). In order for the study to be valid, a minimum of 300 respondents was compulsory (Zhao, 2009). A total of 343 top- and middle-level managers from 53 manufacturing businesses completed questionnaires. The fieldworkers distributed the questionnaires and collected them after completion, where after the questionnaires were returned to the researcher.

Table 5.1: Breakdown of target sampling frame

Province	Manufacturing Businesses	Questionnaires obtained
Gauteng	35	179
North-West	18	82
Free state	8	30
Western Cape	6	52
Total	67	343

5.6.3 Research Instrument and pretesting of the questionnaire

A self-administered, structured questionnaire was developed for data collection purposes. The questionnaire contained structured questions with the purpose of meeting the identified objectives of this study.

The questionnaire comprised two sections, A and B. Section A, which consisted of 7 questions, aimed at defining the demographic profile of the respondents. Section B, which included 44 questions, measured the managers' insights into their self-management competencies, specifically focusing on their integrity and ethical conduct, personal drive and resilience, work-life balance and self-awareness and -development. The questions were all closed-ended except for question two of section A, which was open-ended. A 5-point labelled Likert scale was used where 1 = "*poor*", 2 = "*fair*", 3 = "*good*", 4 = "*very good*" and 5 = "*superior*".

In order to test for clarity purposes a pilot study was administered. The pilot study included 30 respondents who did not form part of the sample for the final study. Burns and Bush (2014:229) suggest that it is essential to conduct a pilot study to identify possible problems such as wording or difficulty among respondents to complete the questionnaire. Once several minor formulation adjustments were made the questionnaire was finalised and then distributed by trained fieldworkers.

5.6.4 Data collection procedures

Ten trained fieldworkers who had gained experience during pre- and postgraduate studies distributed the questionnaires. Respondents were approached based upon convenience in Gauteng, Western Cape, Free State and North West province of South Africa. The fieldworkers clarified the reason for the research and supported the respondents with any problems that might have occurred in the course completing the questionnaire.

5.6.5 Data analysis

Once the primary data had been collected it was analysed. Zikmund and Babin (2010:66) are of opinion that the best suited analytical method for data analysis is determined by taking into consideration management's information needs, the nature of the research design and the characteristics of the data collected. For purposes of cleaning, capturing, editing and analysing the data the Statistical Package for Social Sciences (SPSS version 22) was used. The steps followed for data analysis were as follows: (1) validity and reliability of the measuring instrument were determined using confirmatory factor analysis (CFA) and Cronbach alpha coefficients; (2) descriptive results were reported (including frequencies, percentages, mean scores and standard deviations); (3) hypotheses were tested using Pearson's Product Moment Correlation test.

5.6.6 Psychometric properties of the measuring instrument

Content as well as construct validity were inspected followed by an investigation into reliability.

5.6.6.1 Content validity

The Content validity of a measuring instrument refers to the degree to which the items in the constructs illustrate the concepts that are being researched (McDaniel & Gates, 2013:290).

Content validity according to Feinberg *et al.* (2013:131) involves subjective judgement by experts as to the appropriateness of the measurement. It is therefore used to obtain adequate reporting of the research questions controlling the research. If the instrument contains a representative sample of the research concept, then content validity is good (Cooper & Schindler, 2014:257).

Researched theories, articles and books mainly focusing on the self-management competencies of managers were used to develop the items (Hellriegel *et al.*, 2012:430). To ensure that the four scales in the questionnaire were representative of the constructs being tested, a detailed analysis and evaluation was conducted. Experts in the field of business management at North-West University were consulted to appraise whether the items measuring the constructs would represent the concepts effectively. Hence the instrument was considered content valid.

5.6.6.2 Construct validity

Cooper and Schindler (2014:257) defines validity as the central measure of quality of the measuring instruments in research, which determines the degree to which a questionnaire was able to measure what it was intended to measure. A confirmatory factor analysis (CFA) is the best single method for judging construct validity. It inspects how well the factor structure fits the actual research findings (Babin & Zikmund, 2016:552). Therefore, a CFA was conducted to statistically test the validity of the constructs. A Measuring Sample Adequacy (MSA) (Kaiser-Meyer-Olkin measure of sampling adequacy) was used to measure the construct validity. Field (2013:695) explains that an MSA result of 0.50 is the acceptable limit.

5.6.6.2.1 Construct validity for integrity and ethical conduct

Considering the first construct “integrity and ethical conduct” the MSA was calculated as 0.76 (which is above the acceptable cut-off point 0.50). Furthermore, the five items that measured

integrity and ethical conduct could be reduced to one factor explaining 55.63% of the variance, with communalities on the various items varying from 0.51 to 0.62.

5.6.6.2.2 Construct validity of personal drive and resilience

An MSA of 0.79 was obtained for the second construct “personal drive and resilience”. The CFA confirmed that the five items measuring this construct could be reduced to one factor, explaining 53.83% of the variance, with communalities varying from 0.39 to 0.65.

5.6.6.2.3 Construct validity of balancing work and life dimension

An MSA of 0.84 was obtained for the third construct “balancing work and life dimension”. The CFA confirmed that the five items measuring the construct could be reduced to one factor explaining 60.15% of the variance, with communalities on the items varying from 0.51 to 0.68.

5.6.6.2.4 Construct validity of self-awareness and -development

For the last construct “self-awareness and -development” an MSA of 0.87 was obtained. The CFA confirmed that the seven items measuring this construct could be reduced to one factor, explaining 55.10% of the variance, with communalities varying from 0.46 to 0.62.

Thus the measuring instrument was found to be construct valid.

5.6.6.3 Reliability

Reliability indicates the internal consistency of a measuring instrument (Babin & Zikmund, 2016:280). Table 5.2 illustrates the reliability coefficients for the four constructs investigated in this research.

Table 5.2: Cronbach’s alpha values for the measurement sets

Construct	Number of items	Cronbach’s alpha coefficient
Integrity and ethical conduct	5	0.797
Personal drive and resilience	5	0.778
Work-life balance	6	0.864
Self-awareness and -development	7	0.862

Scales with a coefficient alpha between 0.7 and 0.8 are considered to have good reliability while alpha larger than 0.8 illustrates very good reliability (Babin & Zikmund, 2016:280 - 281). As seen in Table 2 the alpha coefficients vary between 0.78 and 0.86, indicating good to very good reliability.

5.6.7 RESULTS OF EMPIRICAL STUDY

The following section will present the results in accordance with the identified research objectives. The first objective was to compile a limited demographic profile of the respondents.

5.6.7.1 Demographic profile of respondents

The respondents comprised 68.80% males and 31.2% females; thus a strong male dominance. Regarding age, 41.2% of the respondents were between 40 and 49 years old, followed by 28% between 30-39 years of age and lastly, 18,9% that were between 50 and 59 years of age. Not many of the respondents (30.30%) had completed matric, whereas 27.7% held a business degree or diploma. The majority of the respondents (63.8%) were appointed at the middle-management level followed by 36.2% top-level managers.

5.6.7.2 Results pertaining to the four constructs

According to Hellriegel *et al.* (2012:53) self-management as a managerial competency involves work-life balance, ethical conduct and integrity, self-awareness and -development and personal drive and resilience. The mean scores and standard deviations for each item in the four constructs are presented in Tables 5.3-5.6, in which 1 = poor performance and 5 = superior performance.

5.6.7.2.1 Managers' integrity and ethical conduct

The second objective was to investigate managers' integrity and ethical conduct as components of their self-management competency, and the findings are presented in Table 5.3.

Table 5.3: Respondents' integrity and ethical conduct

Respondents' integrity and ethical conduct	N	\bar{x}	SD
I have clear personal standards that serve as a foundation for maintaining a sense of integrity and ethical conduct.	343	4.27	0.70
I maintain personal ethical standards under pressure.	343	4.23	0.72
I am sincere and do not only tell people what they want to hear.	343	4.04	0.80
I recognise my own mistakes and admit to having made them.	343	4.17	0.80
I accept responsibility for my actions.	343	4.38	0.65
AVERAGE		4.22	0.74

It is evident from Table 5.3 that the responses to these scale items are positive and there is overall agreement between the perceived levels of integrity and ethical conduct ($\bar{x} = 4.22$; $SD = 0.74$). The mean scores for this construct varied between $\bar{x} = 4.04$ and $\bar{x} = 4.38$ on a five-point Likert scale. The highest mean score ($\bar{x} = 4.38$; $SD = 0.65$) was obtained for the statement "*I accept responsibility for my actions*". It has become vital for managers to employ individuals who hold the dynamics to be ethical, as well as to create values-driven ethical approaches (Valentine *et al.*, 2014:693). The item which was least agreed upon is the statement "*I am sincere and do not only tell people what they want to hear*" ($\bar{x} = 4.04$; $SD = 0.80$).

