

Sustainable profitability and growth of agribusinesses in South Africa

AJ Radley
24077585

Thesis submitted for the degree *Philosophiae Doctor* in
Agriculture, Economics at the Potchefstroom Campus of the
North-West University

Promoter: Prof Dr PC Cloete
Co-promoter: Prof Dr EPJ Kleynhans

May 2017

ACKNOWLEDGMENTS

A number of people and institutions made important contributions through advice, encouragement and support for this study. It is therefore appropriate to thank them here.

First of all, I wish to thank my promoter, Professor Flippie Cloete. He guided me through the study, made valuable comments and made important inputs.

I would also like to thank my co-promoter, Professor Ewert Kleynhans, for his valuable input in this thesis. Many of the personnel of the School for Economics made important contributions. They also encouraged and motivated me to complete this study. I also record my thanks to Professor Faans Steyn for his statistical expertise.

A special word of appreciation goes to Doctor Herman van Schalkwyk, former Rector of the Potchefstroom campus of the North-West University. His valuable experience in advising on the compiling the research proposal, insight in agriculture, time and encouragement made a crucial contribution.

Danie Marais, former managing director of NWK and co-worker in this study, made it possible for me to live my dream, and shared his experience in the corporate environment.

The management of NWK for supporting me in this study, personally and financially.

I would like to thank Tienie Manders, the business intelligence specialist of NWK, who saved me time in utilising specific software and Nita Goussaard, Elsabe de Villiers and Judy Nel for their friendly and competent secretarial services. Danie Smith made a valuable contribution in the utilisation of the Word-software at the end as well as other NWK colleagues for their support during the study period.

Managing Directors and Chief Executive Officers of participating agribusinesses for their open and honest contributions about strategy in the semi-structured interviews, which increased the value of this study.

Agbiz, for financial support through awarding me the Centenary Bursary.

A special word of thanks goes to Conling Language & Translation Consultants for the professional attention to the technical and language finishing off of this thesis.

My family and friends, for their constant interest in the progress I made during various difficult times and challenges.

To my wife, Elrina, who supported me to reach this milestone: I wish to thank you for your love and understanding and for this period where certain sacrifices we had to make. To my two beautiful daughters, Sonja and Tersia, for their encouragement and sacrifices they had to make.

My Creator, for the strength and mercy to complete this study.

Andries Radley

Lichtenburg

May 2017

SUSTAINABLE PROFITABILITY AND GROWTH OF AGRIBUSINESSES IN SOUTH AFRICA

SUMMARY

Sustainable agricultural businesses (agribusinesses) in South Africa are essential in the food value chain to ensure food security of the nation. This thesis studies the factors that determine profitability and economic growth in the summer and winter grain segments of the agricultural sector as profits have to be earned to ensure future growth and sustainability.

The research findings suggested that the most important determinants of profits in agribusinesses are the renewal of confidence, economic growth and the sound evaluation of investment opportunities and for growth to focus on the application of professional leadership and good knowledge of customers' requirements. The most superior strategies to ensure profits and growth are a customer centric strategy, a people strategy and a strong balance sheet to ensure growth strategy. Agribusinesses which set these as priority achieved on average growth of 25.9 % and profits growing at an above average rate over the research period.

The empirical analysis of this thesis studied data from financial statements and reports and a survey conducted among the most important role players, managing directors and chief executive officers, in agricultural business. The latter provide information and contributed to a better understanding of agribusinesses and the strategies they employ.

Various statistical methods were utilised by means of advanced SAS computer software to analyse the profitability and growth of agribusinesses. These included multiple regression models for different data sets as basis, followed by panel data procedures. Econometric analyses, trend analyses of profitability and growth indicators, descriptive analyses, and semi-structured interviews explained the profitability and growth drivers, and identified the most successful strategies utilised.

Net profit after tax (NPAT) was explained statistically significantly between 1980 and 2013 by operational profit before interest and net current assets and during 2003 to 2013 by earnings before interest, tax, depreciation and amortisation (EBITDA) and retained earnings. Although the effect of current assets and property, and plant and equipment were not found to be statistically significant in generating net after tax profits (NPAT) they remain important to manage carefully to ensure sustainable profitability. External variables, such as rain and exchange rates, are important for the profitability and growth, but could not be statistical

proven as determinants of NPAT. This highlights the importance of agribusiness management to follow the correct strategies.

The main focus of agribusinesses is on customer related strategies that offer increasing value to selected customers. Important strategies that form an integral part of the strategic focus of the agribusiness include a people strategy, a strong balance sheet supporting a growth strategy, a strategy of constant re-investment for growth, an alignment and incentives for growth strategy, a risk management strategy, and fitness strategies. The first mover strategy and forward and backward integration were less important strategies utilised to a lesser extent. The successfulness or failure of the strategies realising profitability is illustrated by the achievements of NPAT profits for the period 2003 to 2013 and compounded average growth rate (CAGR) over the period.

Although different in terms of the importance rating of various strategies, the strategic approach of individual agribusinesses did not differ significantly, but the focus on the specific strategies of the various businesses differed significantly. The one agribusiness that followed a different strategic package achieved the worst financial performance.

This study shows that sustainable profitability and growth is possible in the grain segment of the South African agricultural sector. Although difficult and complex, sustainable success is possible for agribusinesses. The findings of this thesis will be of particular value to managers of agribusinesses, strategists, policy makers and also management in other fields of business, assisting businesses to develop from average to exceptionally great businesses.

-oOo-

KEY CONCEPTS: Agribusiness, Agricultural Economics, Management, Cooperative, Drivers, Grain segment, Growth, Profitability, Strategy, Sustainability

VOLHOUBARE WINSGEWENDHEID EN GROEI VAN LANDBOUBESIGHEDDE IN SUID-AFRIKA

OPSOMMING

Volhoubare landboubesighede in Suid-Afrika is noodsaaklik in die voedselketting om voedselsekerheid vir die bevolking van die land te verseker. Hierdie proefskrif bestudeer die faktore wat winsgewendheid en ekonomiese groei in die somer- en wintergraansegmente van die landbousektor verseker, aangesien winsgewendheid toekomstige groei verseker.

Hierdie navorsing het bepaal dat die belangrikste determinante van wins in landboubesighede die hernuwing van vertroue, ekonomiese groei en die kritiese evaluasie van investering-geleenthede is. Groei word bepaal deur 'n spesifieke fokus daarop te plaas, die toepassing van professionele bestuur en goeie kennis van klante se behoeftes. Die belangrikste strategieë om winsgewendheid en groei te verseker, is 'n kliëntgesentreerde strategie, 'n mens (werknemer) strategie en 'n sterk balansstaat om die groeistrategie te ondersteun. Landboubesighede wat dit as prioriteite gestel het, het 'n gemiddelde groei van 25.9 % met 'n bo-gemiddelde groei in winste oor die navorsingsperiode behaal.

In die empiriese ontledings van die proefskrif, is data van die finansiële state en verslae bestudeer, en daar is ook 'n opname en gestruktureerde onderhoude onder die prominente rolspelers, besturende direkteure en hoofuitvoerende beamptes van landboubesighede geloods. Hierdie rolspelers het inligting verskaf en bygedra tot 'n beter begrip van landboubesighede en die strategieë wat hulle implementeer.

Verskeie statistiese metodes is gebruik deur die gebruikmaking van gevorderde SAS-rekenaar sagteware om die winsgewendheid en groei van landboubesighede te ontleed. Dit het meervoudige regressie modelle vir verskillende datastelle as basis ingesluit, gevolg deur paneeldataprosedures. Ekonometriese ontledings, tendensontledings van winsgewendheid en groeimaatstawwe, beskrywende ontledings en half-gestruktureerde onderhoude, verduidelik die winsgewendheid en groeidrywers en identifiseer ook die mees suksesvolle strategieë wat gebruik is.

Netto wins ná belasting (NPAT) is tussen 1980 en 2013 verklaar deur bedryfswins voor rente en netto bedryfsbates en gedurende 2003 tot 2013 deur verdienste voor rente, belasting, depresiasie en amortisasie (EBITDA), asook teruggehoue verdienste. Alhoewel die effek van bedryfsbates en grond, geboue en toerusting belangrik bly en goed bestuur moet word om volhoubare winsgewendheid te verseker, kon dit nie as statisties betekenisvol bewys word in die generering van netto wins ná belasting nie. Eksterne faktore soos reën en wisselkoerse is

belangrik vir winsgewendheid en groei, maar kon ook nie statisties betekenisvol bewys word om netto wins ná belasting te bepaal nie. Dit beklemtoon die belangrikheid van die effektiewe bestuur van landboubesighede deur die regte strategieë na te volg.

Die hooffokus van landboubesighede is op klientverwante strategieë wat waarde vir geselekteerde kliënte verhoog. Belangrike strategieë wat 'n integrale deel uitmaak van die strategiese fokus van landboubesighede, sluit in: 'n mensgerigte strategie, 'n sterk balansstaat om 'n groeistrategie te ondersteun, 'n strategie van herinvestering vir groei, 'n belyning en aansporing vir groeistrategie, 'n risiko-bestuur strategie, 'n effektiewe distribusiestrategie en 'n fiksheidstrategie. Die eerste bewegestrategie en vertikale en terugwaartse strategie is tot 'n mindere mate gebruik. Die suksesvolheid of mislukking van die strategieë word aangetoon deur die werklike netto wins ná belasting wat behaal is vir die tydperk 2003 tot 2013, en die saamgestelde gemiddelde groeikoers oor die tydperk.

Alhoewel verskille aangetref is ten opsigte van die beoordeling van die belangrikheid van die verskeie strategieë, het die strategiese benadering van individuele landboubesighede nie betekenisvol verskil nie. Wat wel betekenisvol verskil, is die spesifieke fokus wat die onderskeie agribesighede op verskillende strategieë plaas. Die één landboubesigheid wat 'n alternatiewe strategiese pakket gevolg het, het die swakste finansiële resultate behaal.

Die navorsing van hierdie studie het aangetoon dat volhoubare winsgewendheid en groei wel moontlik is in die graansegment van die Suid-Afrikaanse landbousektor. Alhoewel dit moeilik en kompleks is, is volhoubare sukses moontlik vir landboubesighede. Die bevindinge van hierdie studie sal veral van groot waarde wees vir bestuurders van landboubesighede, strateë, beleidmakers en ook vir bestuurslede van ander tipe besighede ten einde hul besighede van gemiddelde besighede te ontwikkel tot uitsonderlik goeie besighede.

-oOo-

TREFWOORDE: Drywers, Graan, Groei, Koöperasies, Landboubesighede, Landbou-Ekonomie, Ondernemingsbestuur, Strategie, Volhoubaarheid, Winsgewendheid

TABLE OF CONTENTS

CONTENTS	PAGE
ACKNOWLEDGMENTS	ii
<i>Summary</i>	iv
<i>Opsomming</i>	vi
<i>Table of contents</i>	viii
<i>List of figures</i>	xiv
<i>List of tables</i>	xvi
<i>List of abbreviations</i>	xvii
<i>Appendixes</i>	xix
CHAPTER 1	
INTRODUCTION	
1. Introduction	1
2. Background	1
3. Problem statement	7
4. Research objectives	8
5. Research methodology	9
5.1 Analysis of data from financial statements and reports	9
5.2 The Agricultural Profitability and Growth Survey	9
6. Data utilisation	10
7. Outline of the study	12
8. Summary	13
CHAPTER 2	
LITERATURE REVIEW OF THEORIES AND MODELS ON ECONOMIC PROFITABILITY, GROWTH AND COMPETITIVENESS	
1. Introduction	14
2. Sustainability and business sustainability	15
3. Agribusiness	16
4. Sustainable profitability	17
5. Determinants of profitability	17
5.1 Internal determinants of profit	18
5.1.1 Investment	18
5.1.2 Human capital	18
5.1.3 Finance	19
5.1.4 Management	19
5.1.5 Strategy	20

5.1.6	Business model.....	20
5.1.7	Market share	21
5.2	External profitability drivers	21
5.2.1	Exchange rate.....	22
5.2.2	Oil price.....	22
5.2.3	Inflation	23
5.2.4	Interest rate.....	24
5.2.5	Climatic conditions: Rainfall.....	25
6.	Sustainable economic growth.....	25
6.1	Reasons why growth is essential for agricultural businesses.....	27
6.2	Challenges of sustainable growth.....	28
6.3	Determinants of growth	29
6.3.1	An introduction to growth.....	29
6.3.2	Conceptual Framework	30
6.3.3	Growth motivation	31
6.3.3.1	Focus on growth.....	31
6.3.3.2	Leadership	32
6.3.3.3	An effective performance measurement system.....	32
6.3.3.4	Discipline.....	32
6.3.4	Expertise in managing growth	32
6.3.4.1	Strategic focus	33
6.3.4.2	Acquisitions of other companies.....	33
6.3.4.3	Geographical expansion.....	34
6.3.4.4	A simple, captivating business model.....	34
6.3.4.5	Excellent execution	34
6.3.4.6	Repeatable growth processes	35
6.3.4.7	Knowledge of customers	35
6.3.5	Resources.....	36
6.3.6	Demand	37
6.3.6.1	Customer enthusiasm	37
6.3.6.2	The economy and industry	38
6.3.6.3	Entrepreneurship.....	38
6.3.6.4	Innovation	38
6.3.7	Supply.....	39
6.3.7.1	Competition from other companies.....	39
7.	Profitable growth	40
8.	Competitive strategy and sustainable competitive advantage.....	40

8.1	Competitiveness and competitive advantage	45
8.1.1	Factor Conditions	46
8.1.2	Demand Conditions.....	47
8.1.3	Related and Supporting Industries	48
8.1.4	Firm Strategy, Structure, and Rivalry.....	48
9.	The relationship between sustainable profitability, growth and competitive advantage	51
10.	Strategies.....	51
11.	Summary and conclusion	57

CHAPTER 3

THE DEVELOPMENT OF THE AGRICULTURAL BUSINESS IN SOUTH AFRICA: AN OVERVIEW

1.	Introduction	58
2.	Historical overview: 1657 to 1994.....	58
2.1	From first commercial farmers to co-operative structures	58
2.2	Co-operatives represented in the South African Agricultural Union	67
3.	Overview: 1994 to 2016	68
3.1	Business form	68
3.2	De-regulation in the marketing of agricultural commodities.....	69
3.3	Political dispensation.....	69
3.4	Legislation.....	71
3.5	Agricultural subsidies	71
3.6	Research.....	71
3.7	Competition.....	72
3.8	Value adding by farmers	72
3.9	Corporate farming	72
3.10	Investments in Africa.....	73
3.11	Investments in agribusinesses by local and multi-national companies.....	73
3.12	Value adding by agribusinesses.....	74
3.13	Economy of scale in commercial farming enterprises	74
3.14	Loyalty programmes.....	75
3.15	Result of political and economic effects on the development of agribusinesses	76
4.	Summary and Conclusion	77

CHAPTER 4

METHODOLOGICAL APPROACH

1.	Introduction	79
2.	Determining the correct methodology.....	79

3.	Methodology of the conducted survey	83
4.	Analysis of data from statements and reports.....	84
4.1	The secondary data utilised.....	84
4.2	Statistical analysis of the data	89
4.3	Model selection	89
4.4	Dependant variable	92
4.5	Internal variables.....	93
4.5.1	Data set of 1980 to 2013	93
4.5.2	Data set of 2003 to 2013	93
4.6	External variables.....	95
4.7	Transformation of the data	96
4.8	Statistical procedures	96
4.9	Steps in the Panel procedure	98
4.10	Summary of statistical methodology.....	99
5.	Descriptive statistics of the profitability and growth drivers, strategies and performance of agribusinesses: 2003 – 2013.....	100
5.1	Strategies-analyses.....	101
6.	Summary and conclusion	102

CHAPTER 5

STATISTICAL ANALYSIS

1.	Introduction	103
2.	Results from the statistical analysis.....	103
2.1	Co-operatives and companies: 1980 to 2013	104
2.2	Agribusinesses: 2003 to 2013	108
2.3	The effect of external variables on co-operatives and companies: 1980 – 2013	113
2.4	The effect of external variables on agribusinesses: 2003 – 2013	114
3.	Summary and conclusion	115

CHAPTER 6

RESULT OF THE AGRICULTURAL PROFITABILITY AND GROWTH SURVEY

1.	Introduction	117
2.	Active steps to advance agricultural Business.....	117
3.	Profitability drivers.....	121
3.1	Politics and Government	122
3.2	Economic factors.....	124
3.3	Investment	125
3.4	Human capital	126
3.5	Competitiveness.....	128

3.6	Nature and environment.....	129
3.7	Finance	130
3.8	Management practices	131
3.9	Strategy.....	133
3.10	Grain stock and prices.....	134
3.11	Business model.....	135
3.12	Market share	137
4.	Growth and growth drivers	138
4.1	Comparison of the reasons to grow an agricultural business.....	138
4.2	The importance of growth drivers	139
4.3	General information on growth	145
5.	Summary and conclusion	147

CHAPTER 7

STRATEGIES IMPLEMENTED BY AGRIBUSINESSES TO OPTIMISE PROFITABILITY AND GROWTH

1.	Introduction	151
2.	Strategies implemented by agribusinesses in South Africa	151
2.1	The most important strategies of agribusinesses.....	151
2.2	Market performance following strategies	159
3.	Strategies of individual agribusiness	160
3.1	Strategies and its success of Agribusiness A	160
3.2	Strategies and its outcomes of Agribusiness B.....	163
3.3	Strategies implemented by Agribusiness C and its outcomes.....	165
3.4	Implemented strategies of Agribusiness D and its results.....	167
3.5	Strategies of Agribusiness E and its resulting performance	170
4.	Comparison between the various strategies of agribusinesses	172
5.	Summary and conclusion	173