5.6.7.2.2 Managers' personal drive and resilience

The third objective was to evaluate managers' personal drive and resilience as components of their self-management competency. Table 5.4 illustrates the findings.

Table 5.4: Respondents' personal drive and resilience

Personal drive and resilience	N	\bar{x}	SD
I take on more responsibility that my position requires.	343	4.18	0.81
I am willing to innovate and take personal risks.	343	3.91	0.80
I am ambitious and motivated to achieve goals.	343	4.17	0.70
I work hard to get things done.	343	4.32	0.66
I show perseverance in the face of obstacles.	343	4.13	0.69
AVERAGE	343	4.14	0.73

It is evident from Table 5.4 that the responses to these scale items are indicative of a high personal drive and resilience ($\bar{x} = 4.14$; SD = 0.73). The highest mean score ($\bar{x} = 4.32$; SD = 0.66) was measured on the statement "*I work hard to get things done*". The item "*I am ambitious and motivated to achieve goals*" obtained a mean score of $\bar{x} = 4.17$ and SD = 0.70. Ross (2014:313) suggests that motivated managers are goal-oriented since goals offer focus, and accomplishing these goals is a measure of achievement and contributes to a positive attitude. The statement "*I am willing to innovate and take personal risks*" obtained the lowest score ($\bar{x} = 3.91$; SD = 0.80).

5.6.7.2.3 Managers, work-life balance

The fourth objective was to explore managers' work-life balance as a component of their self-management competency. Table 5.5 presents the findings.

Table 5.5: Life balance competencies

Work-life balance competencies	N	\bar{x}	SD
I strike a reasonable balance between work and other life activities.	343	3.56	1.04
I take good care of myself mentally / emotionally.	343	3.64	0.91
I use constructive outlets to vent frustration and reduce tension.	343	3.44	0.98
I make time to exercise.	343	3.02	1.21
I eat properly every day.	343	3.27	1.08
AVERAGE	343	3.42	1.04

Table 5.5 depicts that the responses to these scale items are fairly positive. The average mean score to work-life balance ($\bar{x} = 3.42$; $SD = 1.04$) is to some extent lower than the mean scores for the other three constructs. This is contradictory to the ideal situation proffered by Koubova and Buchko (2013:700) who suggest that if a manager can successfully have a personal life and is also capable of delivering good work, it leads to excellent results. The highest mean score ($\bar{x} = 3.64$; $SD = 0.91$) was measured for the statement “*I take good care of myself mentally / emotionally*”. The statement which was least agreed upon is the statement “*I make time to exercise*” with a mean score of $\bar{x} = 3.02$ and a standard deviation score of $SD = 1.21$.

5.6.7.2.4 Managers’ self-awareness and -development

The fifth objective was to appraise managers’ self-awareness and -development as components of their self-management competency. Table 5.6 presents the findings.

Table 5.6: Respondents’ self-awareness and -development

Respondents’ self-awareness and -development	n	\bar{x}	SD
I have clear personal goals.	343	3.95	0.83
I pursue my career / business goals in a balanced way.	343	3.70	0.84
I live my personal values.	343	4.05	0.77
I know my personal strengths and growth areas.	343	4.06	0.71
I accept responsibility for continuous self-development.	343	3.99	0.74
I develop plans and seek opportunities for personal long-term growth.	343	3.90	0.82
I analyse and learn from work and life experiences.	343	4.13	0.78
AVERAGE	343	3.97	0.78

Table 5.6 portrays a high level of self-awareness and -development ($\bar{x} = 3.97$; $SD = 0.78$). The mean scores varied between $\bar{x} = 3.70$ and $\bar{x} = 4.13$. The item “*I pursue my career / business goals in a balanced way*” obtained a score of $\bar{x} = 3.70$ and $SD = 0.84$. Sutton *et al.* (2015:612) explain that a positive link between self-awareness and positive life and work outcomes reveals that evolving the enhancement of being self-aware is likely to bring real benefits to individuals and businesses. The highest mean score ($\bar{x} = 4.13$; $SD = 0.78$) was measured for the statement “*I analyse and learn from work and life experiences*”, whereas

the statement which was least agreed upon ($\bar{x} = 3.70$; $SD = 0.84$) is the statement “*I pursue my career / business goals in a balanced way*”.

5.6.8 Hypothesis testing

The hypothesis is an assumption or theory guess used in research regarding some characteristics of the population under study (McDaniel & Gates, 2013:472). For the hypothesis testing, a correlation analysis was administered. A small p-value ≤ 0.05 indicates strong evidence against the null hypothesis; thus the null hypothesis can be rejected (McDaniel & Gates, 2013:481). When a large p-value > 0.05 is obtained, it represents poor suggestion against the null hypothesis; thus the null hypothesis cannot be rejected (Pallant, 2010:134). If $p < 0.05$, the hypothesis (H1 or H2) cannot be rejected. If $p > 0.05$, the hypothesis (H1 or H2) can be rejected.

The Pearson Product Moment correlation coefficients are stated in Tables 5.7 and 5.8.

Table 5.7: Pearson correlation coefficients – integrity and ethical conduct as well as personal drive and resilience

		Total integrity and ethical conduct	Total personal drive and resilience
Total integrity and ethical conduct	Pearson correlation	1	0.577**
	Sig. (2-tailed)		0.000
	N	342	342
Total personal drive and resilience	Pearson correlation	0.577**	1
	Sig. (2-tailed)	0.000	
	N	342	343

**Correlation is significant at the 0.01 level (2-tailed).

Concerning hypothesis 1, “a significant and positive relation exists between managers’ integrity and ethical conduct as well as between personal drive and resilience – all of which are components of their self-management competency”, the results are as follows:

Table 5.7 depicts a p-value of 0.000. It was therefore found to be smaller than 0.05, illustrating a statistically significant relation (Pallant, 2010:134). Hence a significant relation exists between managers’ integrity and ethical conduct as well as between personal drive and resilience – all of which are components of their self-management competency. The Pearson correlation coefficient ($r = 0.577$) is larger than 0.5 and smaller than 1.0, which means that a strong and positive relation exists between managers’ integrity and ethical

conduct as well as between their personal drive and resilience (Pallant, 2010:128). Hypothesis 1 can therefore be accepted.

Table 5.8: Pearson correlation coefficients – work-life balance as well as self-awareness and -development

		Total work-life balance	Total self-awareness and -development
Total work-life balance	Pearson correlation	1	0.545**
	Sig. (2-tailed)		0.000
	N	343	343
Total self-awareness and -development	Pearson correlation	0.545**	1
	Sig. (2-tailed)	0.000	
	N	343	343

**Correlation is significant at the 0.01 level (2-tailed).

Regarding hypothesis 2, namely that a significant and positive relation exists between managers' work-life balance on the one hand, and self-awareness and -development on the other – all of which are components of their self-management competency, the results obtained are as follows: The p-value (0.000) in table 5.8 is smaller than 0.05, representing a statistically significant relation (Pallant, 2010:134). Therefore a significant relation exists between managers' work-life balance on the one hand and self-awareness and -development on the other – all of which are components of their self-management competency. The Pearson correlation coefficient ($r = 0.545$) is larger than 0.5 and smaller than 1.0, which indicates a strong and positive relation between managers' work-life balance on the one hand and self-awareness and -development on the other – all of which are components of their self-management competency (Pallant, 2010:128). Hypothesis 2 can therefore be accepted.