CHAPTER 8

SUMMARY AND CONCLUSION

1.	Introduction	175
2.	Theories and models on economic profitability, growth and competitiveness	176
3.	Development of the Agricultural business in South Africa.....	178
4.	Methodological approach	178
4.1	Determining the correct methodology.....	178
4.2	Variables	179
4.3	Descriptive statistics of the profitability and growth drivers, strategies and performance of agribusinesses: 2003–2013.....	180

4.4	Methodology of the conducted survey	181
5.	Results from the statistical analyses and survey	181
6.	Profitability drivers.....	182
7.	Determinants of agribusiness growth	183
8.	Strategies implemented by agribusinesses in South Africa	184
9.	Recommendations	187
9.1	Recommendations to agribusiness executives.....	187
9.2	Recommendations for further research	188
9.3	Research limitations.....	188
BIBLIOGRAPHY		189
APPENDIX 1: Questionare: Sustainable Profitability and Growth of Agricultural Businesses in South Africa.....		212
APPENDIX 2: Statistical analyses - 1980 to 2013 and 2003 to 2013		233

LIST OF FIGURES

Figure 2.1:	Relationship between the pillars of sustainability	16
Figure 2.2:	Conceptual framework of growth drivers	31
Figure 2.3:	Three generic strategies.....	41
Figure 2.4:	The value chain.....	43
Figure 2.5:	The value system	44
Figure 2.6:	Porter's Diamond Model of competitiveness.....	46
Figure 2.7:	The complete system	50
Figure 3.1:	Number of Agricultural Cooperatives: 1911 – 1993	62
Figure 3.2:	Number of Agricultural Cooperatives' members: 1911 – 1990.....	63
Figure 3.3:	Growth in Total Turnover of Agricultural Cooperatives: 1968 – 1993.....	64
Figure 4.1:	Dendrogram of the Cluster Analysis	91
Figure 6.1:	Importance and probability of political and governmental factors influencing the profitability of agribusinesses.....	123
Figure 6.2:	Importance and probability of economic factors influencing the profitability of agribusinesses	125
Figure 6.3:	Importance and probability of investment factors influencing the profitability of agribusinesses	126
Figure 6.4:	Importance and probability of human capital factors influencing the profitability of agribusinesses	127
Figure 6.5:	Importance and probability of competitive related factors influencing the profitability of agribusinesses.....	129
Figure 6.6:	Importance and probability of nature/environmental factors influencing the profitability of agribusinesses.....	130
Figure 6.7:	Importance and probability of financial factors influencing the profitability of agribusinesses	131
Figure 6.8:	Importance and probability of managerial factors influencing the profitability of agribusinesses	132
Figure 6.9:	Importance and probability of strategic factors influencing the profitability of agribusinesses	133
Figure 6.10:	Importance and probability of grain stock and price factors influencing the profitability of agribusinesses.....	135
Figure 6.11:	Importance and probability of business model factors influencing the profitability of agribusinesses.....	136

Figure 6.12:	Importance and probability of market share factors influencing the profitability of agribusinesses	138
Figure 6.13:	Relative importance of growth drivers of agribusinesses	140
Figure 7.1:	Strategies utilised to grow agribusinesses in total	153
Figure 7.2:	Net profit after tax of all the included agribusinesses: 2003 – 2013	159
Figure 7.3:	Strategies utilised to grow agribusiness A	161
Figure 7.4:	NPAT of Agribusiness A, 2003–2013	162
Figure 7.5:	Strategies utilised to grow Agribusiness B.....	163
Figure 7.6:	NPAT of Agribusiness B, 2003–2013	164
Figure 7.7:	Strategies utilised to grow Agribusiness C.....	165
Figure 7.8:	NPAT of Agribusiness C, 2003–2013	166
Figure 7.9:	Strategies utilised to grow agribusiness D	168
Figure 7.10:	NPAT of Agribusiness D, 2003–2013	169
Figure 7.11:	Strategies utilised to grow Agribusiness E.....	170
Figure 7.12:	NPAT of Agribusiness E, 2003–2013	171

LIST OF TABLES

Table 3.1:	Summary of some previous mergers and acquisitions (M&A) by agribusinesses in the grain segment	77
Table 4.1:	Data sources & methods used by other researchers	80
Table 4.2:	Financial results from agribusinesses in the grain segment of South Africa: 1980 – 2015	86
Table 4.3:	Financial results of agribusinesses in the grain segment of South Africa: Co-operative era compared with Company era: 1980 – 2013	87
Table 4.4:	Financial results of agribusinesses in the grain segment of South Africa: Agribusiness compared to agribusiness (Co-operative or Company): 2003 – 2013	88
Table 4.5:	Internal variables for the period 1980 to 2013	93
Table 4.6:	Internal variables for the period 2003 to 2013	94
Table 4.7:	External variables for both periods External variables for both periods	96
Table 5.1:	Results of the Panel Poolability Test, the Panel Cross Sectional Dependence Test and the Panel Stationary Test	105
Table 5.2:	Results of the First Difference for One-Way Test	106
Table 5.3:	Results of the Panel Poolability Test, the Panel Cross Sectional Dependence Test and the Panel Stationary Test	109
Table 5.4:	Results of the First Difference for One-Way Test	111
Table 6.1:	Important steps to move from good to great	118
Table 6.2:	Comparison of reasons to grow a business	139
Table 6.3:	Summary of important growth drivers	141
Table 7.1:	Prioritisation of agribusiness strategies	172

LIST OF ABBREVIATIONS

ABC:	Agricultural Business Chamber
ACB:	Agriculture Cooperative Business
AFGRI:	AFGRI Limited
AGBIZ:	Agricultural Business Chamber
Agri SA:	Agricultural Union of South Africa
ANC:	African National Congress
ANOVA:	Analysis of Variance
APAP:	Agricultural Policy Action Plan
ARC:	Agricultural Research Council
BBBEE:	Broad-Based Black Economic Empowerment
BKB:	BKB Limited
CAGR:	Compounded Average Growth Rate
CEO:	Chief executive officer
CPI:	Consumer Price Index
CRDP:	Comprehensive Rural Development Programme
DAFF:	Department of Agriculture, Forestry and Fishers
DRDLR:	Department of Rural Development and Land Reform
EBITDA:	Earnings before Interest, Tax, Depreciation and Amortisation
EE:	Employment Equity
FD:	First Differenced
FDI:	Foreign Direct Investment
FDONE:	First Difference One Model
GDP:	Gross domestic product
GLS:	Generalised least squares
GWK:	GWK Limited (previously Griekwaland-Wes Co-operative)
Ha:	Hectare
IAAE:	International Association for Applied Econometrics
ISBN:	International Book Number
JSE:	Johannesburg Stock Exchange
Kaap Agri:	Kaap Agri Limited
LM:	Lagrange Multiplier
M&A:	Mergers and acquisitions
MBA:	Master of Business Administration
M.Com.:	Master of Commerce

MD:	Managing Director
MGK:	MGK Limited (Obaro – previously Magaliesberg Graan Co-operative)
MSSA:	Marketing Surveys and Statistical Analysis
NCM:	National Chamber of Milling
NDP:	National development Plan
NPAT:	Net Profit after Tax
NPC:	National Planning Commission
NWK:	NWK Limited (previously Noordwes Co-operative)
OECD:	Organisation of Economic and Cooperation and Development
OLS:	Ordinary least squares
Overberg Agri:	Overberg Agri Limited
OVK:	Oos-Vrystaat Kaap Operations Limited
PBIT:	Profit before Interest and Tax
PCA:	Principal Component Analysis
PSE:	Producer Support Estimate
Ph.D.:	Degree: Philosophiae Doctor
PUR:	Panel Unit Root
ROCI:	Return on Invested Capital
ROE:	Return on equity
ROI:	Return on Investment
RSA:	Republic of South Africa
SA:	South Africa
SAAU:	South African Agricultural Union
SARB:	South African Reserve Bank
SAS:	Statistical Analysis Systems
Senwes:	Senwes Limited (previously Sentraal-Wes Co-operative)
SSK;	Sentraal-Suid Cooperative Limited
Suidwes:	Suidwes Agriculture Limited
USA:	United States of America
USD:	US Dollar
VKB:	VKB Agriculture Limited
WACC:	Weighted Average Cost of Capital
WEF:	World Economic Forum
WTO:	World Trade Organisation

APPENDIXES

- Appendix 1: Questionnaire: Sustainable Profitability and Growth of Agricultural Businesses in South Africa
- Appendix 2: Statistical analyses – 1980 to 2013 and 2003 to 2013

CHAPTER 1

INTRODUCTION

"Agriculture is not crop production as popular belief holds – it's the production of food and fibres from the world's land and waters. Without agriculture it is not possible to have a city, stock market, banks, university, church or army. Agriculture is the foundation of civilisation and any stable economy."

– Allan Savory (2015)

1. Introduction

Agriculture is the core of any economy, supplying food for the nation and resources for all the other industries and social endeavours. It is therefore essential that agricultural business is sustainable in South Africa and that it earns profits that would ensure future growth. This thesis investigates the profitability and growth drivers that determine the success of agricultural businesses, with the emphasis on the identification of the determinants of economic profit and growth.

The realisation of maximum profits is the first economic assumption (Mankiw, 2014). This ensures that costs are covered and investment funds are generated to enable future growth. Whenever a company fails to maximise profits, it usually gets liquidated and forced to leave the industry. As long as profits are earned and costs covered through economic operations, wealth is being created for the nation and food security ensured. It is therefore important to determine which drivers determine profits and growth in the agricultural sector in the country.

This chapter will give the necessary background to anchor the study in the relevant situation, and then the problem statement and objectives will be explained, as well as the intended research methodology. The following chapters will describe the relevant theory, the history of agricultural business in South Africa and then analyse the determinants of profits and growth. The first section will now paint the décor and show the agricultural setting that will indicate why this study is important.

2. Background

The birth of co-operative enterprises coincided with the advent of the industrial revolution. It was in Europe, the cradle of the industrial revolution, that the first co-operatives arose (Zamagni & Zamagni, 2010). The lead in the co-operative movement was soon taken by England. Van Niekerk (1988) states that the origin of co-operatives in England dates back to 1760. Other countries

where the co-operative movement was prominent were Finland, Switzerland, Spain, the United States of America (USA), Canada, Japan, India, the Netherlands, Russia and Israel (Zamagni & Zamagni, 2010; Van Niekerk, 1988).

In South Africa, the first demarcated areas consisting of small farms of about ten hectares were allocated to nine approved persons, who became known as “Free Burghers”, during 1657. For all practical purposes, this was the beginning of commercial agricultural development in South Africa (Van Niekerk, 1988). However, it was more than two centuries later that the first co-operative and a federation of agricultural organisations were established. The agricultural group, Agri SA, was established in 1904 as the Inter-colonial Agricultural Union of South Africa, to consolidate the primary agricultural community’s actions and to coordinate their own interests (Visser, 2014a). The first co-operative in South Africa was probably the Pietermaritzburg Consumers’ Co-operative, which was registered in 1892. Up until 1922, several co-operatives were established in the former provinces of Natal (now KwaZulu-Natal), Transvaal (now Limpopo, Mpumalanga, North West and Gauteng) and the Orange Free State (now Free State). An important development was the establishment of the Land and Agricultural Bank of South Africa in 1912 which assumed the responsibility of financing agricultural co-operatives (Van Niekerk, 1988).

Legislation played an important role in the operation of the co-operatives, with the most important being the Land Settlement Act, the Co-operative Societies Act and the Marketing Act. The Land Settlement Act was largely successful in achieving the government’s goals between 1912 and 1966, after which it was superseded by the Agricultural Credit Act and the Land Tenure Act (Land Bank, 2013). According to Van Niekerk (1988), legislation which influenced the development of agricultural co-operatives during the period 1922 to 1939 were, to a large extent, the Co-operative Societies Act (28 of 1922) and the Marketing Act of 1937. The Co-operative Societies Act (28 of 1922) repealed and consolidated all previous co-operative legislation, and the Marketing Act of 1937 shaped the framework and broad basis for the marketing of different agricultural products through control boards, with co-operatives appointed as agents. The main purpose of agricultural co-operatives was the procurement of agricultural inputs at the best prices for their members, financing of the farming enterprises, and later also the marketing of members’ commodities produced (Van Niekerk, 1988).

Secondary purposes of the structured agriculture and different agriculture co-operatives effected co-operation between the different structures as a logical development. During 1922, it was recognised that the co-operatives should be represented in the structure of the former South African Agricultural Union (Visser, 2014a) and in 1928 a federal co-operative was granted permission to affiliate with the South African Agricultural Union. The affiliation of all co-operatives was approved by a decision taken in Cape Town on 1 February 1945 through the establishment

of a Co-operative Committee. This turning point in the history of the organisation of South African agriculture led to the establishment of the Co-operative Council in 1946 (Visser, 2014b). The core function of the Council would be the representation of the interests of agricultural co-operatives. In 1995, after the deregulation of agriculture in South Africa, the organisation adopted the name 'Agricultural Co-operative Business' (ACB) to illustrate the changing needs of agribusinesses and in 2003 the name changed to the 'Agricultural Business Chamber' (ABC). The 2010 transition into a fully autonomous and independent association was an exceptional milestone for the ABC. At the 2012 congress, the association was re-launched as Agbiz, with the slogan "The way to prosperity" (ABC, 2014).

In addition to supplying agricultural inputs, financing farming enterprises and marketing commodities, some co-operatives entered the value added chain to supply their members with value added products such as maize meal, wheat flour and animal feeds. The established retail infrastructure of the agricultural co-operatives and especially the trading shops were utilised to market these products. Operating in the initial service areas of co-operatives, today's agricultural businesses became mainly regional players, with their products also being delivered through different distribution channels such as wholesalers and other retail shops. Agricultural businesses are now often referred to as "agribusinesses". Economy of scale plays an increasingly important role in milling and other industries. To remain profitable and competitive, joint ventures have subsequently been formed. Examples include sunflower toll crush agreements with international commodity companies, equal shareholding with international commodity companies and local agribusinesses (as far as certain grain commodities are concerned), and equal shareholding by local agribusinesses in an agricultural lime company and a financial services company. To market products, compete at a national level, and build strong brands is expensive and must be done wisely over a period of time to achieve sustainability.

The reasons why agribusinesses matter (Agribusiness, 2016) emphasise the importance of the profitability and growth of agribusinesses in South Africa. Agribusiness is the world's oldest, largest and most important industry. It is the business that enables the world to grow, trade and feed everyone, utilising the earth's finite resources. Agribusinesses account for a third of nearly every country's economy and are too important to ignore. While food and fibre production has grown to feed all humanity through ages, global population growth continues unabated and the demand for food and food prices will continue to soar. Great caution was taken in designing the research for this study to ensure deriving significant results which would make a contribution to the future profitability and growth of agribusinesses in the grain segment of the agricultural sector of South Africa.

The total political climate and system in South Africa changed after the election of 1994. The victorious African national Congress (ANC) became the ruling party. The change in political regime after 1994 transformed South Africa's business opportunities from a fairly closed economy with sanctions imposed on the economy by various countries to an open economy in a globalised international environment.

The new government in 1994 gave attention to a new agricultural policy regarding the development of and assistance to subsistence farmers for them to become small-scale commercial farmers and eventually economically viable commercial farmers. Objectives of the National Development Plan (NDP) include increasing investment in agriculture in various areas and the creation of about one million jobs in agriculture by 2030 (NPC, 2012).

South Africa's agricultural success lies in the effective application of scientific innovations and interactive exchanges between farmers – especially in terms of subsistence and small-scale farmers. Through scientific training, farmers are encouraged to innovate and adopt the use of conservation agriculture, crop rotation, wetlands management, grazing management, soil health practices, integrated pest management and sustainable natural resource use (ARC, 2014). Although the Agricultural Research Council (ARC) received a significant increase in funding for infrastructure and equipment replacement during the reporting year, the allocation remains highly inadequate. The ARC continues to face a large backlog that requires additional funding (ARC, 2014). Collaboration and partnerships between private agribusinesses and a network of participating institutions, both local and abroad, which form part of the value added chain, are needed to rectify the situation.

Changes in national legislation followed the implementation of a newly negotiated constitution and the transformation of the country after 1994. It has been foreseen that the implemented and planned legislation in the following areas will substantially affect the landscape and the drivers that will determine the future competitiveness of all businesses in South Africa, namely labour, land reform, agricultural development, rural development, and broad-based black economic empowerment (BBBEE) (DRDLR, 2015).

In the global economy, agricultural subsidies and tariffs have been important trading instruments, but these have been changed or abolished in South Africa during the previous two decades. South African agricultural subsidies were only three per cent of the gross farming income in 2014, which is one of the lowest compared with other countries (Willemse, 2014). Although South Africa signed formal trade agreements with various countries and economic blocks, it applied rates that fall below the "bound rates" stipulated in its World Trade Organisation (WTO) commitments (WTO, 2015). The Producer Support Estimate (PSE) is a measure of how much government support and subsidies farmers receive in different countries (regardless of their nature). The PSE for South

Africa is five per cent, which is lower than that of Japan (58 %), the European Union (EU) (34 %), the United States (20 %), Russia (6 %) and China (6 %) (OECD, 2015).

Following the new political dispensation of 1994, South Africa was welcomed back from isolation to become an international player in the global economy, with all the accompanying opportunities and threats. Africa is part of the global environment and is considered to be the breadbasket for a forecasted world population of nine billion people in 2050 (Janovsky, 2013). The global environment also opened opportunities for multinational agribusinesses to enter the South African and Southern African agricultural markets by investing in current South African agribusinesses. The North American based AgriGroupe took control of AFGRI following a 60 % investment in the company (AFGRI, 2014). Another phenomenon comprises outside investors that obtain substantial shareholding in local agribusinesses, as seen in Zeder's recent acquisition of Kaap Agri shares (Hasenfuss, 2013). Other local multinational companies are also investing in traditional South African agribusinesses. This will unlock synergies to invent a different business platform and gain access to different and bigger markets. Examples of companies in this category are Grindrod, Rainbow Chickens Limited, Pioneer Foods, Tiger Foods and Premier Foods. The drivers that determine the sustainable profitability and growth of agribusinesses must be identified for these different synergies and complementary new market segments. Grindrod, for example, invested 20% in NWK and Senwes respectively (Smith, 2013).

Before 1994, agribusinesses in South Africa were mainly co-operatives, but in the past 22 years most of them have been transformed into companies. The main reasons for the transformation were multi-faceted: political, business inspired, and for the business opportunities provided by a company structure (Grobler, 2006). The members of the co-operatives became the shareholders of the newly formed public companies. Competition and costly duplication of head offices led to the deterioration of agribusiness' profit margins. Since 1994, some mergers and acquisitions have therefore taken place. Although transformed into companies in the early nineties, the co-operative principles still feature strongly in the minds of the directors of the current agribusinesses. Proving this, is the fact that during the past three to five years, some of the agricultural businesses in the grain segment introduced various loyalty and discount schemes based on shareholders' turnover or financing (Suidwes, 2012; VKB, 2011; OVK, 2013; GWK, 2010). These amounts are partially paid to farmers for income tax purposes, while the remaining money is used to buy additional shares in the company or retained to be paid out after a period of, for example, 15 years. This is actually in line with the old co-operative principle where the profit of a co-operative was partially paid out to the members, while reserves were retained to mitigate climate effects and certain member funds were retained to grow the co-operatives (Van Niekerk, 1988). In future this will have an effect on the growth of agribusinesses in the grain sector as well as their attractiveness for external investors and the tradability and value of the companies' shares.

The agricultural marketing system was formally changed to a free market system with the introduction of the Agricultural Marketing Strategy in 2010. This strategy minimises or eliminates market access constraints previously experienced by agricultural producers and other value players in both the local and international markets. It also lowers transaction costs in agricultural marketing. South African producers and agribusinesses have had to adapt to this strategy. The maize board was dissolved on 1 January 1997 (Du Plessis, 2014) and the wheat board on 30 October 1997 – leading to a free market era (NAMC, 1999) in the marketing of agricultural commodities.

Farmers are, in principle, price takers at both the input and output ends of the industry; therefore they can manage seasonal price volatility only to some extent. Calculated over the long term, agriculture experiences an increasing cost curve of approximately 3 % per annum, resulting in the price of farming requisites increasing faster than producer prices rise. In order to counter this phenomenon, farmers need to increase their productivity. Increased output is mainly achieved through improved technology in storage, transport, information availability, genetics, and biological farming practices, as well as economy of scale. Farming enterprises will continue to grow in size and consolidation will continue within the agricultural industry (Janovsky, 2013).

The profile of modern farmers has also evolved into that of highly qualified managers – the “new generation” farmers with different needs. They finance their enterprises through commercial banks, negotiating directly to obtain the best prices for their farming inputs, and utilise their own storage facilities for their commodities or negotiate selling contracts directly from the farm. Agribusinesses are to a great extent bypassed by these farmers because the traditional co-operatives failed to adapt their business models to address these competitive factors. Linked to the escalation of commercial farming operations, groups of progressive farmers utilise the opportunities to establish enterprises by joining forces in the value added chain (Janovsky, 2013).

The trend of large commercial farming enterprises bypassing agribusinesses encouraged some agribusinesses to seek a model for sustainable and profitable corporate farming in South Africa. This can be described as a defensive strategy to ensure the continuation of the traditional business model. Agribusinesses entered the primary production sphere of commodities by applying different business models – becoming corporate farmers with mixed success (NWK, 2013; Farmsecure, 2016; FS Maize, 2015; Profert, 2015). Corporate farming is, however, an increasingly important factor in determining future competitiveness because investment companies, like Zeder Investments Limited with Chayton Farms in Zambia (Maritz, 2012) and other international agricultural companies, are investing in corporate farming operations in South- and Southern Africa.

Agriculture, as an industry, is an important contributor to the South African economy and promotes socio-economic development in the country. Although the official measured contribution of agriculture to South Africa's Gross Domestic Product (GDP) was only between 2.6 % and 3 % during 2016, a broader value chain approach will prove that the impact of the wider agri-food industry in the South African economy is much greater (PwC, 2014). The wider agri-food industry in sub-Saharan Africa is projected to become a US \$1 trillion industry by 2030 and is destined to play an important role in years to come. Agribusinesses will be instrumental in initiating economic development through the building of agri-based industries and providing new markets. Agriculture has the ability to activate growth in other industries as it can initiate the start of a value chain (PwC, 2014).

Agribusinesses in South Africa will have to adapt their strategies, business models and scales of operation to improve competitiveness for future sustainable profitability and growth. Consolidations are already a reality and the landscape of agriculture will probably group agribusinesses into large trading units to counter concentration and other operational risks. Agriculture in the future will differ from agriculture today (Senwes, 2013).

3. Problem statement

Agribusinesses in the grain segment in the South African agriculture sector are nearing a crisis situation where critical decisions might be necessary. The agricultural business landscape in South Africa continues to change dramatically and permanently (Senwes, 2013). The 2012 PricewaterhouseCoopers (PwC) Agribusiness Insight report declared a "cost-squeeze" in the agricultural industry that is eroding the profits of agribusinesses (PwC, 2013). The reasons for this situation include increasing competition in a free market environment, duplication of services, large commercial farming operations bypassing agribusinesses, value adding operations of agribusinesses that are only regional players, climate and price risks on volume of grains, and income for agribusinesses that is volatile (Senwes, 2013). Other important factors are the magnitude of investments needed in African countries, multinational companies investing in local agribusinesses, legalisation from a political perspective, the lack of agricultural support by means of subsidies, declining research impact, and loyalty and discount schemes implemented by various agribusinesses.

Sustainable profitability, especially for agribusinesses operating in the grain segment of the agricultural sector, is dependent on understanding and utilising several drivers of profit. These include severe climate risks that drastically influence profitability between financial years, as well as the effect of other profitability drivers such as international and local stock levels of grains, inflation and fluctuations in the foreign exchange rate (PwC, 2013). The challenge is to identify

the profitability drivers that determine the actual profitability of agribusinesses in the grain segment.

Sustainable profitability is a pre-requisite for sustainable growth. Despite both the importance and difficulty of achieving sustainable growth, there is little guidance in the existing academic literature in terms of the identification of specific practices, competitive tactics and strategies associated with the achievement of growth over the long term (Eitzen & Sartorius, 2012). There is, however, consensus that growth is not a random or chance event, but is associated with specific firm attributes and behaviours (Porter, 1998; Eitzen & Sartorius, 2012). The identification of the important growth drivers in the grain segment therefore remains a problem.

The research conducted in this study therefore aims to identify the most important determinants of profitability and growth, together with the combination of suitable strategies for ensuring sustainable profitability and growth in agribusinesses of the grain segment of the agricultural sector, thereby adding to the collective knowledge base of the subject field.

4. Research objectives

The main objective of the study is to contribute to a better understanding of the profitability and growth drivers of agribusinesses in the grain segment, as well as to identify implemented strategies or a combination of strategies that can promote sustained profitability and growth in the grain segment of the South African agricultural industry. A selection of agribusinesses were included in the study, which constitutes important agribusinesses in the grain segment of the South African agricultural arena.

The first sub-objective is to provide a theoretical basis of sustainable profitability and growth in businesses, and specifically in the grain segment of the agricultural sector.

The second sub-objective is to give an account of the historic development of agriculture in South Africa, as background to the study.

An analysis of the financial performance for individual businesses, homogeneous groups of businesses and for the total research population constitute the third sub-objective.

The fourth sub-objective is to determine the reasons why agribusinesses do grow, in order to establish the different steps for business transformation and to identify the main profitability and growth drivers.

Finally, the fifth sub-objective is to evaluate the implementation of the different strategies and the combination of these strategies as implemented by the agribusinesses included in the study.

5. Research methodology

The methods and techniques that were used are descriptive, theoretical, philosophical and analytical, based on economic principles, acceptable financial analyses and measurements. A defensible theoretical structure was developed to examine data intuitively and to enable comprehensive evaluation.

5.1 Analysis of data from financial statements and reports

Since the abolishment of the office of the Registrar of Co-operatives, no central office exists to gather financial information of agricultural businesses. The analyses of the profitability and growth of the included agribusinesses will therefore be done using financial information obtained from published annual reports of agribusinesses in the grain segment. The gathering of the financial information of the different businesses in the grain segment is done by some of the individual businesses as part of their business intelligence. Profitability and growth performance were analysed according to certain well-known financial measurements for agribusinesses in total, specific groups and individual companies.

5.2 The Agricultural Profitability and Growth Survey

Complementary to the financial analysis, a relevant questionnaire was compiled to investigate the experience of co-operative managing directors (MDs) and chief executive officers (CEOs) of agribusinesses in the grain segment in order to determine the profitability and growth drivers in the grain segment as perceived by these executives. The first part of the research questionnaire was compiled, based on points suggested by the findings of a study conducted by McGrath *et al.* (2000) where over 640 CEOs, mainly from Europe, were asked what determined the economic growth of companies (Eitzen & Sartorius, 2012).

The second part of the research questionnaire was compiled in line with the conclusions of a study by Collins (2001) on the appropriate steps in business transformation that differentiate good from great companies. The third part of the questionnaire was constructed to determine the importance and probability of the profitability drivers occurring. Other profitability drivers were added from the information acquired through the questionnaires acquired from PwC for their Agriculture Insight publication, as well as the questionnaire used to determine the Agbiz Confidence Index. The fourth part of the questionnaire focuses on the determination of the important growth drivers, with a definition of each growth driver for clarity purposes.

Finally, questions on the strategies implemented by MDs and chief financial officers of the studied agribusinesses, which are similar to those used in the study of Schwenke (2011) in his research on Johannesburg Securities Exchange (JSE) listed companies, were included. A definition for

each strategy was included for clarity purposes and these are also given in this thesis in subsequent chapters. The utilised strategies, descriptions of the implemented strategies and the effectiveness of the implemented strategies are also included in the questionnaire. Additional information regarding the different agribusinesses' strategies was also acquired from relevant annual reports. The general questions included in the questionnaire provide perspective on all the answers and are similar to those used in the study of Schwenke (2011). The relevant questionnaire was disseminated through the use of Survey Monkey computer software on the internet.

The completion of the last part of the questionnaire about the description of the implemented strategies and the success thereof was followed by semi-structured interviews with the selected agribusiness' MDs or CEOs. These interviews were conducted in the comfort and privacy of the office of the MD or chief operating executive. The objective with this methodology was to increase the quality of the answers and specifically for achieving a better understanding of the businesses' actual financial performance and the motivation for their implemented strategies. Their competency and experience in the development and execution of their strategies for sustainable profitability and growth was also utilised by having them describe the implemented strategies, as well as their judgement of the success thereof. Anonymity is achieved by grouping the financial results and analysis for more homogeneous agricultural businesses.

The mere mention of profitability drivers and the anticipated effect they have on actual profitability will not be sufficient. The statistical correlation between internal and external profitability drivers and reported profitability will also be determined. Emphasis will also be placed on growth drivers and strategies utilised in the grain segment of the agricultural sector. This will allow the researcher to analyse the influence of profitability and growth drivers in combination with strategies in a comprehensive way. The actual performance of profitability and growth of agribusinesses, groups of agribusinesses and in total for agribusinesses in the grain segment was analysed. The contribution of the important growth drivers and other growth information to the success of the implemented strategies is discussed. Finally, the utilisation and combination of different strategies by the different agribusinesses in the grain segment was evaluated.

6. Data utilisation

The financial information of most agribusinesses in the grain segment and other companies in the agriculture sector has been publicly available since 1995. After conducting an extensive investigation of the grain segment about agribusinesses active in the segment, and also of the availability of financial results from 1980 to 2015, it was decided that the following agribusinesses would be included in this study because these twelve (12) agricultural businesses were the only agricultural businesses in the grain segment that had published their financial results:

- AFGRI Operations Limited (AFGRI).
- Senwes Limited (Senwes).
- NWK Limited (NWK).
- Suidwes Landbou Limited (Suidwes).
- MGK Business Investments Limited (MGK).
- VKB Agriculture Limited (VKB).
- OVK Operations Limited (OVK).
- GWK Limited (GWK).
- Sentraal-Suid Co-operative Limited (SSK).
- Kaap Agri Limited (KAAP AGRI).
- Overberg Agri Limited (Overberg).
- BKB Limited (BKB).

Although BKB is a company that mainly operates in fibres (wool and mohair), they also invest in the storage, marketing and value adding of grain. The research period could have been extended to 2015, but because AFGRI and MGK each converted from a public to a private company during the 2014 financial year, they are not under obligation to provide their annual reports with financial statements.

Agribusinesses were grouped in more homogeneous groups by assessing certain classification factors. An important classification factor in this instance is, for example, whether an agribusiness operates in grain and/or fibre, or only in grain, or mainly in grain. Another classification factor is grain production according to summer or winter rainfall areas, which would determine the main type of grain produced in the specific area. Classification would also be influenced according to mainly dry-land production of grain versus grain produced mainly under irrigation. Finally, the level of value adding to commodities or no value adding to commodities is a classification factor determining the level of differentiation.

Trends in the profitability and growth of the included companies were determined from the financial analysis of the included companies' annual financial reports. The annual financial reports published are, however, given in nominal values.

Next, the correlation of several internal and external generally acknowledged variables in the agricultural sector were tested with statistical methods to determine if there exists meaningful correlation between the profitability of an agribusiness and the specific variable. Before the figures are utilised for statistical analyses, the Gross Domestic Product (GDP) deflator per annum was used to calculate the real values of the figures excluding the effect of inflation. Using the method extensively, only the variables with the highest meaningful correlation with the profitability of

agribusinesses will remain and be tested for comparing the cooperative-era and company-era, as well as for the period 2003 to 2013.

7. Outline of the study

The outline of the study is as follows: **Chapter 1** provides a description of the background for the research, the problem statement and the definition of South African agribusinesses in the grain segment of the agriculture sector (those which are included in the study). The literature overview in **Chapter 2** was an exercise to determine the scope of sustainable profitability and growth in the business world, and specifically in the grain segment of the agricultural sector. This will include the definitions, identification of the drivers, consulting other studies regarding the subject matter and a review of the existing literature.

In **Chapter 3**, an explanation of the historic development of agriculture and agricultural businesses in South Africa is given. **Chapter 4** focussed on the methodology followed in the empirical analysis and analyses of the achieved profitability and growth of the agribusinesses included in the study, and the implemented strategies. The aim is to determine their current level of sustainable profitability and to compile a comparative growth appraisal. This were done for the included agribusinesses in total, as well for more homogeneous groups of agribusinesses.

In **Chapter 5**, the focus was on results of the statistical analysis, based on financial statements and reports of agribusinesses. **Chapter 6** will focussed on survey results on the important steps to transform a good agribusiness to a great agribusiness. The descriptive analyses done on the determinants of profitability and growth is reported. A summary in terms of the reasons to grow and the most important growth drivers for agribusiness in South Africa is determined. In **Chapter 7**, a discussion arising from the survey and semi-structured interviews on the different strategies and the extent to which these strategies were employed by the participating agribusinesses as one group will is reported. The different strategies and the extent these strategies were employed by the participating agribusinesses in some individual agribusinesses is discussed. A profitability and growth analysis provide insights into the effectiveness of each of these strategies for some of the individual agribusinesses.

Chapter 8 summarises the results of the study. This includes a synopsis of the significant correlation between internal and external variables and profitability of agribusinesses. The identified determinants of profitability and growth were summarised and concluded. A summary is provided on strategies utilised by agribusinesses over the researched period and the financial performance for some agribusinesses and for all the included agribusinesses. The study concludes with certain recommendations for agribusiness management, policy, as well as for future research.

8. Summary

This chapter has outlined the rationale for this study. The study intends to investigate the drivers that determine the profitability and growth of agricultural businesses in the grain sub-sector. The background was sketched and the problem statement and objectives explained. The composition of the rest of the thesis was outlined and the empirical methodology that was followed briefly explained. The following chapter will now provide a literature overview focusing mainly on the relevant profitability and growth drivers and models to provide a rigorous theoretical foundation for the rest of the study.

-oOo-

CHAPTER 2

LITERATURE REVIEW

OF THEORIES AND MODELS ON

ECONOMIC PROFITABILITY, GROWTH AND COMPETITIVENESS

1. Introduction

Sustainable profitability and growth are both important and necessary for a company/firm/agribusiness to survive and remain attractive to investors. Profitability is critical to a company's long-term survivability. Achieving high growth that is sustainable is an elusive goal for all but a few great companies (Eitzen & Sartorius, 2012). Despite the relative importance of this topic, limited research has been done to explain high sustainable growth in a South African context – especially in the agricultural industry.

Collins (2001) stated that the vast majority of companies never become great, precisely because the vast majority became quite good – and that is the main problem. Contrary to this, it was found that good to great does happen and Collins determined the steps that make it happen. The definition of great companies given is fifteen-years' cumulative stock returns above the general stock market, punctuated by a transition point taken as 1985, then cumulative returns at least three times the market over the next fifteen years (Collins, 2001). A good company for comparison purposes is defined as a company that achieved fifteen-years' cumulative stock returns at or below the general stock market, punctuated by a transition point taken as 1985, then cumulative returns below three times the market over the next fifteen years. The good companies were used for direct comparisons with the great companies. A comparison was also made in relation to companies that made a short-term shift from good-to-great, but failed to maintain the trajectory. These companies were called the unsustained comparison companies, for purposes of addressing the question of sustainability. To differentiate between good, great and unsustained companies, the focus is set on the cumulative stock returns between the years 1985 and 2000.

The factors that describe the transition from good-to-great companies are described in the following sections (Collins, 2001). The reasons why growth is essential for agricultural businesses are also explained. The transition from good-to-great in essence comprise specific steps, or at least a majority of steps, which are described in Section 6.1. These steps have to be put into practice in order to make the shift to become great companies. These factors will also be assessed scientifically in the empirical analysis sections of this thesis.