5.7 DISCUSSION AND IMPLICATIONS

The knowledge and skills of managers, which are dependent on managerial knowledge and competencies, define business success (Verle *et al.*, 2014:924). Self-management as managerial competency is increasingly contributing to the personal success of a manager in the working environment, which leads to the enhancement of business success (Strydom *et al.*, 2015:55). Self-management is essential for managers to be able to set goals for themselves, to set up a plan with a view to accomplish their goals and to execute the specified plans (Mullins, 2013:480). Ross (2014:301) explains that certain conditions are

required from managers to be competent in managing themselves. Hellriegel *et al.* (2012:53) suggest that self-management as a managerial competency involves work-life balance, ethical conduct and integrity, self-awareness and -development and, personal drive and resilience. The purpose of this study was to investigate selected self-management competencies of top- and middle-level managers in manufacturing businesses in South Africa. Quality literature sources on the managerial competencies in manufacturing industries of South Africa are limited; therefore the literature background of this research article was grounded on international studies and other scholarly sources found on specific self-management competencies of managers.

The results of this study portrayed that there was a strong male dominance of managers and they mostly fell within the older age range. It was further clear that respondents expressed a positive approach the main competencies measured, namely integrity and ethical conduct, personal drive and resilience, work-life balance and self-awareness and -development. It can therefore be assumed that self-management is considered as an important element of adequate management style of particular manufacturing businesses in South Africa, which link to research completed by Daft *et al.* (2015:24-25) who conclude that managerial competencies outline an important aspect of business success.

The findings indicate that considering the four constructs, respondents rated integrity and ethical conduct as their highest self-management competency. Mullins (2013:683) suggests that a high level of ethics leads to efficient decision-making in the business context. Concerning even further enhancement of integrity and ethical conduct, it is recommended that managers develop ethical policies and an ethical culture and attempt to establish an ethical management philosophy. Respondents rated their personal drive and resilience second highest. Schermerhorn (2013:217) confirms that managerial success is dependent on resilience and Alam *et al.* (2015:388) support this by stating that a high level of personal drive encourages managers to successfully execute their tasks. The competency which was rated third best was self-awareness and -development. De Janasz *et al.* (2012:5) also deem this competency important and explain that self-awareness assists an individual in understanding the business in which he or she is operating. To enhance self-awareness and -development further, managers could endeavour to identify their concerns as well as to determine how these emotions may have an impact others. Managers can understand and advance competencies through repetition, criticism and research. Lastly, the respondents indicated that they find it challenging to maintain a work-life balance given that they scored work-life balance the lowest out of the four constructs. Kaiser *et al.* (2011:10) advocate that achieving work-life balance effectively results in a series of benefits for managers such as

decreased disagreement amongst work and non-work domains, as well as the individual's role being enhanced, be it related to work or not.

These results were supported by previous research on managerial competencies including self-management (De Janasz *et al.*, 2012:6; Hellriegel *et al.*, 2012:43; Lounsbury *et al.*, 2016:434; Ross, 2014:300) and the relations thereof to business success (Strydom *et al.*, 2015:55). Their results suggest that self-management enhances managers' work efficiency, which in turn influences the success of the business. Hellriegel *et al.* (2013:43) as well as Ketola (2012:471) also emphasise the importance of managerial self-management and the effect thereof on business performance.

The findings further indicate that integrity and ethical conduct, as well as personal drive and resilience were found to be statistically significantly related to their self-management competency. This implies that managers with a high level of integrity and ethical conduct will also have command over substantial drive and resilience. Managers' work-life balance as well as self-awareness and -development – all of which are components of their self-management competency – were also found to be statistically significantly related, implying that managers that are attuned to self-awareness and -development will be able to balance their work-life dimensions well.

5.8 CONCLUSION

Top- and middle-management level managers in this study revealed good to very good self-management competencies which include integrity and ethical conduct, personal drive and resilience, work-life balance and self-awareness and -development. Findings of the hypothesis testing showed positive relations between some of the competencies. The self-management competencies of managers in the manufacturing industry seem to be satisfactory but can always be further enhanced by making the managers aware of the important role of the four above-mentioned competencies for business success. The male dominance of managers is one of the concerns and the age of managers could also be looked into since most of the managers fell within the older age range.

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MAIN FINDING ARTICLE 2 (CHAPTER 5)

Main finding 2.1: The highest education level of the majority of the managers that participated in the research was a grade 12 qualification, followed by approximately a third who had completed a business diploma or degree. It is evident that the most managers were appointed as middle-level managers in the manufacturing business.

Main finding 2.2: Self-management as managerial competency is divided into four diverse competencies. Taking responsibility for your life at work and beyond involves well-developed integrity and ethical conduct, personal drive and resilience, balancing work-life issues, and self-awareness and development.

Main finding 2.3: The results revealed an above-average result for managers being competent in Self-management.

Main finding 2.4: The research article established that a statistically significant and positive relation exists between managers' integrity and ethical conduct, and between personal drive and resilience, as well as a significant positive relationship between work-life balance on the one hand and self-awareness and -development on the other – all of which are components of their self-management competency.

Main finding 2.5: Managers indicated that of all four competencies included in the self-management competency, they obtain a high level of integrity and ethical conduct in the business, indicating that they are very likely to take responsibility for their actions.

Main finding 2.6: Regarding managers' personal drive and resilience, they expressed a low result in willingness to innovate and take personal risks. Moreover, personal drive and resilience scored second highest of managers' self-management competencies.

Main finding 2.7: Managers have scored work-life balance as part of the self-management competency lowest, indicating that they struggle to eat properly during the day and also do not often make time for exercising.

Main finding 2.8: It should be noted that managers scored their self-awareness and development above average with a high perception of analysing and learning from work- and life experiences. Furthermore it is evident that managers scored balancing business/career goals lowest of the self-awareness and development competency.

CHAPTER 6: RECOMMENDATIONS AND CONCLUSIONS

6.1 INTRODUCTION

The purpose of this chapter is to draw a number of conclusions, and to make some recommendations from the empirical results and the preceding literature reviews.

The research was completed in accordance with the specific objectives set in Chapter 1. The primary objective of this study was to investigate managers' planning and administration as well as self-management competencies in manufacturing businesses. This was done by means of comprehensive research on management which included: an in-depth overview of managerial roles; management theories; management competencies; and business competencies; in the South African manufacturing industry and in particular the eight constructs regarding managers' planning and administration, as well as self-management competencies.

This chapter will outline the following aspects: a summary of the study, findings from the literature, findings on the empirical study, findings on the objective of the study, recommendations, recommendations for further study, limitations, contribution of the study as well as a conclusion to the study.

6.2 SUMMARY OF THE STUDY

Modern-time industries are continuously evolving due to influencing factors such as globalization, diversity of the workforce, increased competitiveness, improving technology, increased workload and the link between work and social life (Edwards & Jenkins, 2015:452). Developing countries can gain from the way it needs to modernise its industries and use it as direction (Campbell *et al.*, 2011:157). The changing circumstances require new skills in management to address the growing challenges. As a result of the current progressive improvement and changing environment, further consideration is given to the characteristics of managers and their competencies (Hellriegel *et al.*, 2012:45). Thus managers are expected to continually monitor the business objectives which are an important determinant of obtaining a sustainable competitive advantage. Manufacturing businesses have become more competitive, since customers are demanding higher quality products, better service and delivery within shorter time frames. The South-African manufacturing industry is currently facing significant competition from other countries. The ability of the manager to adapt to the changes determines the success or failure of any business, including the manufacturing industry. Managers in manufacturing businesses must link and coordinate the different resources and competencies which enable them to be

effective managers. Managerial competencies are therefore considered important because it has an extensive effect on personal performance and accordingly on business performance (Mullins, 2013:424).

Planning and administration has emerged as a managerial competency that is being increasingly used by managers to achieve business goals. It is therefore essential for managers to apply these competencies effectively.

Being able to take responsibility for one's own life at work and beyond involves a well-developed self-management competency (Hellriegel *et al.*, 2012:43). People generally blame their difficulties on certain situations when things do not go well. Effective self-managed managers overlook these crucial aspects of self-management competency, namely self-management competency, which involves integrity and ethical conduct, personal drive and resilience, work-life balance, and self-awareness and development. Consequently things then inevitably do go wrong to the detriment of the organisation.