Joachimsthaler (2007, as cited by Eitzen & Sartorius, 2012) argues that sustainable high growth is the difference between an average and a great company. The author elaborates by arguing

that the achievement of this phenomenon is one of the most difficult challenges a business faces. The vast majority of companies never become great, precisely because the vast majority become quite good. Collins (2001) is of the opinion that the latter is the main problem of most businesses in that: good is the enemy of great. Growth constitutes one of the least-studied dimensions of performance within the field of management, as compared with other performance variables, such as profitability (Porter, 1998). There is, however, consensus that sustainable growth is not a random or chance event, but is associated with specific firm attributes and behaviours (Perren, 1999a; Perren, 1999b) and is dependent on sustainable profitability with a superior, implemented strategy as a precondition, causing a competitive advantage.

The objective of this chapter is to give background in terms of sustainable profitability, sustainable growth and competitiveness, and sustainable competitive advantage, as well as the relevance hereof in terms of this study. This will include defining the different concepts as well discussing the relationship between sustainable profitability, economic growth and competitive advantage. The chapter will be concluded with a discussion of the different strategies and the importance of a superior strategy to move from good to great, and in doing so, achieving profitability and a high growth rate that is sustainable.

2. Sustainability and business sustainability

The word sustainability is derived from the Latin “sustinere” (“tenere” = to hold; “sus” = up). Sustain can mean “maintain”, “support”, or “endure”. Sustainability interfaces with economics through the social and environmental consequences of economic activity. Figure 2.1 indicates the relationship between the three pillars of sustainability, suggesting that both economy and society are constrained by environmental limits.

Sustainability in business is a business strategy that drives long-term corporate profitability and growth by mandating the inclusion of environmental and social issues in the business model (Robert, 1998). The purpose of sustainability is to generate maximum increase in company, consumer and employee value by embracing opportunities and managing risks derived from environmental and social developments. A business model must combine and continually maintain the following attributes to achieve sustainability: sustainable development; corporate social responsibility; and stakeholders' and corporate accountability (Stubbs & Cook, 2008).

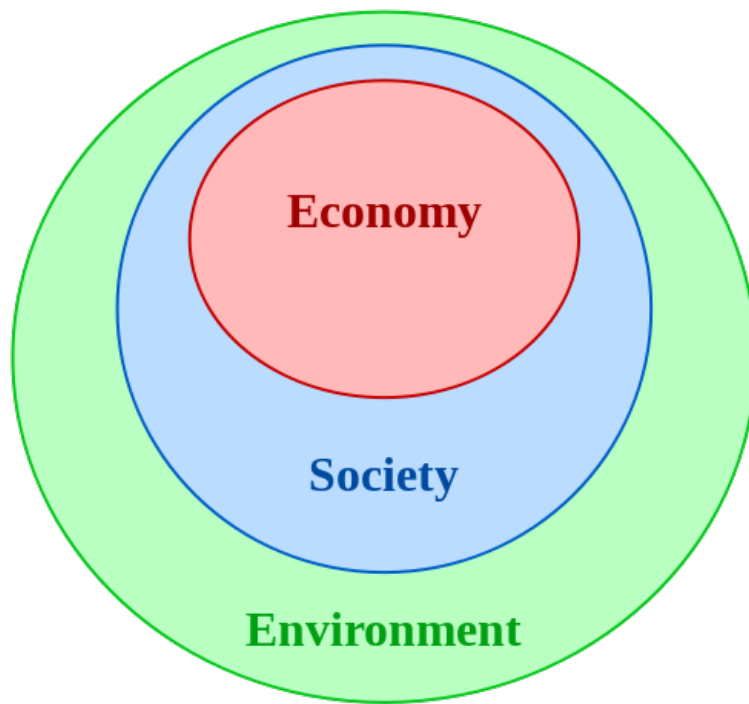


Figure 2.1: Relationship between the pillars of sustainability

Source: Tucker, 2011

Business sustainability is often defined as managing the triple bottom line – a process by which companies manage their financial, social and environmental risks, obligations and opportunities. These three impacts are sometimes referred to as profits, people and planet (Elkington, 1994). In traditional corporate cultures, social and environmental concerns have typically been considered to conflict with financial goals. The goal of sustainability requires a more extended timeline for return on investment (ROI) but once initial investments are made, they can actually lead to increased profitability (Elkington, 1994).

3. Agribusiness

Before linking the concept of sustainability and growth to agribusiness, it is necessary to define the term 'agribusiness'. For the purpose of this study, agribusiness refers to the business of agricultural production and includes input supply, retail, farm machinery, financing, insurance, breeding, crop or livestock production, the collecting, handling and storage of commodities, processing (value adding), distribution, marketing, and sales (Ng & Siebert, 2009). The term 'agribusiness' emphasises the interdependence of these various sectors within the production chain of agricultural products.

4. Sustainable profitability

Business sustainability is not achievable without sustainable profitability because a business entails costs and these costs must be paid. The traditional focus of industrial operations has been on operational objectives, such as throughput and consumption of resources, as compared with business objectives. Typically, plants were designed to maximise production output, which proved to have the limited agility necessary to meet market demands during economic downturns (Martin, 2011). The significant transition of companies is to modify their business approach to survive and thrive by the following five forces that are becoming the catalysts for change (Martin, 2011):

- i. the transition from labour workers to performance managers;
- ii. the transition from process to profit management;
- iii. the transition from transactional to real-time business environment;
- iv. the transition from an island to a holistic business perspective, and
- v. the transition from a rigid to agile operations.

It is one thing to optimise the profitability of an operation at any point in time; however, it is much more challenging to continually optimise the operation over time and to sustain the profitability (Martin, 2011).

Conventional performance analysis only looks at the return on economic capital. It lends no fundamental value to all other forms of capital that are used in companies. Sustainable profitability is the use of economic, natural and social capital in companies in absolute monetary terms (Figge & Hahn, 2016). It is important for executives to put the common good ahead of their own narrow needs, but that they also need to demonstrate that embedding sustainability drives greater profitability.

Sustainable profitability is not equal to maximum profitability over the short term. Maximum profitability is equal to sustainable profitability over the long term by the developing of people, the fulfilment of social responsibility, and preserving the environment (Figge & Hahn, 2016).

5. Determinants of profitability

With the aforementioned in mind and considering the focus on the study, it is important to take cognisance of the fact that a number of important drivers influence the sustainable profitability of the grain segment of the agricultural sector in South Africa. These drivers were identified through analysis of the remarks stated in the reports of the chairmen of the board and the reports of the chief executive officers (CEOs) or managing directors (MDs) of the included agribusinesses' annual reports, as well as from points noted by Schwenke (2011). The annual agribusiness insight surveys done by PricewaterhouseCooper since 2008 give additional insight into the influence and

importance of the various profitability drivers. The drivers identified for evaluation in the research can be separated into internal and external drivers, and grouped into different categories. The following sub-sections will deal with each of these drivers individually.

5.1 Internal determinants of profit

In this section the internal determinants of agribusiness profits are discussed, focussing first on investments, followed by human capital, finance, management, the various business models and market share.

5.1.1 Investment

The expected return on capital invested (ROCI) is one of the most important calculations for assessing a company's efficiency at allocating the capital under its control to profitable investments. Comparing a company's ROCI with its weighted average cost of capital (WACC) reveals whether invested capital is being used effectively. If ROCI is larger than WACC, value is being created. If not, value is being destroyed. The disadvantage of ROCI is that provides no indication about which segment of the business is generating value. Investors always endeavour to identify attractive business opportunities from good business opportunities. However, they particularly need to be much disciplined about selecting "investable" opportunities from the many business opportunities that are available (Roure, 2013). The five basic important questions are:

- i. Is there a market that can be identified?
- ii. Is this the right time?
- iii. What is the existing and likely competition?
- iv. Does it have an economically and conceptually viable business model? and,
- v. Does it have focused and differentiated strategy?

5.1.2 Human capital

Human capital is always very important in achieving sustainable profitability, and specifically the availability of key skills, succession planning for leadership positions, stimulation of executive management through compensation initiatives to achieve long-term growth, staff training and development and talent management.

The three main skills are communication, application of numbers (using, interpreting and manipulating numbers within the context of problems, confidently and accurately) and using information technology. Important personal skills are improving own learning and performance, working with others, and problem solving (Wiltshire, 2016). Succession planning for leadership positions is important for organisations to continue functioning smoothly, irrespective of losing key employees performing key roles. The benefits of succession planning are: the organisation is well

prepared for any sudden attrition; the impact of losing key employees is reduced; managers are obliged to identify various skill-sets among team members, groom identified successors well to handle the relevant positions, develop any skills-set that is lacking, motivate identified successors to perform even better so that they will stay even longer with the organisation; a considerable amount of time and cost is saved in hiring and inducting new candidates; and a very positive atmosphere is created, overall, within the organisation (Swamidass, 2013).

Staff training is important for organisational development and success. Training is the process of enhancing the skills, capabilities and knowledge of employees for doing a particular job, and is also fruitful to both employers and employees of an organisation. Although it is continuous and never-ending in nature, employees will become more efficient and productive with excellent training (Louw-Potgieter, 2012; Van Zyl, 2010). The key to prompting a workforce to achieve greatness is to align staff development and talent management with company strategy, define consistent leadership criteria across all functional areas, and to identify competencies to cultivate for continuing growth (Successfactors, 2016). Business leaders who implement the best talent management processes are more prepared than their competitors are to compete in the global economy and capitalise quickly on new opportunities.

5.1.3 Finance

Finance involves financial management that deals with planning, organising, directing and controlling financial activities, such as the procurement and utilisation of funds for a company (Remund, 2010). Financial management is one of the most important functions of any business. Not only is finance a good indicator of the overall health of the company, it also holds an important role in managing business growth. Whether growth is attributable to a larger market and an increase of employees, a new location, a new product, service or a new demographic, finance is the enabler of such opportunities. The result of the inability to finance growth is lost opportunities. Because debt and equity financing have such disparate effects, companies seek to find a balance or an optimum level of financing. The idea is to use only enough debt to fund various business ventures, without exposing the company to too much debt, and to use a small enough amount of debt that will keep adequate ownership interest within the company (O'Farrell, 2016).

5.1.4 Management

Management has a direct impact on a business' performance (Drucker, 2001). Superior company performance requires an effective management team, and more especially an effective MD or CEO. The measure of an executive is the ability to get the right things done (Drucker, 1967). Effectiveness can be learned, and has to be learned because effectiveness is the responsibility of executives. This is normally the difference between an average and an outstanding MD or CEO.

Management's sole function is to provide the largest possible immediate gain to the shareholder, and management has to accept their accountability for performance. The fundamental task of management remains the same: to enable people to become capable of joint performance through common goals, common values, and the right structure, and with training and development, to perform and respond to change (Drucker, 2001). The main categories of tasks of management that are of equal importance, but essentially different, are: establishing the specific purpose and mission of the institution; making work productive and the worker effective, and managing social impacts and social responsibilities (Drucker, 2001). A business has failed if it does not produce economic results, does not supply goods and services desired by the consumer at a price the consumer is willing to pay, or it does not improve or maintain wealth by utilising the producing capacity (Drucker, 2001). Management has to manage financial risks, ensure the sound financial position and cash flow of the business, the compliance with laws and regulations, high ethical standards and focus on corporate reputation. With a functional organisational structure and optimal processes, management is responsible for effective cost management, outsourcing of business processes or functions, and increasing productivity.

5.1.5 Strategy

The identified and measured key determinants of profit should be utilised to develop strategies to grow profits, without increasing costs. A strategy is a set of rules or a protocol to be followed in order to maximise a set goal or achieve a specific outcome, such as a set profit margin or growth rate. An optimal strategy is a strategy that will guarantee a certain outcome, regardless of the actions of other market agents or external factors (Bluman, 2012). Making the business more profitable involves considering ways to increase sales revenue, as well as decreasing costs, and benchmarking the business to determine where savings are possible. It is important to prioritise the chosen strategies to improve profitability by focusing on the most important modes of action (Queensland Government, 2016). These will include a strategic plan (road map), medium-term goals according to the strategic plan, adjusting business plans according to the strategic plan, annual adjusting of the strategic plan on performance of achieving goals, and utilising synergies. Strategic alliances, joint ventures, mergers and acquisitions are important parts of the strategic plan to increase sustainable profitability (Besanko, Dranove, Schaefer & Shanley, 2012).

5.1.6 Business model

Every viable organisation is built on a sound business model (Magretta, 2002). A business model consists of four interlocking elements that, taken together, create and deliver value. The elements are: the customer value proposition; the profit formula; key resources and key processes. The customer value proposition and the profit formula define value for the customer and the company, respectively. Key resources and key processes describe how that value will be delivered to satisfy

the customer and the company (Johnson, Christensen & Kagermann, 2008). Established companies should not undertake business model innovation lightly, as management judgement is required. Five strategic circumstances were observed that often require business model change: the opportunity to address the needs of large groups of potential customers who are shut out of a market entirely because existing solutions are too expensive or complicated for emerging markets; the opportunity to capitalise on a brand-new technology or to leverage a tested technology by bringing it to a whole new market; the opportunity to bring a job-to-be-done focus where it does not exist; the need to fend off low-end disrupters; and the need to respond to a shifting basis of competition (Johnson *et al.*, 2008).

While an effective, and carefully designed, business model is a prerequisite for success and growth (Diong & Choo, 2008), Hess (2007) discovered in a study on organic growth that it is companies with simple, easy to understand and captivating business models that significantly outperformed their competitors. To ensure sustainability, businesses should constantly examine their business model by reviewing their value proposition and their value chain to ensure their business model is consistent with the strategy of the business and the future. It is only by constantly reviewing the business model to ensure that they are relevant and captivating, that businesses will keep pace with a rapidly changing business environment (Diong & Choo, 2008).

5.1.7 Market share

“It is now widely recognised that one of the main determinants of business profitability is market share. Under most circumstances, enterprises that have achieved a high share of the markets they serve, are considerably more profitable than their smaller-share rivals” (Buzzell, Gale & Sultan, 1975). This is attributable to economy of scale, market power and quality of management. A large-share business achieves economy of scale in procurement, manufacturing, marketing and other cost components. The result of greater market power is that their size permits them to bargain more effectively, “administer” prices, and in the end realise significantly higher prices or margins for a particular product. Good managers are successful in achieving high shares of their respective markets because they are skilful in controlling costs and getting maximum productivity from employees. Not only is the retention of market share important, but also important is the increasing of the market share.

5.2 External profitability drivers

External profitability drivers that are usually quoted by the chairmen of the board and MDs or CEOs of agribusinesses in the grain segment for declining of financial results are: changes in exchange rate, rising oil prices, inflationary pressures, increases in prime rate, and rainfall which

had a direct impact on grain production. The interaction and conflation of these profitability drivers will be considered in more detail, as well as the hypothesis of a “perfect storm”.

5.2.1 Exchange rate

The exchange rate of a country is important for economic growth. Rodrik (2008) has stated that the under-valuation of the currency (a high real exchange rate) stimulates economic growth. Exchange rate volatility impacts on export prices, the price of imported inputs, and the competitiveness of a country. In the short term, the exchange rate is determined by the flow of currency between two countries. Currency flow, again, is affected by interest rates, trade balance, investors' confidence and issues or expectations in one country relative to another. Foreign investors' confidence and expectations will also influence the exchange rate. If investors are confident in the political and economic stability of a foreign country, they are more likely to purchase that country's assets (Beranek, 2015).

A commodity-wide explanation of surging prices of grain commodities is the depreciation of the US Dollar (USD). The depreciation of the USD can account for the rise in dollar-denominated food prices in an arithmetical sense, cutting 20 % to 30 % off the nominal dollar increase in the case of conversion from USD to Euros or Rand. When the dollar weakens, agricultural exports (particularly grain and oilseeds) also increase (Mankiw, 2014). From 2002 to 2007, the dollar depreciated 22 %, while the value of agricultural exports increased by 54 %. Accepting that the United States is a large country in terms of international agricultural markets with respect to wheat, maize and soybeans, the depreciation of the USD should lead to higher prices in the United States, but lower prices in the rest of the world (Headey & Fan, 2008). Research has indicated that a depreciation of the dollar will increase dollar-denominated commodity prices with an elasticity of between 0.5 and 1.0 (Gilbert, 1989). Abbott *et al.* (2008) also show that the divergence between the dollar and other currencies is quite stark, compared with increases in nominal dollar-denominated food price increases.

Exchange rates are important and impact on agricultural commodity prices and affect the profitability of agribusinesses in the grain segment because they execute a trading function for their agribusiness, as well as for their members. Agricultural businesses need to recognise the impact of fluctuating currency on their business' profitability and consider ways of managing the risk.

5.2.2 Oil price

Relative to its output, agriculture does not use that much energy; however, several facts suggest that oil probably has a large impact on the cost of agricultural production (Headey & Fan, 2008). Energy used in agriculture is mostly oil-related and oil prices have risen faster than prices of other

energy sources. Moreover, the United States' food production, which dominates world food production and export markets, is especially oil-intensive. Oil prices affect the prices of fertilisers, as well as other chemicals used in crop production. For wheat, maize and soybeans, the estimation is that oil prices increased the cost of US production by 30 % to 40 % from 2001 to 2007, relative to a baseline scenario in which oil-related prices only increased by the inflation of the US GDP deflator (Headey & Fan, 2008). The oil price also affects transport costs, such that the margin between domestic and export prices has added as much as 10.2 % to the export prices of maize and wheat (Mitchell, 2008). The combined increase in production and transport costs for the major US food commodities could account for 20 % to 30 % of the increase in US export prices (Mitchell, 2008).

Research that examined a systematic interrelationship between the international oil and agricultural commodity prices, taking the role of the USD and the perceived global market risks into correlation for the period from January 1990 to June 2013, has been published by Gozgor and Kablamaci (2014). Findings from the panel unit root (PUR) tests suggest that there is a strong relationship between oil and agricultural commodity prices. In addition, the empirical findings from the fixed effects panel data, panel co-integration analysis, the Panel-Wald Causality tests and the common correlated effects show that the world oil price and weak USD have positive impacts on almost all agricultural commodity prices. Furthermore, "with prices of fertilisers and other farm chemicals and machinery costs closely related to oil prices, any rise in oil prices is expected to quickly translate into increasing production costs" (Brandon, 2013).

Rising oil prices not only affect the profitability of the agribusinesses in the grain segment negatively because of transportation cost and supplying the farmers with energy, but also impair the farm producers' margin. The agribusinesses normally finance the production costs of grain production, and declines in the economic viability of the farmers can result in them becoming debtors who find it difficult to repay their loans, especially when weather shocks occur. Agricultural businesses need to understand the impact of rising oil prices on their business' profitability.

5.2.3 Inflation

The increase in food costs for consumers is best revealed by the continual changes in the prices paid for a basket of foods actually consumed, which is the food component of the national Consumer Price Index (CPI) (Dewbre *et al.*, 2008). The link between the consumers' cost of a basket of food they purchased and an index of trade-weighted food commodity prices depends on a number of factors. The composition of the consumer basket will usually differ between countries and may not be similar to a basket of traded food commodities recorded for international price indexes. Aside from that, the price links will depend on a long list of factors that interfere with the transmission of prices both internationally and domestically. Internationally, full

transmission of world to domestic prices will occur only if countries maintain open borders and do not intervene reactively in either commodity or exchange rate markets. Frequently, however, governments in importing and developing countries utilise institutions including state trading and border taxes or subsidies that change with international market conditions to isolate their domestic market from world market variability. Moreover, transportation and transaction costs can impede the transmission of prices internationally, even in the absence of government intervention (Balcombe *et al.*, 2007).

Once the commodities reach the domestic market, the issue becomes one of price transmission from imported commodity prices through the supply chain to retail food markets. In general, farm-gate prices of agricultural commodities in many developed countries account, on average, for 25 % to 35 % of the final retail price. The higher the degree of processing, the lower will be the share of the raw commodity in the final price at retail (Dewbre *et al.*, 2008). This means that food prices reflect not only commodity price changes, but also those of other inputs, in particular wages, energy, transport and storage. It also means that, depending on the circumstances, retail food prices can change by more or by less than would be determined by the change in commodity prices if these other factors do not change to the same degree (Dewbre *et al.*, 2008). The rise in agricultural commodity prices has a potentially greater impact on developing than on developed country consumers because of the share of processed goods in the food basket. For most countries, consumer food price inflation has recently exceeded overall inflation rates, and food price inflation in developing countries has exceeded that in OECD countries (OECD & FAO, 2008).

Supplying farm requisites to farmers renders trends in inflation rates important in terms of the economic viability of farming operations, as well as of the agribusiness itself. Agribusinesses that have diversified in value adding of commodities, especially, will have to monitor the effect of inflation rate (CPI) on consumer prices of their products and the effect on the profitability of the specific enterprise.

5.2.4 Interest rate

The effect of monetary policy on the agricultural sector is important, especially with regard to interest rate variability (Coetzee *et al.*, 2002). This is the case for the farming enterprises as well as agribusinesses. Three prices, namely interest rates, foreign exchange rates and inflation, have a major impact on the agricultural sector. Real exchange rates, interest rates and inflation have significant and persistent impacts on agricultural output, prices received by farmers, and farm input prices (Kargbo, 2007). In the grain segment of the agricultural sector, a large contributing factor is the risk involved in grain farming and agribusinesses in the grain segment attributable to the unstable weather patterns in South Africa. Agribusinesses in the grain segment provide

production loans, medium-term and long-term loans to farmers. Poor management, bad accounts and severe droughts may cause default in repayment of debts by farmers. The result is that farmers with too little collateral security will be forced to leave primary agriculture, while agribusinesses will experience cash flow pressure in the next planting season. The profitability after interest of agribusinesses decreases when total debt (especially carry-over debt) or high prime rate increase.

5.2.5 Climatic conditions: Rainfall

Agriculture is a resource-intensive enterprise. The manner in which food production systems utilise resources has a large influence on environmental quality and profitability (Cassman *et al.*, 2003). There is a long-standing debate on the impact of environmental performance on agro-firm performance. Although previous studies have reported mixed results, many of these papers suffer from model misspecification and/or limited data (Elsayed & Paton, 2005). With static and dynamic panel data analysis, it has been concluded that environmental performance has a neutral impact on firm performance (Elsayed & Paton, 2005).

The Highveld region in South Africa is an important area for the food production of the nation, as 70 % of country's cereal crops and 90 % of the commercially grown maize is cultivated there. The western part of the Highveld is characterised by relatively low mean annual precipitation and high variable yields, and while rainfall increases towards the east, inter-annual yield variability remains high. Variability of yields is already a concern for agro-ecosystems and it is hypothesised that it could be exacerbated by future climate changes (Walker & Schulze, 2008). The volatility of prices of major grains has generated a wide array of analyses during previous decades. Market events and their economic interpretations indicated that price spikes are not unusual. The balance between consumption, available supply and stocks is still relevant for the understanding of these markets (Wright, 2011).

The income and profit of agribusinesses in the grain segment are highly dependent on the storage and handling of the volume of grain that is produced. Rainfall determines the volume of grain in a particular season, and therefore influences the profitability of agribusinesses to a great extent. Therefore, rainfall will be included in the analysis, despite the results from specific studies that suggest that rainfall has no impact on the financial performance of a firm, or agribusiness in this case.

6. Sustainable economic growth

In order for a business to remain sustainable it should grow. If a business does not grow, it will have to close eventually (Magretta, 1997; Mankiw, 2014). Businesses have to be able to finance their growth either through debt or equity financing by raising additional funds needed by the issue

of more equity, reducing of the dividend pay-out ratio, increasing the debt position and/or improving the operating performance (Klein & Belt, 1993). If they do not have sufficient financing, and experience a very high growth rate, they may find it difficult to obtain financing to sustain that growth. On the other hand, a business that grows too slowly will stagnate. The sustainable growth rate in a business is the maximum growth rate a business can achieve without having to increase its financial leverage or debt financing. It is the maximum growth rate that can be achieved, given the company's profitability, asset utilisation, dividend pay-out, and debt ratios. Sustainable growth rate defines the rate at which a company's sales and assets can grow if the company sells no equity and wishes to maintain its capital structure (Platt *et al.*, 1995). The same applies in the case of the minimum growth level to ensure survival.

The breakeven point is the minimum sales growth, meaning the absolute minimum sales needed to stay in business. Sustainable growth rate is the "ceiling" for sales growth; it is the highest that sales can grow without new financing and without exhausting cash flows. A set of preconditions and levers have been identified to achieve long-term growth. The first precondition is the generation of a common understanding regarding growth and profit ambitions among the management team as a prerequisite for aligned and coordinated strategy development and implementation. The second precondition is the understanding of relevant markets, as is important for generating market foresight when identifying and assessing growth initiatives, such as megatrends and scenario analyses, segment-specific benchmarking and in-depth assessments and market demand projections. Important levers and strategies include applying formulas for fast, growth, defining the growth strategy and ensuring growth. Applying formulas for rapid growth are represented in, for example, determining the number of relevant customers, the share of the budget and lifecycle potentials, continuous innovation, ultimate offerings intended to eliminate competition, network-based growth, mergers and acquisitions (M&As), and buy-and-build driven growth (Klein & Belt, 1993).

Defining a growth strategy as a portfolio of best-suited growth initiatives should take into consideration a multidimensional set of criteria, such as easing of implementation, growth and profit impact, expected risk versus return and cash flow stability (Magretta, 1997). Finally, strategy and corresponding culture must be addressed in a consistent way to make growth happen and must include creating the case for growth, clearly defining and communicating vision and strategy, as well as developing and energising the organisation. The growth capability of a firm, such as a firm's infrastructure, and growth strategy, including the business plan, need attention to achieve long-term growth.

Once the sustainable growth rate is calculated, it should be compared with the company's actual growth rate. If the sustainable growth rate is greater than the actual growth, the company might

be under-performing. If the actual growth rate is above the sustainable growth rate, the company may experience liquidity and investment funds restrictions due to its unrestrained growth rate.

6.1 Reasons why growth is essential for agricultural businesses

A key decision for this study is to choose which measure of growth to use. A number of different measures may be used: number of employees, turnover, profit, earnings, operating cash flows, assets, net assets, return on investment (ROI), or return on equity (ROE). Mohr and Fourie (2004) describe growth as an increase in assets, turnover or profits, which usually leads to an increase in retained profits and ultimately shareholder wealth. No one financial indicator may necessarily be adequate to describe sustainable growth (Miller & Friesen, 1976). A combination of measures may provide the best proxy for growth. This view, that multiple dimensions are needed to describe sustainable growth, is consistent with Balanced Scorecard theory (Kaplan & Norton, 1992; 2007).

Poulos (2006, as cited by Schwenke 2011) states that the growth of a business is assumed as an obvious goal in most corporate finance literature and is always one of the key challenges that business leaders face. The same accounts for agricultural businesses. Kroeger *et al.* (2000), as cited by Schwenke (2011), focused on the reasons why companies grow and ascertained that the most important reasons are:

- i. To achieve superior brand recognition;
- ii. Improve cost position;
- iii. To attract stronger alliance partners;
- iv. Gain access to capital;
- v. Attract superior people,
- vi. Raise profits;
- vii. Obtain a superior strategic position, and most importantly
- viii. Generate superior value.

There is a premium placed on companies that demonstrate an ability to deliver on superior, sustainable growth expectations (Schwenke, 2011). A good company that becomes a great company is in fact answering the question as to why the good-to-great companies were able to achieve sustainable growth. It has been stated that the important criteria for great companies are that they make the leap from good results to great results and sustain those results for at least fifteen years (Collins, 2001). The main question was: What did the good-to-great companies share in common that distinguished them from the comparison companies or what was different, compared with the comparison companies in the same industry? Addressing the question of sustainability, the good-to-great companies were also compared with unsustainable companies.

The implementation of the steps followed, which cause some companies to attain higher levels of success than others, are determined by:

- i. Celebrity leaders who come in from the outside are negatively correlated with taking a company from good to great;
- ii. No systematic pattern was found linking specific forms of executive compensation to the process of going from good to great;
- iii. Strategy per sé did not separate the good-to-great companies from other companies;
- iv. The good-to-great companies did not focus principally on what to do to become great; they focused on what not to do and what to stop doing;
- v. Technology can accelerate a transformation, but technology cannot cause a transformation;
- vi. Mergers and acquisitions play only a very small role in achieving transformation from good to great;
- vii. The good-to-great companies paid little attention to managing change, motivating people or creating alignment;
- viii. The good-to-great companies had no name, tag line, launch event or programme to signify their transformations;
- ix. Greatness is not a function of circumstance. Greatness is largely a matter of conscious choice (Collins, 2001)

These results formed an integral part of the questionnaire that was developed for the current study to research the appropriate steps the MDs or CEOs of the participating agribusinesses in the grain segment of the agricultural sector in South Africa value the most for ensuring sustainable profitability and growth. A comparison with these findings will be reported in Chapter 5.

6.2 Challenges of sustainable growth

This section will focus on the identification of a number of growth drivers. According to Schwenke (2011), the factors that inhibit growth range include financial, technological and managerial aspects. The following main reasons explain the rarity of sustainable growth:

- i. The trade-off: now versus future (growth versus return on invested capital). A key challenge to growth involves the tension between protecting revenue streams from existing business, which is critical to current success and supporting new concepts that may be crucial to future success.
- ii. Disruptive forces: Many companies ignored disruptive forces in the industry while paying exclusive attention to their best customers and listening to customer focus groups in order to allocate investments to the products whose profit margins are most

- attractive. These forces may be a new product, technology or channel which dramatically alters the way customers are served.
- iii. Size: In the past, size was often quoted as an inhibitor of growth but today's most successful large companies are exploiting their size and scope, together with the large number of talented professionals they employ, to create unique value propositions that help them achieve a distinctive and sustainable competitive advantage.
 - iv. Focus on core business – the unbundling trend: Many companies stop growing as rapidly as they did previously when they grow in size. Their stock price begins to reflect their poor growth prospects and unbundling follows; the company being broken up and sold off piece by piece. A group of investors believe that the unbundling of non-core operations improves the firm's focus and enhances value to shareholders.
 - v. Structural and managerial challenges: Sometimes, structural and managerial challenges are the main limitations on a firm's growth. The firm's growth can ultimately be restrained by its inability to find, train and absorb new management of sufficient quality, resulting in an increase in the costs of growth.
 - vi. Momentum: It is easier to achieve growth when a company is already in a growth phase. In other words, growth feeds growth (Schwenke, 2011). Collins (2001) described it as the "flywheel" because no matter how dramatic the end result, the good-to-great transformation never happens in a single event. The process resembled relentlessly pushing a giant heavy flywheel in one direction, turn upon turn, building momentum until a point of breakthrough, and beyond.

6.3 Determinants of growth

This section discusses the determinants of growth and the components that drives such growth in agribusiness, and includes the conceptual framework, the growth motivation and other important components of sustainable growth.

6.3.1 An introduction to growth

Sustaining business growth is one of the key challenges that business leaders face (McGrath & MacMillan, 2005; Smith *et al.*, 2005). Sustainable high growth is the difference between an average business and a great one, yet the achievement of this phenomenon is arguably one of the most difficult business challenges (Joachimsthaler, 2007). Despite both the importance and difficulty of achieving sustainable growth, there is little guidance in the academic literature in terms of the identification of specific business practices, competitive tactics and strategies associated with the achievement of growth over the long term (Covin *et al.*, 1990). In fact, growth constitutes one of the least studied dimensions of performance within the field of management, as compared with other performance variables such as profitability (Moreno & Casillas, 2008). There is even

less in the academic literature about growth in the South African context (Eitzen & Sartorius, 2012). In the grain segment of the agricultural sector in South Africa, growth is mentioned often in the annual reports by the chairmen of the boards, as well as the MDs or CEOs of these agribusinesses. Some of the included financial indicators are growth measurements, but literature on sustainable growth in the agricultural sector is hard to find. There is, however, consensus that growth is not a random or chance event, but is associated with specific firm attributes and behaviours (Perren, 1999a; Perren, 1999b).

Some of the significant benefits of growth include obtaining superior strategic positioning and generating superior value (Stewart, 2006; Jonash, 2005).

The key determinants of growth were identified for Johannesburg Securities Exchange (JSE) listed companies by Schwenke (2011). These conceptual framework and identified growth drivers are applicable for any business and industry, and also for agribusinesses in the grain segment of the agricultural sector in South Africa. The following sub-sections will deal with these factors of growth in more detail.

6.3.2 Conceptual Framework

The literature on growth is fragmented, with authors often focusing on one or two factors which can influence growth. The review of the growth literature, therefore, makes use of a conceptual framework, such as the framework by Schwenke (2011) illustrated in Figure 2.2, to organise the variables that influence growth into a number of coherent themes in order to structure the literature review. In this regard, the literature review assembled five categories of factors or themes, which are necessary for a company to achieve growth. These categories include: growth motivation, expertise in managing growth, demand, resources, and supply. Although the literature review discusses the influence of each of these variables on growth, it has been assumed that the causal relationships affecting growth are complex and the five categories of factors that influence growth will, in many instances, also display inter-relationships between themselves and may even include more categories.

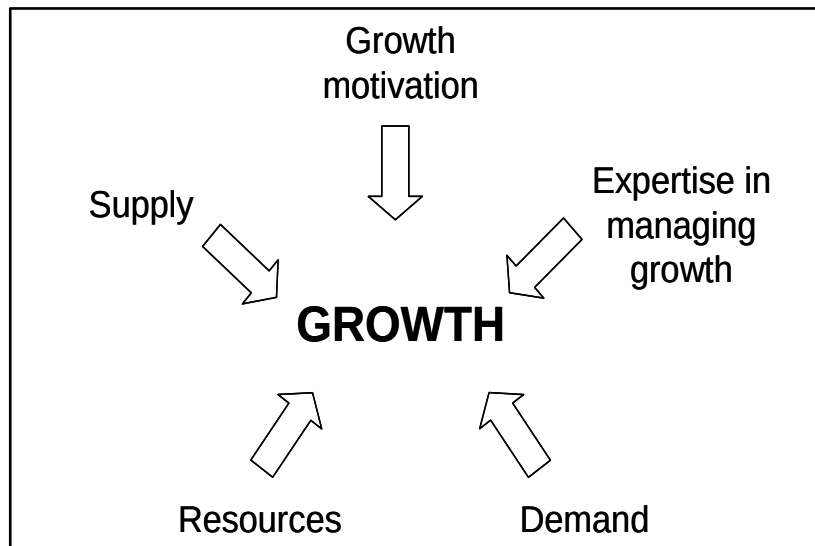


Figure 2.2: Conceptual framework of growth drivers

Source: Schwenke (2011)

6.3.3 Growth motivation

Motivation to grow is an essential precursor to growth. Penrose (1959) and Barringer and Jones (2004) argue that there is an ideal rate at which a firm should grow, but recognise that firms may fail to grow at their ideal rate simply because of a lack of motivation. While this motivation to grow can manifest itself in a number of ways, it is, however, important that a “focus on growth” is maintained by the company’s leaders (Laurie *et al.*, 2006; Barringer & Jones, 2004). In addition, leadership is identified as being an important driver of growth (Collins, 2001). This focus on growth required to ensure growth motivation needs to be communicated and instilled in all staff throughout the company. Arguably, the most effective way of communicating the importance of growth is through an effective performance measurement system (Kaplan & Norton, 1992; 2007). Discipline in identifying what needs to be done to grow and relentlessly doing those things is also key to growth (Collins, 2001).

The drivers of growth motivation can be summarised as a focus on growth, leadership, an effective performance measurement system and discipline, which are discussed in more detail in the following sections.