Those managers that apply self-management effectively and adopt appropriate response strategies to challenges are more likely to succeed. It is therefore essential for managers to strengthen their self-management competencies and apply accordingly for improved work performance (Whetten & Cameron, 2011:122). Since managers in manufacturing businesses are responsible for performance of projects and consequently influence the overall success of the business, the demand for skilful managers grows; hence an increasing interest has arisen in managers with experience and significant managerial competencies.

Although research has been done on managerial competencies, little research could be traced on specifically managers' planning and administration, as well as self-management competencies. The primary objective of this research was to investigate these competencies. Through in-depth research on these competencies, the researcher obtained knowledge and current insights on management and moreover, the importance of managerial competencies for businesses to succeed.

The research furthermore enabled the researcher to make meaningful recommendations for managers to ensure effective management by applying their newly attained planning and administration, as well as self-management competencies. The purpose of presenting Chapter 6 is to draw conclusions regarding the importance of the identified managerial competencies expected from managers in manufacturing businesses. Moreover, this chapter

includes recommendations on the identified primary and secondary objectives of this study as stated in Chapter 1.

The **primary objective** of this research was to investigate managers' planning and administration, as well as self-management competencies in manufacturing businesses (par. 1.5.1). By investigating the primary objective the researcher was able to gain valuable knowledge of the perception managers have of their planning and administration as well as self-management competencies.

For the set primary objective, as stated above, to be achieved, a number of secondary objectives were set. In support of the primary objective, the following secondary objectives were formulated (par. 1.5.2):

- to determine a limited demographic profile of the respondents;
- to measure managers' information-gathering and problem-solving skills, as contributors to their planning and administration competency;
- to determine managers' planning and organising skills, as contributors to their planning and administration competency;
- to identify managers' time management skills, as contributors to their planning and administration competency;
- to measure managers' budgeting and financial management skills, as contributors to their planning and administration competency;
- to investigate the extent of managers' integrity and ethical conduct as components of their self-management competency;
- to evaluate managers' personal drive and resilience as components of their self-management competency;
- to explore managers' work-life balance as a component of their self-management competency; and
- to appraise managers' self-awareness and -development as components of their self-management competency.

The research methodology followed a descriptive exploratory research approach in the form of well-structured quantitative self-administered questionnaires (par. 3.5.2). Overall 343

questionnaires were examined for purposes of this research. The research aimed at obtaining information from top-level and middle-level managers in manufacturing businesses. Furthermore, the relations were determined of planning and administration, as well as self-management competencies with one another.

Data entry, tabulation and statistical analysis were done by the Statistical Consultation Services of North-West University (Potchefstroom Campus). The key conclusions and recommendations pertaining to each secondary objective are discussed in the following paragraphs.

6.3 FINDINGS FROM THE LITERATURE

For the purpose of understanding and answering specific objectives of the research, one literature chapter and one literature overview section were conducted for each research article. The literature background presented in Chapter 2 focused on the importance of management as a business function and particularly concentrated on the business environment, understanding management through an in-depth investigation of management theories and managerial roles. Furthermore, management and managerial competencies were studied and presented a comprehensive understanding of the importance of specific managerial competencies. In-depth investigation on self-management and planning and administration competencies followed and several important constructs were identified.

6.3.1 Main finding on management as a business function

Chapter 2 commenced by presenting a detailed description of the business environment, followed by in-depth research of the various management sub-categories.

6.3.2 Main findings on the business environment

With a view to obtain a better understanding of the importance of management it is essential to have ample knowledge at their command of the business environment and how businesses operate. Combe (2014:25-26) suggests that businesses in modern times operate in a fast-paced environment which holds various internal and external challenges for managers. It is essential for managers to understand the importance of how management is linked to business success. DuBrin (2012:5) states that the success of any business lies in satisfying the customers' needs. The importance therefore lies in focusing on three vital elements within the business, namely knowledge, competencies and attitudes (Jabr, 2010:264). Businesses are continuously facing challenges that demand business to grow

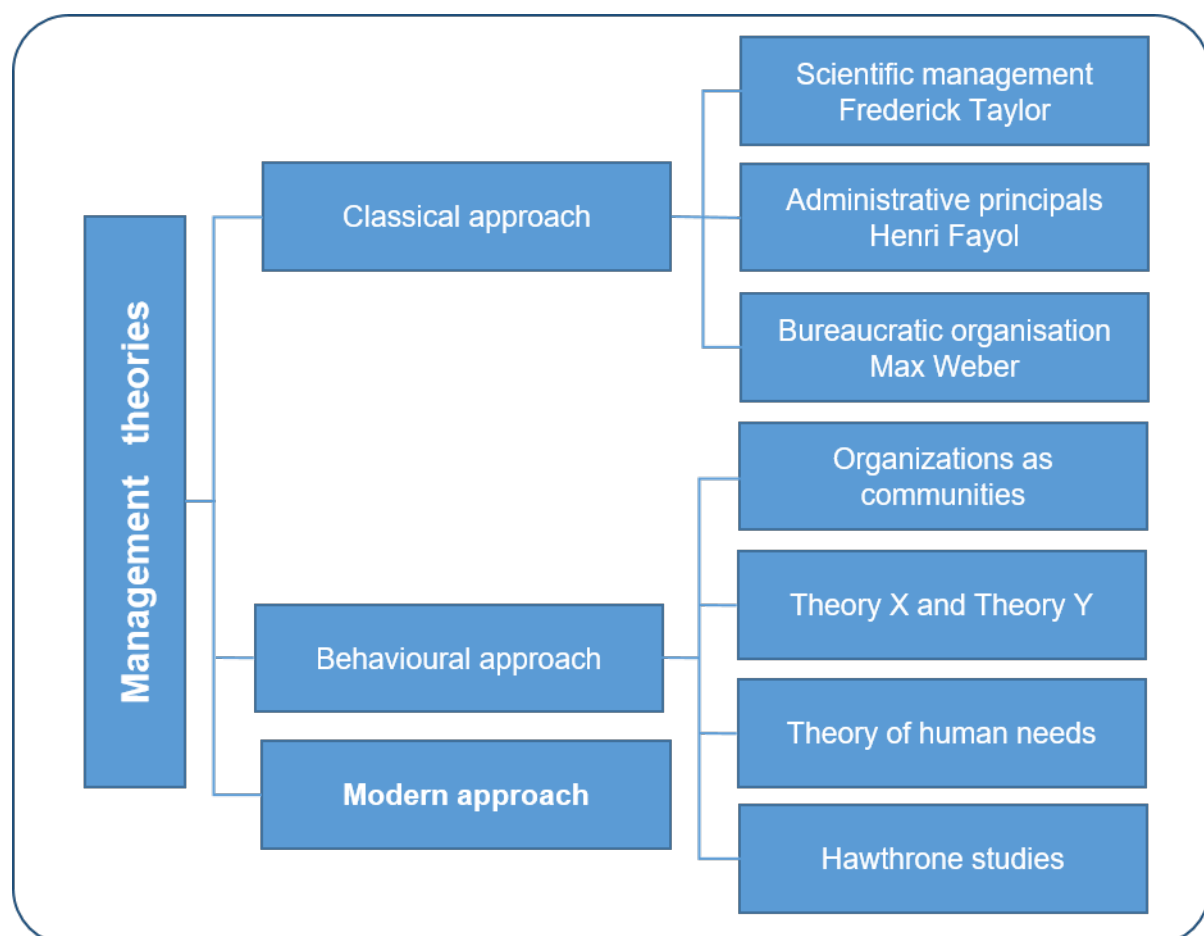
into constant innovators to keep up with the changing environment and the competition accompanying these changes.

6.3.3 Main findings on management theories

Gaining a deeper understanding of management theories provides context to the origin of effective management and management strategy. Management as we know it today has been built on management practises of the past.

Recognizing the influence of management theories and how it is implemented in modern workplaces motivates and bring the best out of managers. Managers typically use more than one theory in order to achieve productivity or business goals. Executing the management theories framework supports effective management and business productivity. The classical approach, behavioural approach and modern approach are well-known theory approaches in current management (Fig. 6.1).

Figure 6.1: Management theories



Source: Schermerhorn (2013:38).