6.3.3.1 Focus on growth

To achieve sustainable growth, it is necessary to have a passionate focus on growth. Growth will not occur on its own, but rather needs to be planned for and focused on. In order for a company to achieve sustainable growth, it is important that the CEO should champion the growth challenge (Laurie *et al.*, 2006). Many companies that have achieved significant growth had CEOs that spent approximately half their time on growth-related projects (Laurie *et al.*, 2006). Barringer and Jones

(2004) noted that rapid-growth firms emphasised a “commitment to growth”, as compared with normal- or low-growth firms. Rapid-growth firms were also found to emphasise their continued growth intentions, while this was not done by comparable slower growing firms.

6.3.3.2 Leadership

Collins (2001) identified “level five” leadership as a characteristic, setting apart great companies from their competitors. The term “level five” leadership refers to leaders who have a unique combination of personal humility and professional will, which combine to create a fierce resolve to do whatever is needed to make the company great. It is this motivation to be great that sets companies apart from their competitors and is posited to be a valuable driver of growth.

6.3.3.3 An effective performance measurement system

A performance measurement system is an effective way to align behaviour and outcomes with corporate objectives, motivate employees, and monitor the performance of employees and the company as a whole (Kaplan & Norton, 1992; 2007). For a performance measurement system to be effective as a driver of growth, it must emphasise those drivers which in turn influence the achievement of sustainable growth the most (Kaplan & Norton, 1992; 2007; Neely, 2005). An effective performance measurement system is important because measurement provides a way to assess performance (Diong & Choo, 2008; Hess, 2007). Incentives that motivate managers to prioritise growth also help resolve motivational problems regarding growth (Barringer & Jones, 2004). An additional benefit of effective performance measurement systems is that they assist in identifying best practice, which can be disseminated across the organisation, and problem areas which can then be rectified timeously. Performance measurement systems also contribute indirectly to the growth ambitions of the firm by enhancing communication and improving staff understanding of the firm’s vision and goals (Barringer & Jones, 2004).

6.3.3.4 Discipline

Collins (2001) defines discipline as one of the differentiating factors which allows companies to achieve success. The desired outcomes have to be aligned with the company’s objectives; and then relentlessly focusing on the achievement of those outcomes is a key component of growth motivation.

6.3.4 Expertise in managing growth

Motivation to grow is a precursor to growth, but sustainable growth will only be achieved if the company also has the expertise in managing growth.

6.3.4.1 Strategic focus

Strategy is a key area of expertise needed to manage growth. Within the context of strategy, executives need to make a choice of strategic focus, which could either be on one or a combination of several strategies. Furthermore, the chosen strategic focus can be implemented either through organic growth initiatives, an acquisition strategy or a combination approach. The importance of strategic focus, and of the implementation of the strategy or combination of strategies, is so high that this section will be covered separately.

6.3.4.2 Acquisitions of other companies

Acquisition has been an important path to growth (Smit *et al.*, 2005; Hay & Liu, 1998; Freeser & Willard, 1990). Benefits of acquisitions include the possibility of obtaining far more rapid access to larger markets, securing supply of limited inputs, and increasing production capacity at lower costs than internal development would allow (Freeser & Willard, 1990).

Acquisitions often receive criticism for their discouraging track record. Laurie *et al.* (2006) argue that over time, 65 % of acquisitions destroy more value than they create. However, Bruner (2001) is of a slightly different view and concludes that studies of targets and buyers combined suggest that acquisition transactions create joint value. Furthermore, in most cases, targets benefit from mergers and acquisitions (M&A). Bruner (2001) highlights the point that value is created in M&A activity through focus, relatedness and adherence to strategy, while diversification, size maximisation, empire building and hubris are justifications for M&A activity associated with the destruction of value. Acquisitions appear to be more attractive in slow-growing markets (Hay & Liu, 1998). This may be a result of the difficulty in justifying conventional capital investment in a market which is not growing significantly, and may indicate that firms are trying to obtain a strategic advantage by achieving critical size with the aim of becoming the dominant firm in the market. Dominant firms often find it difficult to achieve a high growth rate through acquisitions because they are large and there are too few targets available, and any significant acquisition would warrant the attention of competition authorities (Hay & Liu, 1998). Smaller firms, on the other hand, may be able to achieve high growth through a series of smaller acquisitions in absolute size, without attracting rival bids for the same targets (Hay & Liu, 1998).

Laurie *et al.* (2006) argue that although acquisition plays an important role in any growth strategy, acquisition cannot substitute for growth. Rather than serving as a direct growth driver, acquisitions should serve as a way of acquiring specific capabilities, assets and market knowledge (Laurie *et al.*, 2006). Although there is a great deal of negativity surrounding the efficacy of acquisitions, it appears that, provided they are undertaken with focus and as part of the firm's strategy, acquisitions are an important driver of growth. Furthermore, an often overlooked rationale for

acquisitions is the ability to obtain capabilities, assets and knowledge, which would fuel future growth.

6.3.4.3 Geographical expansion

Geographical expansion essentially involves doing what a company is currently doing, in more geographical areas. Ansoff (1968) proposed four alternatives for strategic growth: market penetration; product development; market development; and diversification. Market development can often involve moves into new geographies, where broad focus does not change but new markets are entered. Geographic expansion poses certain operational risks, especially if the characteristics of the new market are dissimilar to those of the company's established markets. Many firms have found their expansion into new geographies costly owing to a lack of understanding of the competitive landscape in the new target market.

6.3.4.4 A simple, captivating business model

While an effective and carefully designed business model is critical for success and growth (Diong & Choo, 2008), Hess (2007) has reported that it was companies with simple, easy to understand and captivating business models that significantly outperformed their competitors. The benefit of simplicity is explained as follows: "with simplicity comes understanding and engagement because employees know where the company is headed, how it will get there and what their individual role is in that growth." (Hess, 2007:57).

To ensure sustainability, businesses should constantly examine their business model by often reviewing their value proposition and their value chain to ensure it is consistent with the strategy of the business. It is only by constantly reviewing the business model to ensure that they are relevant and captivating, that businesses will keep pace with a rapidly changing business environment (Diong & Choo, 2008).

6.3.4.5 Excellent execution

Hamel (2000) defines three categories of strategic resources as comprising the foundation for competitive advantage: core competencies (what the firm knows) are the fundamental and unique capabilities that form the basis for the success of the firm; strategic assets are physical assets, brands and customer relationships; and core processes (what the firm does) are what the firm actually does and how it structures and performs its activities. These can be divided into three main processes: customer relationship management; product innovation; and management of firm infrastructure.

It is effective utilisation of strategic assets through the use of core competencies and core processes that result in excellence. According to Hess (2007), "the high growth companies

generally do not have unique strategies, products or services, nor are they market leading innovators, but they are execution champions – day after day, they have figured out how to get consistent high-quality performance from their people”. Excellent execution also entails the effective implementation of the strategy of the firm. While many firms have impressive policies and protocols setting out the firm’s strategy, very few execute their strategy effectively. These firms, in essence, have established the map of where they want to go, but have not followed the map in their day-to-day activities to ensure that they reach the desired destination.

6.3.4.6 Repeatable growth processes

Many companies invest significant amounts of money in human resources, supply chain, and other operating processes in the quest for continuous improvement. By contrast, little investment and focus goes into processes for developing growth or institutionalising capabilities needed to achieve growth (Laurie *et al.*, 2006). Zook and Allen (2003) reported that companies who consistently outgrow their rivals do so by developing processes in order to grow in a predictable and repeatable way. By formalising the growth process into a repeatable formula, companies can achieve higher success rates in what is normally a complex, experimental and chaotic process. The repeatability of the process allows companies to systematise the growth and take advantage of learning-curve effects (Zook & Allen, 2003). Companies which demonstrate their ability as consistent repeaters, display strong discipline and study their customers and their customers’ economics very carefully, which sets the stage for industry-leading growth. Zook and Allen (2003) conclude that learning how to make growth initiatives repeatable creates strategic benefits, which include learning-curve effects, reduced complexity, speed and strategic clarity. A learning-curve effect refers to a repeatable model that allows managers to refine skills and systematise processes which are developed mostly through guesswork the first time they are completed. Reduced complexity is a process that is repeatable and which reduces the complexity and uncertainty associated with growth initiatives. The speed benefit refers to a repeatable formula for growth initiatives whereby a number of moves can successfully be started or finished, in a way that is faster than that of competitors. Strategic clarity refers to companies with a repeatable formula that is effective and easy to understand.

6.3.4.7 Knowledge of customers

The foundation for many companies for sustainable growth is a deep understanding of their customers (Zook & Allen, 2003). This provides the benefits of improved satisfaction, and as a result, a loyal customer base. In the context of growth, this should ensure a steady stream of repeated business from satisfied customers. An intimate knowledge of customers will provide an understanding of their wants and needs. This insight allows the sale of additional related products

to customers. In addition, companies can achieve growth by tracking their customers' expansion plans and anticipating their future needs (Zook & Allen, 2003).

6.3.5 Resources

The resource-based view of a firm proposes that sustained competitive advantage is created by the unique resources and capabilities of a firm in its environment (Barney, 1995). According to this paradigm, the micro-economic equilibrium where homogenous firms make zero profit can be overcome if the following two conditions are met (Rumelt, 1984).

Firstly, the firm holds superior resources and these resources are not easily diffused throughout the industry. This idea is akin to Porter's (1998) concept of barriers to entry. When these ideas are applied in the context of growth, it suggests that superior or unique resources will act as an effective driver of sustainable growth. These resources specifically refer to strategic assets, managerial talent, a talent incubator which develop identified employees), happy people, networks and key strategic relationships. Hamel (2000) identified strategic assets as comprising one of the three foundations necessary for competitive advantage. Hamel's (2000) definition of strategic assets included physical assets, brands and customer relationships. For the purposes of our discussion, key strategic relationships have been split out and will be discussed separately. Strategic assets are those assets, physical or intangible, which are unique and which provide a competitive advantage over the company's rivals.

Secondly, Penrose (1959), Slater (1980), and Barringer and Jones (2004) all referred to the lack of managerial talent as one of the most significant limitation in terms of growth potential for any firm. Ultimately, a firm's growth is constrained by its ability to find, train and absorb new management of sufficient quality who can administer and accommodate its growth (Slater, 1980, Barringer & Jones, 2004). The corollary of this assertion is that in order to grow on a sustainable basis, it is necessary to have sufficient managerial talent in the organisation. Barringer *et al.* (1998) suggest that rapid-growing firms reduced the impact of the managerial capacity problem through strategic alliances, use of cash incentives, and employee empowerment practices. The authors concluded by arguing that these practices reduce the effect of the managerial capacity limitation and enable firms to pursue growth opportunities that would otherwise be beyond their reach.

A talent incubator was also recognised as being a resource factor. Talent encompasses the skills, knowledge, technical know-how and ability that reside in people. As managerial talent is a scarce resource, successful companies need to ensure that they have a reliable supply of talent. An effective talent development programme provides a company with a long-term competitive edge and ensures that the company has a bountiful supply of talent, which is available at a lower cost

compared with sourcing talent from outside of the company. In addition, it is necessary to have the right people in the right roles to lead and grow the business, especially during the periodic upheavals which all businesses are likely to encounter (Cohn *et al.*, 2005). A prescient strategy, inspired business model and well-aligned business processes will not compensate for an absence of adequate human capabilities (Diong & Choo, 2008). Talent development programmes link closely to the factor of happy people and the relationship thereof with sustainable growth. A happy, motivated and engaged workforce is believed to be a powerful driver of growth. Although the linkage between staff morale and motivation and the success of the firm is one which appears logical, it is difficult to measure and quantify.

Similarly, networks or key strategic relationships are other important “resource” related factors that influence sustainable growth. The use of networks refers to the conscious effort by growth-seeking firms to establish long-term relationships with other firms in order to obtain and sustain a competitive advantage (Jarillo, 1989). It is posited that growth-seeking firms use networks more often than low growth firms do precisely because these resources are the key to above-average growth, letting firms pursue opportunities that lie beyond what their present assets would afford (Jarillo, 1989).

6.3.6 Demand

If companies can ensure that there is strong demand for their products, they will achieve higher rates of growth and competitiveness (Porter, 1998). Demand is linked to a number of growth drivers such as the economy and industry; entrepreneurship; innovation; and customer enthusiasm.

6.3.6.1 Customer enthusiasm

Enthusiastic customers are a key driver of profitable growth because they not only become repeat customers and ensure sustainable business, but also recommend company’s products and services to friends and acquaintances, which serves to grow the company’s customer base and revenues (Reichheld, 2003). Reichheld (2003) found that it was possible to obtain useful information, which correlated with customer behaviour, and ultimately with company growth, by asking just one question: “How willing are you to recommend the company’s product or service to someone else?” It was found in most of the industries studied that the percentage of customers who were enthusiastic enough to refer a friend or colleague correlated directly with differences in growth rates among competitors (Reichheld, 2003).

This driver of growth is particularly effective as it not only provides a company with the best form of marketing in the form of word-of-mouth recommendations, but also significantly reduces its

marketing spend: the company's loyal customers, in effect, become its marketing department (Reichheld, 2003).

6.3.6.2 The economy and industry

If the country or industry in which a company operates is growing, the company is likely to grow. Historically, it was thought that growth was the preserve of companies operating in growth industries (Mascarenhas *et al.*, 2002; Gertz & Baptista, 1995).

6.3.6.3 Entrepreneurship

Entrepreneurs have been defined as being primarily motivated by the pursuit of opportunities, as opposed to those managers exclusively concerned with the efficient management of resources already controlled by the firm (Stevenson & Jarillo, 2007). As a result of this pursuit of opportunity, high growth tends to be associated with a firm's entrepreneurial behaviour (Brown *et al.*, 2001; Stevenson & Jarillo, 2007; Jarillo, 1989). In fact, growth is considered a logical consequence of innovative, proactive and risk-taking behaviour on the part of the firm, as these are dimensions which define entrepreneurship (Moreno & Casillas, 2008). Stopford and Baden-Fuller (1994) reported that poorly performing mature companies were generally narrow, defensive, and parochial in their thinking. In contrast, high-performing mature companies were able to maintain the features of entrepreneurial organisations: teamwork, high aspirations, freedom to experiment, the capability to learn and adapt, and the capacity to recognise and resolve dilemmas that unfold over time (Gertz & Baptista, 1995).

As entrepreneurs are concerned with pursuing new opportunities, with the associated promise of an increase in revenues and earnings, it follows that an entrepreneurial focus will contribute as a driver of growth.

6.3.6.4 Innovation

Innovation is widely believed to be key driver of sustainable top- and bottom-line growth (Diong & Choo, 2008; Kelley & Littman, 2006; Jonash, 2005). Tom Kelley, general manager of IDEO and author of "The Art of Innovation" and "The Ten Faces of Innovation", identifies the growing acknowledgment of innovation as a centrepiece of corporate strategy, as the single biggest recent business trend (Kelley & Littman, 2001). Furthermore, The Economist (2002) recently claimed, "Innovation is now recognised as the single most important ingredient in any modern economy" (Kelley *et al.*, 2006). It is for these reasons that leading USA companies have re-focused on organic growth. Companies such as General Electric and IBM have adopted innovation as a corporate theme (Kanter, 2006). In fact, General Electric is relying on innovation to achieve its commitment of organic double-digit growth (Kanter, 2006; Stewart, 2006). Innovation encompasses advancements or new developments in resources, processes and business

models (Knight, 2005). Most innovations occur in the resources category, such as developing new products and technologies. Some innovations occur in the process category and lead to better ways to getting things done. Much fewer innovations occur in the business model category, which involve selling products or services in an entirely new way, often to customers who could never previously afford them (Knight, 2005). Laurie *et al.* (2006) have extended the idea of product innovation and argue that companies should identify and create new growth platforms on which “businesses could build families of products and services and extend their capabilities into multiple new domains.” (Laurie *et al.*, 2006: 80). Rather than focusing on single resource or product innovations, it is the related families of products and services that serve as particularly lucrative growth platforms.

Innovation is a strong driver of growth. Even more powerful than the single resource or process innovation, is an approach which focuses on families or platforms of related new products and services. This paradigm helps identify all the synergies and related benefits of a new idea. As a result, these new ideas are more likely to be supported and successful (Kline & Rosenberg, 1986).

6.3.7 Supply

The final category that determines growth is supply, which is closely linked to the micro-economic theory of demand as a growth driver. Factors, such as the level of competition in the industry, contribute to the market structure that a company faces in its particular industry and influences the ease with which companies can grow.

6.3.7.1 Competition from other companies

In general, higher levels of competition over time make it more difficult for companies to achieve sustainable growth, and indeed, one would expect an inverse relationship between the level of competition and the growth rate in a specific industry.

Huyett and Viguerie (2005) identified three types of competition. The first is traditional “trench warfare”, which is common in mature, undifferentiated industries when demand is shrinking or cannot keep pace with rapid growth in supply. The result is shrinking revenues and profits caused by intensifying competition but with few changes among the market leaders. The second type of competition, “judo competition” is the opposite of traditional competition in that the overall industry grows but the spread of profits and market leadership amongst industry participants is constantly changing. Such industries are often led by a dominant firm but these dominant players are always at risk that small competitors can undermine their competitiveness through product innovation or new business models that compensate for a lack of scale or scope. Finally, fierce competition combines the most challenging aspects of the previous two types of competition: a shrinking

industry and fierce competition which results in many changes in the dominant firms within the industry.

7. Profitable growth

Sustainable profitability and growth go hand in hand in regard to business success. However, sustainable growth is dependent on sustainable profit, but sustainable profit is not a guarantee for sustainable growth when investment in growth opportunities do not contribute to increased profitability. Success is profitability in the short-term and long-term, as well as growth in the long-term with good return on investments. Profit is key to basic financial survival as a corporate entity, while growth is key to profit and long-term success (Mankiw, 2014). To be successful and remain in business, both profitability and growth are important and necessary for a company to survive and remain attractive to investors and analysts. Profit, for any company, is the primary goal (Mankiw, 2014), and with a company that does not initially have investors or financing, profit may be the corporation's only capital. Without sufficient capital or the financial resources used to sustain and operate a company, business failure is imminent. Although financing can be used to financially sustain a company for a time, it is ultimately a liability, not an asset. After a company moves beyond the start-up phase, the next item of focus should be growth.