The most general approach of management is the classical approach. It consists of three main factors: scientific management, administrative principals and bureaucratic organisation (par. 2.2.2). Scientific management focuses on the productivity of the individual worker, while administrative principals focus on management itself and bureaucratic organisation depends on rules and a specific hierarchy which entails a clear labour department and comprehensive procedures (par 2.2.2.1). The behavioural approach concentrates on dealing successfully with the human aspects of businesses. It entails the manner in which managers lead employees and communicate with them, and the reason why managers have to change their assumptions about people if they want to lead high-performing teams. Hence the behavioural approach emphasises the employees' social and economic needs as well as the influence of the business' social setting on quality and quantity of work produced (par.2.2.2.2). The modern approach as discussed in paragraph 2.2.2 provides insights into the modern management principles as management theories change over time. Hence management theories establish the foundation of management as known in modern times, given that modern management is still emerging. These three key management theory approaches were addressed in this research to demonstrate the formal accusation of management in the twentieth-century. It is essential for managers to consider combining well-executed management performances and theories together, based on the established business model.

6.3.4 Main findings on management

Management is referred to as the process of an individual in a higher hierarchy position in the business utilising business resources to successfully reach business objectives through planning, organising, leading and controlling (par. 2.2.3).

6.3.5 Main findings on managerial roles

Managerial roles comprise a general set of actions that is included in a manager's day-to-day tasks. Top-, middle-, and first-line managers engage in the four main management functions (i.e. planning, organising, leading, and controlling). In other words, the roles managers have in a business outline what they essentially do. Included in managerial roles are decision-making role (par 2.2.2.3.1), interpersonal role (par 2.2.2.3.2) and information role (par.2.2.2.3.3).

6.3.6 Main findings on managerial competencies

Managerial competencies, as indicated throughout this research, essentially contribute to business success. Managerial competencies are constantly developing. Competencies are a

vital element of the managerial role within business which enables managers to adapt to the changing environment (par. 2.2.2.3.4).

6.3.7 Main findings on planning and administration competency

Section B of the questionnaire (Appendix A) measures respondents' performance in terms of their planning and administration competency. Planning and administration as managerial competency involves determining the business activities that are essential to complete first, defining by which method they can be performed, allocating various resources which enable them to be done, and then monitoring progress to ensure that they are done. Planning and administration competency generally first comes to mind when one thinks about managers and managing. Administration is associated to sets of rules or procedures, which form part of the management process concerned with the design and implementation of systems and procedures to help meet stated objectives. Planning, however, describes the process of establishing how the business should operate in accordance with where it aims at going and what actions to follow in the interest of achieving it (par. 2.3).

Planning and administration competency included information-gathering and problem-solving (par. 2.3.1), planning and organising (par. 2.3.2), time management (par. 2.3.3), as well as budgeting and financial management skills (par. 2.3.4).

6.3.8 Main findings of self-management competencies

Self-management as a managerial competency was measured in Section B of the questionnaire (Appendix A). Taking responsibility for your life at work and beyond requires a well-established self-management competency. Regarding business and everyday management tasks, self-management also indicates an individual's attempt to deal with own tasks and decision-making by identifying and evaluating problems and creating specific goals and strategies to construct one's individual environment to face those problems. When managers are able to lead themselves effectively they behave in line with their stated values. Possession of the qualities self-management and self-awareness leads to managers being more likely to approach difficult tasks. Self-management as a managerial competency includes specific constructs, namely work-life balance (par. 2.4.1), personal drive and resilience (par. 2.4.2), integrity and ethical conduct (par. 2.4.3) as well as self-awareness and self-development (par. 2.4.4).

6.4 FINDINGS OF THE EMPIRICAL RESEARCH

A comprehensive research methodology is presented in Chapter 3. The empirical research results are presented in the two articles as found in Chapter 4 and Chapter 5 respectively. This research followed a quantitative, descriptive exploratory research design. The data collection was done by collecting primary data in order for valuable interpretations to be made. Furthermore, a secondary research method was utilised to gather the literature insights. Electronic databases and scholarly textbooks were utilised for successful collection of theories and definitions as required for insights into the identified elements of managerial competencies investigated in this research.

For data collection purposes a self-administered questionnaire was developed in accordance with the information gathered from literature and results obtained from the pilot testing. Furthermore, the self-administered questionnaire comprised multiple choice-, closed-ended and scale questions. Trained fieldworkers were requested to distribute the questionnaires according to the given sampling plan. Once the questionnaires were completed a computer-based statistical programme, SPSS, was used to analyse the collected data. For purposes of this research a convenience sampling method was adopted. The data were collected by identifying the sample size, specifying the required sampling methods and selecting the research instrument. The sample size was determined according to the minimum sample size required for research to be valid.

Top- and middle-level managers of manufacturing businesses in South Africa comprised the population of this research. Cronbach's Alpha value was used to calculate the reliability of the coefficients. Furthermore, to assess construct validity of the scales measuring self-management competencies of managers, a CFA was conducted to confirm the underlying structure of the data. For purposes of this research, descriptive statistical techniques were applied by using frequency and percentage, and distribution was determined for the demographic information used so as to construct the research population. In conclusion, the empirical research has addressed important questions regarding the manner in which this research was conducted. It furthermore clarifies the reason for choosing these methods.

The empirical findings of this research were divided into two main aspects. The two aspects include the planning and administration, as well as self-management competency of managers in manufacturing businesses. Included in the two main competencies are various factors that are essential to consider as part of the management competency. The main aim of data collection and data analysis, as mentioned above, was to address the primary objective of this research. Furthermore, the data collection and data analysis contributed to

the achievement of the identified secondary objectives. Recommendations follow in section 6.5 addressing various approaches to consider in the interest of understanding the importance of planning and administration as well as self-management competencies of managers.

6.5 FINDINGS ON THE OBJECTIVES OF THE STUDY AND RECOMMENDATIONS

To answer the primary objective, an in-depth investigation was conducted on related literature. This objective was successfully achieved through identifying various elements which are in essence main factors to take into account when considering the two main competencies studied in this research. This objective was answered through in-depth literature investigation and research instrument development for data obtaining purposes to gain insights into the perceptions of managers of manufacturing businesses regarding managerial competency. Once the literature had been studied, various secondary objectives were formulated to support the primary objective. The following section discusses the empirical findings on each of the secondary objectives of this study.

6.5.1 Secondary objective 1

To develop a demographic profile of respondents who participated in the research

The research methodology which is presented in Chapter 3 contains a detailed description of the method followed to obtain research data from the required target population. The identified demographic profile included- top and middle-level managers of manufacturing businesses in South Africa as indicated in Section A of the questionnaire (Appendix A). The outcome of the demographic profile of the study is presented in 4.7.1 and 5.6.7.1. A total of 343 respondents participated in the research. Further it was worth noting that a clear male dominance was captured in the demographic profile with 68.80% male respondents participating in the study. Only 30.30% of the respondents have completed matric, whereas 27.70% possess a business degree or diploma. Furthermore, the majority of the respondents (63.80%) were appointed at the middle-management level. Regarding age, most of the respondents (41.2%) were between 40 and 49 years old, followed by 28% that were 30-39 years of age, and lastly 18.9% that were 50-59 years of age.

6.5.2 Secondary objective 2

To investigate managers' information-gathering, analysis, and problem-solving skills as part of the planning and administration competency

Five items were identified concerning this objective (see section B of questionnaire). The items included the evaluation of managers' ability to: monitor information relevant to on-going projects and activities, obtain and use relevant information to identify symptoms and underlying problems, make timeous decisions, anticipate negative and positive consequences when taking risks, and know when expert knowledge is needed and ask for it in an attempt to solve problems. Timeous decision-making was among the elements managers indicated to be competent in. Managers indicated that they typically lack the ability to monitor information relevant to on-going projects and activities. For managers, it is important to note that information-gathering analysis and problem solving are essential since customers are a rich source of information, but this can easily take a full day to address (see par.2.3.1). Therefore managers should take note that effective planning and time management are essential aspects when considering information-gathering.

6.5.2.1 Recommendation 1

Problem-solving for managers is less time-consuming and more effective when they have the necessary expertise and experience regarding how to solve a problem effectively. Managers are required to delegate tasks effectively in order to enable delegates to join in on problem-solving. In doing so, managers gain knowledge concerning all the business processes and improve their managerial competencies (Griffen & Van Fleet 2014:58). Given that information-gathering is linked to time constraints it is worth noting that the cost of the information-gathering or research should be weighed against the quality of data to be obtained. Therefore managers should use relevant gathered information with a view to identify the consequences and underlying problems. Nieman and Bennett (2014:107) explain that successful decisions are usually made when well-structured processes to follow are in place, including situation analysis and planning. Managers should consider organising team meetings to encourage the information-gathering analysis and problem-solving process. By means of continuous weekly internal meetings with team members, managers are not only able to retrieve current activity status but this also enables managers to receive essential information that might lead to the prevention of upcoming difficulties within the business.

6.5.3 Secondary objective 3

To determine managers' planning and organising skills of projects as part of the planning and administration competency

For purposes of addressing this objective five items were identified essential to consider, namely having the ability to: develop plans and schedules to achieve specific goals,

prioritising tasks in order to stay focused on those that are most important, organising people around specific tasks to help them work together towards a common objective, delegating responsibility for tasks to co-workers, and anticipate possible problems and develop plans to deal with them (see section B of questionnaire). Item I *delegate responsibility for tasks to co-workers* scored the lowest amongst managers planning and organising skills (see par.4.7.2.2). Managers indicated that they are able to prioritise tasks so as to stay focused and are also capable of organising people around specific tasks to assist them in working together towards a common objective. This implies that managers prioritise tasks to attend to the more important ones, and that managers can organise their people to work towards common objectives.

Planning, according to Nieman and Bennett (2014:189), is essential for developing business goals and objectives, and defining how it can be achieved. Erasmus *et al.* (2013:92) suggest that planning is beneficial for a manager, given that it is planning that provides direction for managers to set goals and objectives for future growth.

6.5.3.1 Recommendation 2

Planning is often seen as the first step in the management process, since other management roles are subordinate to planning. Effective planning and organising reduces time wasted at the office allowing managers to concentrate on important tasks (see par.2.3.2).

It is recommended that managers follow the subsequent steps for effective planning, as prescribed by Schermerhorn (2013:113) and Combe (2014:72): define objectives, managers must know their goals and have a clear plan of where they want to be and how they intend to achieve this. Furthermore, it is important for managers to determine the current position. Managers should have an idea of where they presently stand in reaching their specific objectives and identify their strengths and weaknesses in the interest of achieving their objectives. By constructing a plan, managers should apply the best plan that is likely to succeed and assist them in achieving their objective; managers must describe what needs to be accomplished to successfully implement a plan that will work. Regarding plan implementation, action needs to be taken by managers by means of which they measure the progress they had made by implementing the plans, and if the progress is slow, the plans need to be revised. Moreover, it is suggested that managers identify targets to evaluate outcomes and results after which they must assess the outcome and take corrective action.

Hence it is essential for managers to prioritize tasks effectively which can be done by writing a to-do list of responsibilities and ranking each responsibility in order of importance.

6.5.4 Secondary objective 4

To identify managers' time management skills as part of the planning and administration competency

As discussed in Chapter 2 (see par 2.3.3), effective time management is undoubtedly a factor in day-to-day work activities which has an effect on task performance and can therefore contribute to any business success (Daft & Marcic, 2014:122). Moreover, effective time management supports capable control over tasks, increases effectiveness, improves work-life balance and enables them to proactively deal with challenges (Mullins, 2013:480).

With regard to time management the overall conclusion on managers' performance was good. The time management construct consisted of five items, namely: *I handle several issues and projects at the same time, but do not over commit; I monitor and keep to a schedule or negotiate changes in the schedule if needed; I work well under time pressure; I know when to permit interruptions and when to screen them out; I know when to renegotiate established deadlines in order to deliver satisfactory results.*

Managers indicated that they work well under time pressure, which shows that managers are able to become accustomed to time pressure and to adapting their workload accordingly. However, managers however expressed concerns about monitoring and keeping to a schedule and knowing when to renegotiate specific deadlines so as to deliver satisfactory results (see par.4.7.2.3).

6.5.4.1 Recommendation 3

Since managers are accountable for managing their time, especially given the multiple demands in the manufacturing business environment, it is essential to develop and adopt effective time management strategies. A recommended strategy according to Griffen and Van Fleet (2014:10, 57), is to keep an active to-do list and with that arrange responsibilities and activities according to the level of urgency and importance. Daft and Marcic (2014:126-127) note that an effective way of prioritizing tasks is by using letters of the alphabet to rank the tasks in order of importance, where "A" indicates *most important*, "B" represents *should do* and "C" *will be nice to get done*. Furthermore, effective delegation of tasks ensures better work-load distribution. Additionally, managers should focus on one activity at a time so that they can focus their attention on the one task for better-quality outcomes.

6.5.5 Secondary objective 5

To measure managers' budgeting and financial management skills as part of the planning and administration competency

Financial management, as defined by Bowdin *et al.* (2011:295), includes decision-making -making with regard to obtaining, planning, and assigning, monitoring and tracking money assets of a business. Zayed and Liu (2014:171) note that financial management is a vital management tool (see par. 2.3.4). Five items were identified to measure managers' competency levels regarding budgeting and financial management skills as part of the planning and administration competency. The five items included: *I understand budgets, cash flow and financial reports; I use budgets and financial reports to make decisions; I ensure that accurate and complete financial records are kept; I create budgetary guidelines for co-workers, and I work well within the given budgetary guidelines* (see par. 4.5.5). Managers indicated that they are competent in managing budgets and financial aspects. However, it is clear that managers do not see the value of providing their co-workers with budgetary guidelines. It is, however, worth noting that the budgeting and financial competency scored the lowest of the planning and administration competencies. Zayed and Liu (2014:171) highlight that financial management is an essential part of management; therefore middle- and top-level managers should take responsibility for monitoring their function's financial position in the interest of effective business financial planning and reporting.

6.5.5.1 Recommendation 4

For the success of any business effective financial management is essential. It is therefore recommended that managers continuously monitor the financial position of all functions within the business. Managers should focus on creating budgetary guidelines or information sessions for co-workers to enable the business to work towards one goal as a whole. In other words, Kihn (2011:217) suggests that it is essential for managers to establish budget targets and effectively communicate it to the employees so that all employees and co-workers in the management team know what is expected of them. It is also recommended that managers attend training courses to update and improve their financial skills.

6.5.6 Secondary objective 6

To investigate managers' integrity and ethical conduct skills as part of the self-management competency

Five elements were identified for the above-mentioned objective. Each of the five elements that follow describes a dimension of integrity and ethical conduct as part of managers' self-management competency. Firstly *"I have clear personal standards that serve as a foundation for maintaining a sense of integrity and ethical conduct"*, in which managers scored relatively low among the identified elements (see par. 5.6.6.2.1). *"I maintain personal ethical standards under pressure"* scored highest among the elements; thus indicating that managers are able to maintain ethical standards and make ethically correct decisions under demanding circumstances. Furthermore, the ability to be sincere and to not tell people only what they want to hear, to recognise their own mistakes and admit to having made them, and to accept responsibility for their actions forms part of the managers' integrity and ethical conduct skills as part of their self-management competency. Within business, integrity and ethical conduct are important for establishing relationships of trust, specifically between managers and stakeholders (Coulson-Thomas, 2013:32). Consequently it is essential for managers to be trustworthy and honest in order for them to engage and connect with employees, customers and stakeholders, which will lead to developing permanent relationships and to inspiring networking. When managers do not display integrity, it gives lead to the following consequences: harm-established long-term relationships with stakeholders, investors deciding to sell their stock, customers taking business to another organisation and employees possibly underperforming or resigning.

6.5.6.1 Recommendation 5

Spinelli and Adams (2012:145) state that managerial integrity is linked to being consistent, in other words it represents what employees believe that managers in essence do what they expect of others. The main focus for managers of manufacturing businesses should be to develop their integrity and ethical thinking by developing a strong sense of who they are and what they stand for (Svensson & Wood, 2011:21-22). Furthermore, it is recommended for managers to establish a good balance between internal personal values and external business values. Managers must also attend workshops on how to implement an ethical culture in the business.