Growth of a business is essentially expansion, making the company bigger, increasing its market share, and ultimately making the company more profitable. Measuring growth is possible by looking at total sales, number of staff, market share and turnover (Schwenke, 2011). Though the present profitability of a company might be good, further opportunities for growth should always be explored, since this offers opportunities for greater overall profitability and keeps or moves the corporation into the line of sight of analysts and potential or current investors. Knowing the present condition of any company is essential to creating a successful growth strategy.

The interrelation of profitability and growth is illustrated by the fact that growth can be evaluated by examining profit and total sales. This is a basic operating principle.

8. Competitive strategy and sustainable competitive advantage

A competitive strategy and sustainable competitive advantage are both important for achieving sustainable profitability and growth in the long term. "While competitive strategy concentrates on the industry, competitive advantage concentrates on the firm" (Porter, 1985). Porter (1985) also noted that "competitive strategy is aimed towards the establishment of a profitable and sustainable position against the forces that determine industry competition" and "competitive advantage grows fundamentally out of value a firm is able to create for its buyers that exceeds the firm's cost of creating it".

The choice of competitive strategy is determined by two factors. Firstly, the attractiveness of an industry for long-term profitability and factors that influence it, and secondly, the determinants of relative competitive position within an industry. These factors are both dynamic because industries become more or less attractive over time, and competitive position reflects an unending battle among competitors. Competitive strategy not only responds to the environment but also attempts to shape that economic environment in a firm's favour (Porter, 1985). A sophisticated understanding of the rules of competition determines an industry's attractiveness, which is embodied in competitive forces involved in new competitors entering the sector, the threat of substitutes, the bargaining power of buyers and suppliers, and the rivalry among the existing competitors (Porter, 1985).

The collective strength of these five forces determines the ability of firms in an industry to earn rates of return on investment that will exceed the cost of capital, and varies from industry to industry (Mankiw, 2014). These forces determine industry profitability because they influence the prices, costs, and the required investments of firms (Kleynhans, 2016). A firm's relative position within its industry is the second important question, and more specifically, whether a firm's profitability is above or below the industry average.

		Lower Cost	Differentiation
COMPETITIVE SCOPE	Board Target	1. Cost Leadership	2. Differentiation
	Narrow Target	3A. Cost Focus	3B. Differentiation Focus

Figure 2.3: Three generic strategies

Source: Porter, 1985

Sustainable competitive advantage is the fundamental basis of above-average performance. There are two types of competitive advantage that firms might possess: low cost or differentiation and the significance of any strength or weakness of firms, which is ultimately a function of the impact on relative cost or differentiation. Cost advantage and differentiation stem from industry structure and result from a firm's ability to cope with economic forces better than its rivals do. The two basic types of competitive advantage, combined with the scope of activities for which firms seek to achieve, may lead them to pursue three generic strategies that can achieve above-average performance in an industry, namely cost leadership, differentiation and focus (Porter, 1985). The focus of strategy has two variants; a cost focus and a differentiation focus (see Figure 2.3).

Competitive advantage is at the heart of any business strategy. Achieving competitive advantage requires a firm to make a choice about the type of competitive advantage it seeks to attain and the scope within which it will attain it. A combination of the three generic strategies is also possible, but being all things to all people is a recipe for strategic mediocrity and below-average performance. Care has to be taken not to become stuck in the middle, thus becoming a firm with no competitive advantage. The choice of competitive scope or the range of a firm's activities can play an important role in determining competitive advantage (Porter, 1985). There are three conditions under which a firm can simultaneously achieve both leadership and differentiation. The first condition arises when competitors are stuck and not positioned well enough to force other firms to the point where cost and differentiation become inconsistent. The second condition arises when cost is strongly affected by the share or interrelationships and the cost position is heavily determined by the market, rather than by product design, level of technology, service provided, or other factors. The third condition arises when a firm pioneers a major innovation by introducing a significant technological innovation and the firm can lower costs and enhance differentiation at the same time.

Competitive advantage grows from the way that firms organise and perform discrete activities. The activities performed when competing in a particular industry can be grouped into categories, also referred to as the value chain (Figure 2.4). All the activities in the value chain contribute to buyer value. Activities can be divided broadly into those involved in the acquiring of raw materials, of on-going production, marketing, delivery and servicing of the product (primary activities) and those providing purchased inputs, technology, human resources, or overall infrastructure functions to support the other activities (support activities). Strategy guides the way a firm performs individual activities and organises its entire value chain. Activities vary in their importance to competitive advantage in different industries. Firms gain competitive advantage from conceiving of new ways to conduct activities, employing new procedures, new technologies, or different inputs (Porter, 1998). A firm is more than the sum of its activities. A firm's value chain

is an interdependent system or network of activities, connected by linkages. Linkages occur when the way in which one activity is performed affects the cost or effectiveness of other activities. Linkages often create trade-offs in performing different activities that must be optimised. Linkages also require activities to be coordinated (Porter, 1998).

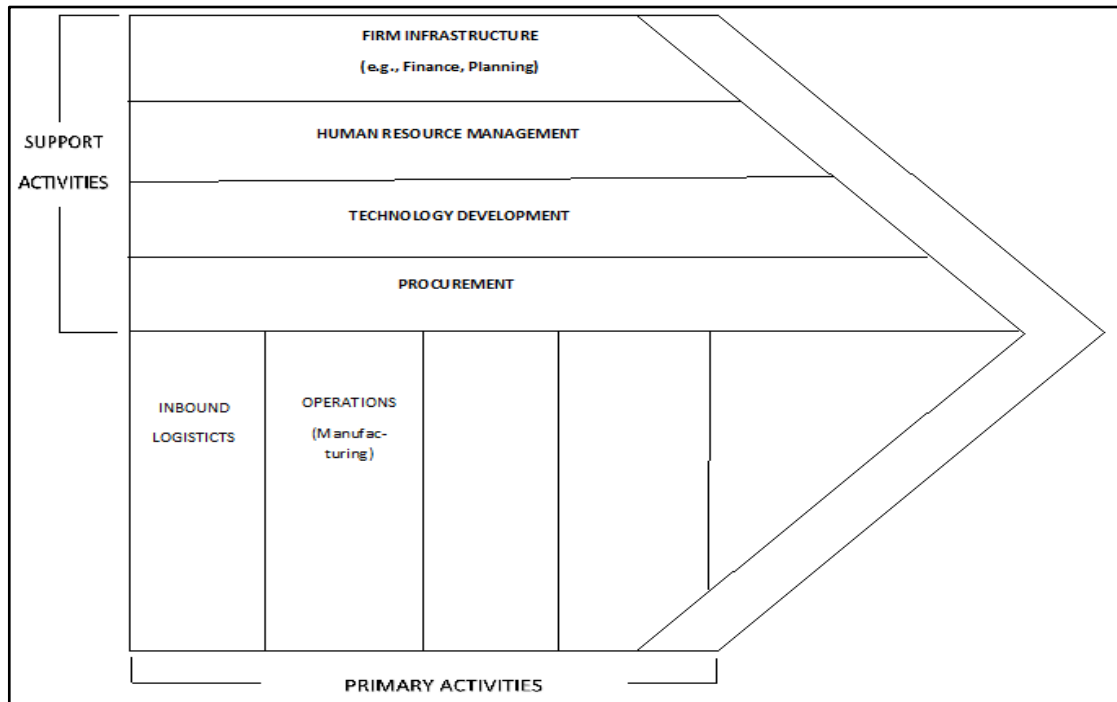


Figure 2.4: The value chain

Source: Porter, 1998

Gaining competitive advantage requires that a firm's value chain is managed as a system (see Figure 2.5) rather than a collection of separate parts. Linkages not only connect activities inside a company, but also create interdependence between a firm and its suppliers and channels. A company can create competitive advantage by better optimising or coordinating these links to the outside. The value chain provides a tool for understanding the sources of cost advantage, exposes the sources of differentiation and allows a deeper look not only at the types of competitive advantage, but also at the role of competitive scope in gaining competitive advantage. A prominent reason why firms gain competitive advantage is that they choose a different scope to competitors, by focusing on a different segment, altering geographic breadth, or combining the products of related industries.

Firms create competitive advantage by perceiving or discovering new and better ways to compete in an industry and bringing them to market, which is ultimately an act of innovation. Innovation here is defined broadly to include both improvements in technology and better methods or ways

of doing things. It can be manifested in product changes, process changes, new approaches to marketing, new forms of distribution, and new conceptions of scope. It always involves investment in developing skills and knowledge, and usually in physical assets and marketing effort (Porter, 1998). The most typical causes of innovations that shift competitive advantage are new technologies, new or shifting buyer needs, emergence of new industry segment, shifting input costs or availability, and changes in government regulation.

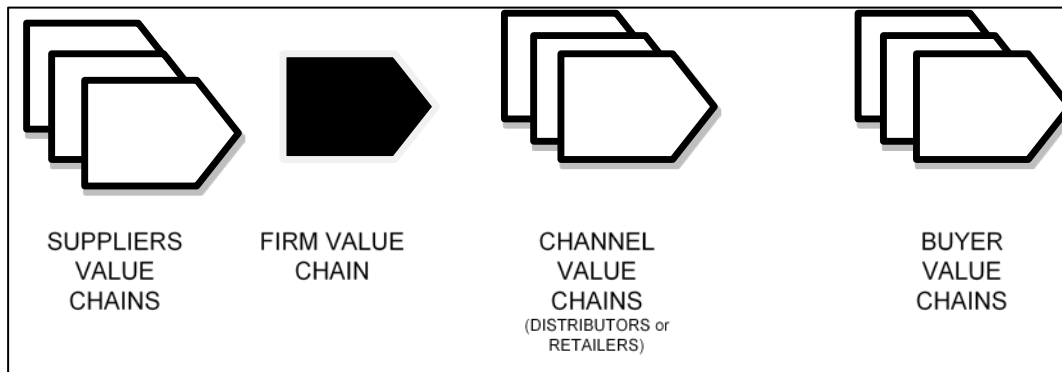


Figure 2.5: The value system

Source: Porter, 1998

Sustaining advantage requires change. Three conditions determine the sustainability of competitive advantage. The first is the particular source of the advantage: lower-order advantages, such as low labour costs or cheap raw materials that are easy to imitate, and higher-order advantages, such as proprietary process technology, product differentiation based on unique products or services, and brand reputation. Secondly, higher-order advantages usually depend on a history of sustained and cumulative investment in physical facilities and specialised, and often risky, learning, research and development or marketing that is not easy to imitate by competitors. Thirdly, constant improvement and upgrading is the most important reason that competitive advantage is sustained.

The basic principles of competitive strategy apply whether a firm is competing domestically or internationally (Porter, 1998). A firm needs a competitive advantage through global strategy, global configuration, global coordination, location-based and system-based advantages, the process of industry globalisation, moving early in global competition, and strategic alliances.

8.1 Competitiveness and competitive advantage

Competitiveness is the ability to compete successfully in the market in order to achieve sustainable growth within the global economic environment, while earning at least the opportunity cost of returns on resources employed (Esterhuizen, 2006). An important aspect regarding competitiveness, according to Esterhuizen (2006), is that competitiveness is a dynamic process, and not an absolute state of affairs; it can only be assessed within a relative sense; it is a tool to enable continuous exploitation of the market reality for gain and profits relative to other competitors; it is a holistic viewpoint of the ability to sustain the gains achieved through trade; and it depends on certain key success factors and constraints that must be identified and managed. To sustain competitiveness, scarce resources must continuously be attracted through other economic endeavours.

The approach of Porter (1998) is that wealth is governed by productivity. A nation's standard of living is determined through its productivity. In other words, the value of the output produced by a unit of labour or capital is based on the quality and the product, which affects prices as well as the efficiency of production. Traditional theories on national competitiveness seek to answer the wrong question by trying to determine why some nations succeed and others fail in international competition, rather than seeking to ask why firms based in a particular nation are able to create and sustain competitive advantage against the world's best competitors in a particular industry or segment (Porter, 1998).

Sustainable profitability and growth are dependent on the competitive advantage of a business in the particular industry. Porter's theory of the competitive advantage of nations provides a sophisticated tool for analysing competitiveness with all its implications (Figure 2.5). Porter's theory contributes to understanding the competitive advantage of nations in international trade and production. Its core, however, focuses upon individual industries, or clusters of industries, in which the principles of competitive advantage are applied. The theory begins from individual industries and builds up to the economy as a whole. Since firms, not nations, compete in international markets, understanding the way firms create and sustain competitive advantage is the key to explaining what role the nation plays in the process (Kleynhans, 2016). Therefore, the essence of the argument is that "the home nation influences the ability of its firms to succeed in particular industries" (Porter, 1998). Given this interdependence, it appears that in order to draw conclusions on the competitiveness of the particular industry, consideration of the different facets of the competitive diamond of the whole nation is needed.

Porter (1998) considers the competitiveness of a country as a function of four major determinants: factor conditions; demand conditions; related and supporting industries; and firm strategy, structure, and rivalry (Cho & Moon, 2013). Even though these determinants influence the

competitive advantage of entire nations, their nature suggests that they are more specific to a particular industry rather than typical of a country. The reason for this is that in Porter's theory, the basic unit of analysis for understanding competition is the industry. "The industry is the arena in which the competitive advantage is won or lost" (Porter, 1998). Determining the competitive advantage of nations requires explaining the role played by national attributes such as a nation's economic environment, institutions, and policies promoting businesses' ability to compete internationally in a particular industry.

8.1.1 Factor Conditions

The following sub-sections elaborate on the different factors and their relationship to competitiveness, as portrayed in Porter's Diamond Model, with reference to Figure 2.6.

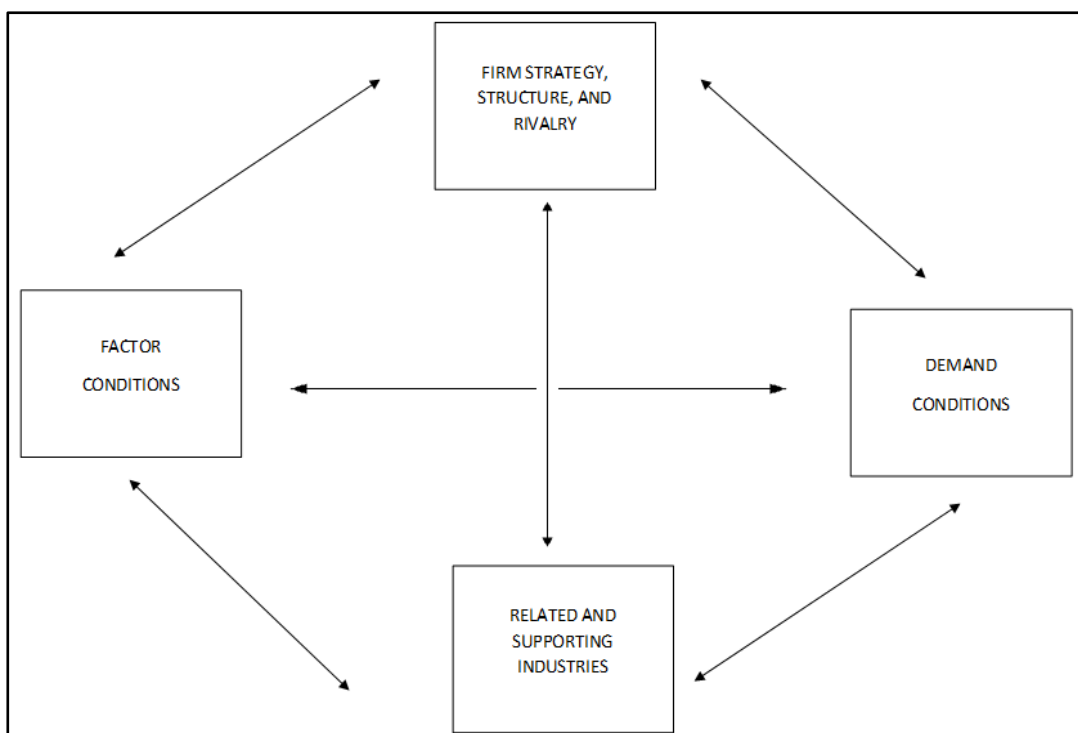


Figure 2.6: Porter's Diamond Model of competitiveness

Source: Porter, 1998

Factor conditions are the inputs which affect competition in any industry and comprise a number of broad categories (Porter, 1998):

- i. Human resources; the quantity, skills, and cost of personnel (including management);

- ii. Physical resources; the abundance, quality, accessibility, and cost of the nation's land, water, mineral, or timber deposits, hydroelectric power sources, fishing grounds, and other physical traits;
- iii. Knowledge resources; the accumulated scientific, technical, and market knowledge in a nation in the sphere of goods and services;
- iv. Capital resources; the stock of capital available in a country and the cost of its deployment;
- v. Infrastructure resources; the characteristics (including type and quality) and the cost of using the infrastructure available.

While analysing these factors as a prerequisite for building competitive advantage, it is relatively unimportant to emphasise simply their quantity or involvement in a particular industry. What determines their influence on competitiveness is the degree of *efficiency* and *effectiveness* of the way they are deployed within an industry.