6.5.7 Secondary objective 7

To measure managers' personal drive and resilience skills as part of the self-management competency

This competency is specifically essential when a manager does something that no one else has done, and is likely to face setbacks and failures (Hellriegel *et al.*, 2012:43). When a manager harbours a high level of personal drive it is believed that the individual will see the negative feedback as motivation and reverse it into a more positive manner so as to encourage better job performance (Alam *et al.*, 2015:388). Managers' perceived level of integrity and ethical conduct was good (see par. 5.6.7.2.2). The five items measured were: *I have clear personal standards that serve as a foundation for maintaining a sense of integrity and ethical conduct, I maintain personal ethical standards under pressure, I am sincere and do not only tell people what they want to hear, I recognise my own mistakes and admit to having made them, I accept responsibility for my actions.*

Managers expressed the highest response to the item "*I accept responsibility for my actions*". The item which was least agreed upon is the statement "*I am sincere and do not only tell people what they want to hear*".

6.5.7.1 Recommendation 6

In order for managers to grow and support it is essential for them to present a high level of personal drive and resilience. As a result of this adjustment, key recommended areas to grow and look into for building or maintaining personal resilience, as described by Warner and April (2012:53), include grounding and connecting, understanding and accepting one's self, being in control of and choosing one's thoughts, controlling and choosing one's feelings and attitude, and giving and accepting support. It is worth noting that the major focus should be on personal drive and resilience when managers set out to do something or take on activities which they have never before ventured to take on.

6.5.8 Secondary objective 8

To measure managers' work-life balance as part of the self-management competency

Work-and-life balance represents an individual's understanding of whether his/her work and non-work actions are well-suited and support growth with his/her current life concerns and priorities (Koubova & Buchko, 2013:700). Five items were identified as important regarding measuring managers' self-management competency: *I strike a reasonable balance between work and other life activities; I take good care of myself mentally/emotionally; I use*

constructive outlets to vent frustration and reduce tension; I make time to exercise; and I eat properly every day (par. 5.6.7.2.3). Managers scored work-life balance as part of the self-management competency lowest, indicating that they struggle to eat properly during the day and also do not often make time for exercising. However, managers indicated that they take good care of themselves mentally or emotionally.

6.5.8.1 Recommendation 7

Managers must link this aspect to time management, because this will assist them in dividing their time effectively between work and home. Managers must attend time management courses to help them plan their time effective and efficiently. It is also important to plan activities according to importance in the work situation. If possible, they should delegate the less important task to save time. Managers must also make sure that they spend their family time effectively and concentrate on not involving any work during this personal time.

6.5.9 Secondary objective 9

To measure managers' self-awareness and development skills as part of the self-management competency

Development of self-awareness is also acknowledged as being at the core of many human resource development initiatives. To know and understand oneself primarily is a powerful managerial competency which enables individuals to know and understand others (Frost, 2014:126). For measuring self-awareness and development as a self-management competency, six items were identified, namely: *I have clear personal goals; I pursue my career / business goals in a balanced manner; I live my personal values; I know my personal strengths and growth areas; I accept responsibility for continuous self-development; I develop plans and seek opportunities for personal long-term growth; and I analyse and learn from work and life experiences.*

It is worth noting that managers scored their self-awareness and development above average with a high percentage analysing and learning from work and life experiences. Furthermore it is evident that managers scored balancing business/career goals lowest of the self-awareness and development competency (par. 5.6.7.2.4).

6.5.9.1 Recommendation 8

Self-awareness and development comprise an essential competency to possess in the dynamic work environment. The ability to learn and relearn consciously is highly recommended for effective management (Hellriegel *et al.*, 2012:45). Managers must make

sure that they stay updated with the latest management tendencies. They can attend workshops on improving managerial skills. It is recommended that managers assess themselves and identify areas of improvement and develop those areas by means of courses, workshops and informal discussions.

Table 6.1 below represents an overview of the secondary objectives achieved for the research.

Table 6.1: Overview of secondary objectives achieved

Objective	In chapter(s)	Main findings	Section in questionnaire
Develop a demographic profile of respondents who participated in the research	3,4 & 5	1.1, 2.1	A
Investigate managers' information-gathering, analysis and problem-solving skills as part of the planning and administration competency	4	1.5	B
Determine managers' planning and organising skills regarding projects as part of the planning and administration competency	4	1.6	B
Identify managers' time-management skills as part of the planning and administration competency	4	1.7	B
Measure managers' budgeting and financial management skills as part of the planning and administration competency.	4	1.8	B
Investigate managers' integrity and ethical conduct skills as part of the self-management competency	5	2.5	B
Measure managers' personal drive and resilience skills as part of the self-management competency	5	2.6	B
Measure managers' work-life balance as part of the self-management competency	5	2.7	B
Measure managers' self-awareness and development skills as part of the self-management competency.	5	2.8	B

6.6 RECOMMENDATIONS FOR FURTHER STUDY

This research can be duplicated to managers in a retail and services business, not merely manufacturing businesses, and can be tested to establish whether planning and administration competencies of managers have an influence on the different businesses. The study further contributes to existing research where managers realize the importance of developing managerial competencies to enable them to adapt to the changing environment. A managerial competency framework can be developed to serve as a guideline to enhance managerial effectiveness to determine whether managers possess the necessary competencies in managerial skills and more specifically in planning and administration. The research can be broadened to be duplicated in the other provinces that did not form part of the sampling frame. This research can therefore be applied in any manufacturing business in South-Africa including BEE Businesses. Due to the lack of research on planning and organisation competencies of managers in manufacturing businesses, more studies should be undertaken on this topic to expand their knowledge.

6.7 LIMITATIONS

Several limitations were detected regarding this research. Firstly, limited research has been done on planning and administration, and self-management competencies of managers in manufacturing businesses in South Africa. This led to using international literature based on competencies of managers in manufacturing businesses. The international literature was applicable to other countries and would not necessarily be applicable and beneficial to the South African manufacturing industry. Since the questionnaires were completed by the respondents who are bound to tight schedules and did not always have time to complete the questionnaires in a relaxed environment, the time limit restricted the managers to thoroughly read through the questionnaire and answer it properly. Financial limitations were experienced in that fieldworkers had to pay for resources such as fuel, phone calls and food. For the fieldworkers to arrange meetings with managers, they contacted the managers and arranged appointments to meet with them and had to drive to the different businesses so that the managers could complete the questionnaires.

6.8 CONTRIBUTION OF THE STUDY

Managerial competencies, in particular the planning and administration, and self-management competencies identified in this research are transferable from one business to the next. This research is applicable to all types of managers whether working for a global organisation, managing a smaller team in the local market or being a managing director.

Having command of extensive knowledge of the identified competencies and associated key elements can enhance personal and business performance. Regardless of when, where and how managers develop these competencies, they should be capable of applying the competencies in future managerial positions.

6.9 CONCLUSION

This chapter provided a summary of the complete research by highlighting the previously discussed chapters (Chapters 1 to 5). Moreover, main findings were presented and the focus on secondary objectives was addressed and recommendations suggested for each secondary objective of the research. The recommendations for each of the research elements provide additional direction for managers in manufacturing businesses to consider. Subsequently, Table 6.1 presented the links between research objectives, hypotheses research questions in the questionnaire, main findings, conclusions and recommendations. Furthermore, the recommendations for future studies and the limitations of the study were presented. To conclude, this chapter proposed research suggestions for future studies.

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APPENDIX A: QUESTIONNAIRE**QUESTIONNAIRE****INVESTIGATING SOME MANAGERIAL COMPETENCIES
OF MANAGERS**

This questionnaire forms part of a research project by BCom Hons students and lecturers from the **School of Management Sciences, North-West University, Potchefstroom Campus**. The lecturers are: Prof Japie Kroon (Tel: 018 299 1423/1, e-mail: Japie.Kroon@nwu.ac.za), Prof Louw van der Walt, Dr Alfred Henrico, Dr Louis van Staden, Dr Aloe Meintjes, Mrs Zelma Botes, Mr Zach Moolman and Junior Longweni.

To be a good manager in an increasingly complex and diverse business world, managerial skills and specifically self-management and planning and administration have important competencies.

This questionnaire is divided into two sections. **Section A** contains demographic questions, while **Section B** measures the perceptions of managers regarding their own self-management and planning and administration competencies.

It will take less than 10 minutes to complete this questionnaire.

All information is confidential. Only overall results from all responses will be compiled and used. The aggregate data will only be used in research and articles to report on the competencies of managers.

We would like to thank you in advance for taking the time to share this information with us.

Please circle the applicable answer or mark with an X.

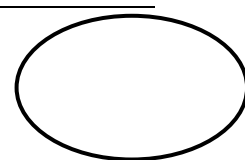
Mark only one alternative.

For statistical purposes, it is important to complete ALL the questions.

Students undertake to provide feedback on the overall results from all responses in all the businesses. If your business would like to receive a condensed report, please provide one e-mail address per business.

E-MAIL ADDRESS: _____

SECTION A: MY DEMOGRAPHIC VARIABLES



1.	Gender	Male	1	
		Female	2	
2.	Age in years			
3.	Race (for research purposes only)	Black	1	
		Coloured	2	
		Asian	3	
		White	4	
		Other	5	
4.	The number of permanent employees in business	5-50	1	
		51-200	2	
		200+	3	
5.	Your highest qualification	Grade 12	1	
		Business diploma/degree	2	
		Non-business diploma/degree	3	
		Business post-graduate degree	4	
		Non-business post-graduate degree	5	
6.	Your position / responsibility in business / business function	Owner/manager	1	
		Administration	2	
		Financial	3	
		Human resources	4	
		Marketing/sales	5	
		Operations/production	6	
		Other (please specify)	7	
7.	Management level	Top management	1	
		Middle management	2	

SECTION B: YOUR SELF-MANAGEMENT AND PLANNING AND ADMINISTRATION COMPETENCY

Please indicate to what extent you rate your performance as manager based on the following statements:

SCALE:

1 = Poor, 2 = Fair, 3 = Good, 4 = Very good, 5 = Superior

	STATEMENT	SCALE				
		1	2	3	4	5
1	I monitor information that is relevant to ongoing projects and activities.	1	2	3	4	5
2	I obtain and use relevant information to identify symptoms and underlying problems.	1	2	3	4	5
3	I make decisions on time.	1	2	3	4	5
4	I am able to anticipate negative and positive consequences when taking risks.	1	2	3	4	5
5	I know when expert knowledge is needed and ask for it to solve problems.	1	2	3	4	5
6	I develop plans and schedules to achieve specific goals.	1	2	3	4	5
7	I prioritise tasks in order to stay focused on those that are most important.	1	2	3	4	5
8	I can organise people around specific tasks to help them work together toward a common objective.	1	2	3	4	5
9	I delegate responsibility for tasks to co-workers.	1	2	3	4	5
10	I anticipate possible problems and develop plans in order to deal with them.	1	2	3	4	5
11	I handle several issues and projects at the same time, but do not over commit.	1	2	3	4	5
12	I monitor and keep to a schedule or negotiate changes in the schedule if needed.	1	2	3	4	5
13	I work well under time pressure.	1	2	3	4	5
14	I know when to permit interruptions and when to screen them out.	1	2	3	4	5
15	I know when to renegotiate established deadlines in order to deliver satisfactory results.	1	2	3	4	5
16	I understand budgets, cash flow and financial reports.	1	2	3	4	5
17	I use budgets and financial reports to make decisions.	1	2	3	4	5
18	I ensure that accurate and complete financial records are kept.	1	2	3	4	5
19	I create budgetary guidelines for co-workers.	1	2	3	4	5
20	I work well within the budgetary guidelines given.	1	2	3	4	5
21	I have clear personal standards that serve as a foundation to maintain a sense of integrity and ethical conduct.	1	2	3	4	5

22	I maintain personal ethical standards under pressure.	1	2	3	4	5
23	I am sincere and do not only tell people what they want to hear.	1	2	3	4	5
24	I recognise my own mistakes and admit to having made them.	1	2	3	4	5
25	I accept responsibility for my actions.	1	2	3	4	5
26	I take on more responsibility than my position requires.	1	2	3	4	5
27	I am willing to be innovative and take personal risks.	1	2	3	4	5
28	I am ambitious and motivated to achieve goals.	1	2	3	4	5
29	I work hard to get things done.	1	2	3	4	5
30	I show perseverance in the face of obstacles.	1	2	3	4	5
31	I strike a reasonable balance between work and other life activities.	1	2	3	4	5
32	I take good care of myself mentally/emotionally.	1	2	3	4	5
33	I use constructive outlets to vent frustration and reduce tension.	1	2	3	4	5
34	I make time to exercise.	1	2	3	4	5
35	I eat properly every day.	1	2	3	4	5
36	I know how to enjoy leisure time.	1	2	3	4	5
37	I have clear personal goals.	1	2	3	4	5
38	I pursue my career/business goals in a balanced way.	1	2	3	4	5
39	I live my personal values.	1	2	3	4	5
40	I know my personal strengths and growth areas.	1	2	3	4	5
41	I accept responsibility for continuous self-development.	1	2	3	4	5
42	I develop plans and seek opportunities for personal long-term growth.	1	2	3	4	5
43	I analyse and learn from work and life experiences.	1	2	3	4	5

Please rate your overall performance or effectiveness on a 10-point scale, where 1 = poor and 10 = extraordinary.

44	Overall performance	1	2	3	4	5	6	7	8	9	10
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All information is confidential.

We appreciate your time and participation very much.

APPENDIX B: LETTER FROM STATISTICAL CONSULTATION SERVICES



Private Bag X6001, Potchefstroom
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Tel: 018 299-1111/2222
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Statistical Consultation Services
Tel: +27 18 285 2447
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Email: monique.vandeventer@nwu.ac.za

10 November 2017

Re: Dissertation, Ms Z Steyn, student number 23555378

We hereby confirm that the Statistical Consultation Services of the North-West University analysed the data involved in the study of the above-mentioned student and assisted with the interpretation of the results. However, any opinion, findings or recommendations contained in this document are those of the author, and the Statistical Consultation Services of the NWU (Potchefstroom Campus) do not accept responsibility for the statistical correctness of the data reported.

Kind regards

A handwritten signature in black ink, appearing to read 'SM Ellis'.

Prof SM Ellis (Pr. Sci. Nat)

Associate Professor: Statistical Consultation Services

APPENDIX C: LETTER FROM THE LANGUAGE EDITOR

G

6 November 2017

I, Ms Cecilia van der Walt, hereby confirm that I took care of the editing of the dissertation of Ms. Zandri Steyn titled *Planning and administration, and self-management competencies of managers in manufacturing businesses.*



MS CECILIA VAN DER WALT

BA (*Cum Laude*)

THED (*Cum Laude*).

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APPENDIX D: LETTER OF ETHICAL CLEARANCE



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9 May 2016

Ms Z Steyn
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1450

Dear Ms Z Steyn

ETHICAL CLEARANCE

This letter serves to confirm that the research project of Zandri Steyn, with the title **"The planning and administration, and self-management competencies of managers in manufacturing businesses"** has undergone ethical review. The proposal was presented at a Faculty Research Meeting and accepted. The Faculty Research Meeting assigned the project number **EMSONB16/03/08-01/01**. This acceptance deems the proposed research as being of minimal risk, granted that all requirements of anonymity, confidentiality and informed consent are met. This letter should form part of your dissertation manuscript submitted for examination purposes.

Yours sincerely

Louise Jansen
van Rensburg

Louise Jansen van Rensburg
Senior Administrative Assistant

Original details: (11930497) C:\Users\11930497\Documents\2. BESTUUR\2.2.20_FEMS-WorkWell_Voorleggingvergaderings\2016\Ondermeringsbeoordeling\2016-03-08\Steyn, Z
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9 May 2016

APPENDIX E: LETTER FROM THE TECHNICAL EDITOR

PO Box 2272

Potchefstroom

2521

RE: DISSERTATION: Me Z Steyn – 23555378

This letter serves to confirm that the technical editing of the dissertation of Ms Zandri Steyn titled

"Planning and administration, and self-management competencies of managers in manufacturing business"

was done with regard to the

- index,
- tables,
- figures,
- text,
- chapter headings and
- general presentation.

EP Beukes / E Oosthuizen

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November 18, 2017