8.1.2 Demand Conditions

The importance of market demand conditions which influence competitive advantage stems from the fact that in a market economy, the direction of production, as well as the kinds of goods which are produced, is determined by the needs of buyers. What this means is that, regardless of the state of the other determinants in the Diamond Model, competitiveness in an industry is impossible to achieve unless demand conditions allow for the successful realisation of firms' sales. Underlying this dependence is the dynamic influence of home demand, which shapes the rate and character of improvement and innovation by a nation's firms. The sources of this influence within the context of home demand are divided into three broad attributes: the composition of home demand, the size and pattern of growth of home demand, and the mechanisms by which a nation's domestic preferences are transmitted to foreign markets. Considering demand conditions, the most important aspects are (Porter, 1998):

- i. Home Demand Composition. The composition of home demand determines the way firms perceive, interpret, and respond to buyer needs.
- ii. Demand Size and Pattern of Growth. In order for a clear relationship between this attribute of home demand and competitive advantage to be established, characteristics that should be considered are the size of home demand, the growth rate of home demand, and early saturation of home demand.
- iii. Internalisation of Domestic Demand. While the source for creating national advantage is rooted in the composition of home demand, its sustainability is accounted for by the size and pattern of growth of home demand, and the transfer of a nation's products,

while services abroad relates to a third attribute of home demand – its capacity of *becoming internalised*.

8.1.3 Related and Supporting Industries

The sources of competitive advantage in an industry should not be considered separately, but rather in the context of the whole economy. Special account should be taken of the industries which are directly related or support the one whose competitiveness is a subject of investigation. The reason for this requirement is that, provided supplier industries possess an international advantage, downstream industries could benefit from it in several ways. One of these refers to the access that competitive supplier industries provide to cost-effective inputs (Porter, 1998). Given the increasingly significant globalisation process, which makes inputs available on global markets, emphasis should be put not on the availability of the inputs, but on their effective utilisation. Therefore, a more important aspect in which the presence of competitive advantage in supplier industries could influence the creation of one in the downstream industries is the provision of coordination on the part of the former in terms of linkages with the value chains of the latter (Cho & Moon, 2013). Perhaps the most important benefit of home-based suppliers, however, is expressed in the process of innovation and upgrading. It refers to a mutual influence between firms and their suppliers. On the one hand, suppliers help firms to perceive new methods and opportunities to apply new technology. New innovations could, on the other hand, be given from firms to their suppliers by influencing suppliers' technical efforts in a direction of testing new developments and ideas. Other factors, such as the exchange of research and development information (R&D), joint problem solving, and transmitting of information through suppliers to different firms, contribute to the establishment of a fast pace of innovation within the entire national industry and may also enhance competitiveness.

8.1.4 Firm Strategy, Structure, and Rivalry

In closing the circle of factors which determine the existence of competitive advantage, it is necessary to consider the context in which firms are created, organised and managed, as well as the nature of domestic rivalry (Van der Merwe *et al.*, 2016). The goals, strategies, and ways of organising firms in industries are widely influenced by national circumstances. The achievement of national advantage depends on the degree to which these choices correspond with the sources of competitive advantage in an industry. Firm strategy and structure are reflective of company goals and individual goals, as well as national prestige and national priority. Company goals are strongly determined by ownership structure, the motivation of owners and holders of debt, the nature of the corporate governance, and the incentive processes that shape the motivation of senior managers (Porter, 1998). Provided that the goals of owners and managers match the needs of the industry, the opportunities for success are greatly enhanced. As far as the goals of

individuals who work in firms are concerned, they also have a significant role for creating and upgrading competitive advantage. The achievement of the latter depends on the motivation of people to develop their skills, as well as to expend the necessary effort needed for the company's success. Another important source of competitive influence on the way firms are organised is national prestige or national priorities. These factors affect the process of attracting qualified human resources to particular industries, as well as the strength of individuals' and shareholders' motivation. Provided that the latter is quite pronounced, it also turns into an important conductor of corporate success. The reason for this is that it assures sustained commitment of capital and human resources to an industry or to a firm, and for employees, to a profession. This in turn enhances productivity and effectiveness (Schwenke, 2011).

The stimuli for increased productivity and effectiveness should also be traced at a higher level which encompasses not only the manner of a firm's organisation but also its performance as influenced by the behaviour of its competitors. In this respect, an important correlation based on empirical findings has been established. It concerns the association between vigorous domestic rivalry and the creation and persistence of competitive advantage in an industry (Porter, 1998). The underlying logic is that competition at home pressures firms to improve and innovate. Having once established the manner for constant upgrading of their competitive edge at home, companies easily transfer their strategy for success to a worldwide scene. Vigorous local rivalry can also stimulate competitiveness through the need for expansion of firms' markets and selling abroad in order to grow. This is particularly likely in the presence of economy of scale when local competitors force each other to direct their activities abroad in the pursuit of greater efficiency and higher profitability (Cho & Moon, 2013). Domestic rivalry not only creates pressures to innovate but also to innovate in ways that upgrade the competitive advantages of a nation's firms. The presence of rivals lowers the significance of advantages created through little effort and investment, such as those which stem simply from being in a nation. This, therefore, forces a nation's firms to seek higher and ultimately more sustainable sources of competitive advantage. So, contrary to the perceived notion of "national champions" reaping economy of scale in the home market, the existence of strong domestic rivalry inhibits reliance on factor advantages, as well as conditions for their more efficient deployment.

Apart from the major determinants, Porter (1998) considers two additional variables which are not as important as the determinants in influencing the creation of a competitive advantage, but are significant in shaping the direction of the influence. These are chance and government. Chance events are developments beyond the control of firms, such as direct inventions and breakthroughs in basic technologies. These can play an important role in shifting competitive advantage in many industries. Government, being an important variable, may set policies which can influence the

entire system of determinants, either in the direction of undermining or enhancing competitive advantage.

Adding these variables to the whole Diamond Model results in what is referred to as the complete system, which is illustrated by Figure 2.7.

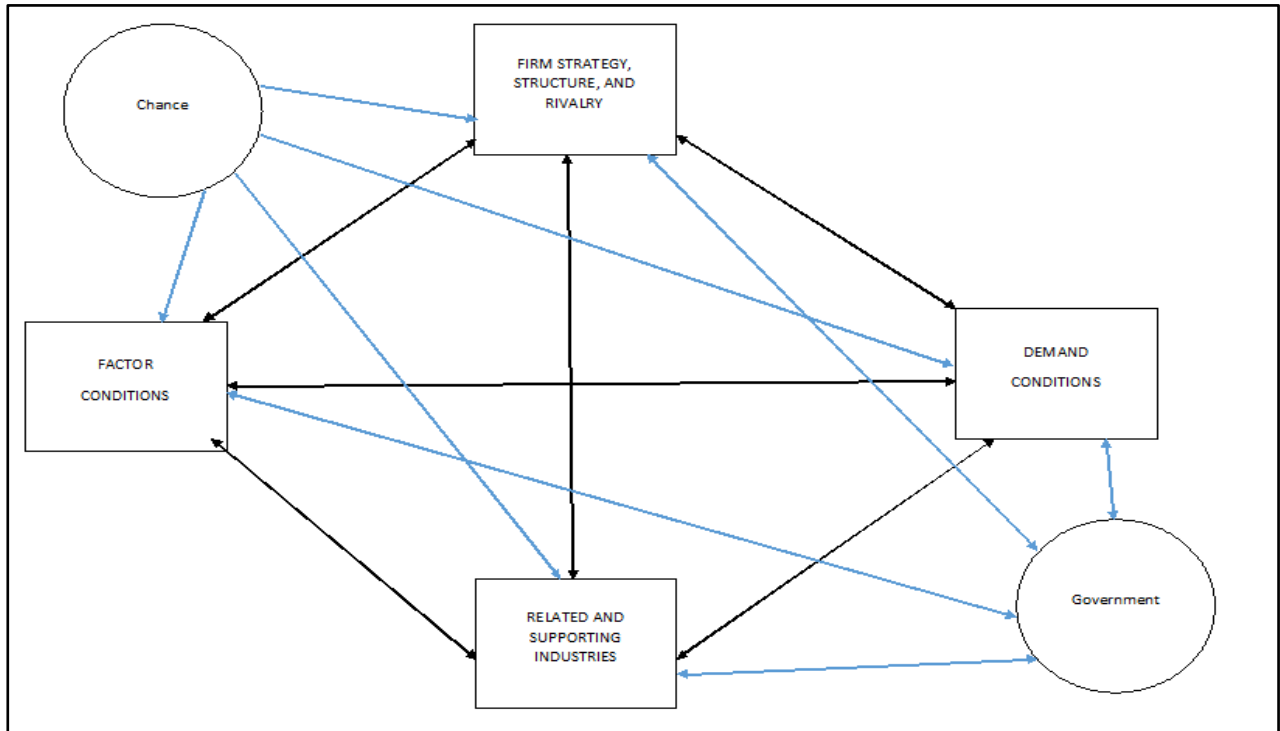


Figure 2.7: The complete system

Source: Porter, 1998

Important in understanding the determinants' power to foster competitiveness in an industry, is the condition for their being interrelated. What this means is that the determinants should form a mutually reinforcing system, referred to as a "Diamond" (Porter, 1998), and the effect of one of them should be contingent on the state of others. This implies not only that one favourable national attribute may be inadequate in itself to induce competitive advantage, but also the possibility that an advantage in one determinant can create or upgrade advantages in others. The competitive system is dynamic and constantly changing, developing and evolving (Cho & Moon, 2013).

Esterhuizen (2006) added three extensions to the diamond model. Firstly, the double diamond framework developed by Rugman and D'Cruz (1993) suggested that managers build upon domestic and foreign diamonds to become globally competitive in terms of survival, profitability and growth. Secondly, the generalised double diamond by Moon, Rugman and Verbeke (1995)

defined national competitiveness as the capability of firms engaged in value added activities in a specific industry in a particular country to sustain this value added over long periods of time in spite of international competition. Thirdly, the nine-factor model by Cho (1994) differs from Porter's diamond model in the division of factors and in the addition of new factors.

9. The relationship between sustainable profitability, growth and competitive advantage

The term "profitable growth" stresses that profitability and growth should be jointly achieved. It is a break from previous firm-development models which advocated growth to first achieve economy of scale, and then profitability. Profitability growth, in fact, hides a contradiction in terms as one often speaks of the Profitable Growth Paradox. Normally, growth investment will at first reduce the profitability, and cost reduction efforts to boost the bottom line usually have a negative impact on future growth. This is especially true with mature products or services. The only way out of the Profitable Growth Paradox is through innovation, not only technical innovation but mainly business model innovation. Porter (1985) stated: "Competitive advantage is at the heart of a firm's performance in competitive markets" and competitive strategy aims to establish a profitable and sustainable position against the forces that determine industry competition. Lafley and Martin (2013) elaborated on this by arguing that strategy is about making specific choices to win in the marketplace.

10. Strategies

The determination of a strategy and careful implementation of the chosen strategy are necessary for sustainable profitability and growth. Strategy formulation is commonly approached from a multitude of different perspectives. Grant (1991) distinguishes between two schools of thought, namely the Rational School represented by Ansoff (1968) and the Incremental School represented by Mintzberg (1987). Ansoff (1968) regards strategy formulation as a logical process which is made up of distinct steps. Strategy is formulated by a group of core managers and the tool for execution is the strategic plan, which lists activities to be carried out. Kotler (2003) divides the strategic planning process into corporate, division, business and product planning, while Porter (1996) on the other side stresses the activities in strategy and defines corporate strategy as "being different – choosing a different set of activities to deliver a unique mix of value". These complement the logical process of strategy formulation.

Grant (1991) highlights the importance of internal resources and defines strategy as the link between the firm's capabilities consisting of goals, values, capabilities, resources and systems and the industry environment comprising competition, customers and suppliers. Mintzberg (1987) characterises strategy as something that evolves and emerges through the daily operations of the company. Even though a firm's strategy may not be formally defined, its activities and their

results provide insights regarding the firm's realised strategy. Mintzberg (1987) defines strategy in five dimensions, which he refers to as the "five P's of strategy". These consist of:

- i. Strategy as a plan. Most commonly, strategy is seen as a deliberate course of action, which is purposefully decided upon in advance;
- ii. Strategy as a ploy. Strategies can serve the purpose of outwitting a competitor by use of market signals and competitive moves;
- iii. Strategy as a pattern. A planned strategy results in certain behaviours or a certain pattern in a series of actions. Strategy is seen as consistency in behaviour and action. No consistency in behaviour implies an absence of strategy;
- iv. Strategy as a position. Strategy can be seen as an outward looking activity whereby the firm attempts to position itself in the most advantageous position considering its external environment. Strategy becomes the niche in which the firm operates and represents the search for a match between the company's internal resources and its environment; and
- v. Strategy as a perspective. Strategies are abstractions which exist only in the mind of the strategists; they are ways of perceiving the world. Strategy is a common perspective shared by members of an organisation. Strategy becomes to the organisation what personality is to the individual.

According to Mintzberg (1987), a firm's realised strategy is the end result of the intentions of the company. It is the deliberate actions and emergent strategies that develop in the absence of intention, or despite a stated intention, often as a result of external shocks from the market, technology shifts and political forces. Truly deliberate strategies are seen by Mintzberg (1987) as rare, as even precise intentions will, during execution, be affected by unanticipated events and the environment.

Ansoff (1968) proposed an effective summary of a firm's choice of growth strategies based on the two dimensions: product, and markets or mission. This posed four alternatives for strategic growth, which are:

- i. Market penetration, with existing products and markets, which focuses on winning market share in the existing market.
- ii. Product development of new products in existing markets, which entails servicing the existing market or customers with new products.
- iii. Market development with existing products in new markets. This is an approach whereby existing products are sold to new markets. These new markets could be new geographical locations or previously untapped customer segments.

- iv. Diversification to new products and new markets, which involves selling newly developed products to newly established markets. This represents a departure from the core product offering and familiar markets of the company.

Within each of the four strategic choices, companies can achieve growth organically or by means of acquisition. These two categories of growth are widely employed by companies which have demonstrated superior growth. However, organic growth is perceived to be superior to acquisitive growth. Jonash (2005) demonstrates a strong positive correlation between a company's effective focus on organic growth and future shareholder returns. In contrast, some acquisitions destroy value (Laurie *et al.*, 2006), although this conclusion is refuted by authors such as Bruner (2001).

Initially, six specific strategies were identified that could influence sustained company growth. The first strategy involves increasing value to select customers (McGrath & MacMillan, 2005; Mascarenhas *et al.*, 2002; Gertz & Baptista, 1995). This strategy involves knowing everything about the base of carefully selected customers and their needs. The company focuses on serving those needs with intense dedication in order to transform the customer experience. The second strategy focuses on becoming exceptionally effective at rapidly developing large numbers of new products that offer superior value to customers (McGrath & MacMillan, 2005; Zook & Allen, 2003; Mascarenhas *et al.*, 2002; Gertz & Baptista, 1995). This strategy necessitates the development of the people and processes to enable the rapid development of new, value adding products. The third strategy attempts distribution innovation (Mascarenhas *et al.*, 2002; Harvard Management Update, 1996; Gertz & Baptista, 1995). This strategy focuses on finding and developing the most effective ways to connect customers with the company's products and services. The fourth strategy involves monopoly and/or first-mover advantage (Zook & Allen, 2003; Mascarenhas *et al.*, 2002; Harvard Management Update, 1996). This strategy involves establishing control of a market and then growing as it grows. Control of the market may be established as a result of first-mover advantage or through anti-competitive means. This strategy is unlikely to be effective in markets where there are no extreme barriers to entry or where there are vigilant competition authorities. The fifth strategy is growth by means of acquisitions (Mascarenhas *et al.*, 2002). The acquisition strategy involves acquiring and consolidating firms in order to increase market share and growth. The sixth strategy, an "adjacent space strategy" (Zook & Allen, 2003), encompasses many of the ideas already discussed, and involves pushing out the boundaries of a company's core business into an adjacent space. The adjacent space referred to can encompass expanding along the value chain, growing new products and services, using new distribution channels and entering new geographies, or even virtual 'space' on the internet and computer networks. Furthermore, this strategy could involve addressing new customer segments, often by modifying a proven product or technology or moving into the "white space", with a new business built around a strong capability (Zook & Allen, 2003).

In addition to these six strategies given, work by Eitzen and Sartorius (2012) makes reference to eleven more strategies:

- The first of these strategies involves market intelligence and focusing on understanding the market and how it is likely to change in order to optimally position the business. The output of a market intelligence strategy represents a combination of past-, present- and future-orientated outlooks of an organisation's business environment. Market intelligence can be broken down into three separate but interrelated sub-processes: future watch, strategic planning and the early warning and opportunity system (Hedin *et al.*, 2014). Differentiating the business's products and services in order to become the indispensable provider of choice to its customers is described as the second of these alternative strategies. A differentiation strategy calls for the development of a product or service that offers unique attributes that are valued by customers, and that customers perceive these to be better than or different from the products of the competition. The value added by the uniqueness of the product may allow the firm to charge a premium price for it. The firm assumes that higher prices will more than cover the extra costs incurred in offering the unique product. Firms that succeed in a differentiation strategy often have the following internal strengths: access to leading scientific research, highly skilled and creative product development teams, strong sales teams with the ability to successfully communicate the perceived strengths of the product, and corporate reputation for quality and innovation (Porter, 2016).
- The third strategy, as reported by Eitzen *et al.* (2012), is a "fitness strategy", ensuring that the business is disciplined financially and operationally so that it has the flexibility and "fitness" to overcome any adverse conditions, as well as pursue any opportunities that arise (Schwenke, 2011).
- The fourth strategy involves the expanding of the business by means of vertical integration, which implies acquiring suppliers or customers of the business to capture more of the value chain (Schwenke, 2011).
- The fifth strategy involves partnering with key suppliers or service providers to establish a difficult-to-replicate competitive advantage. According to PwC (2016), the majority of companies rate partnerships as important or critical to their business. Not all partnerships are, however, successful and alliances are often like marriages as the partners have to understand each other's expectations, be sensitive to each other's changes of mood and not be too surprised if their partnership ends in divorce. To help make a strategic partnership successful, the partnership must be important in itself, and moreover should be seen in the context of other partnerships and other strategic activities – a cultural fit is

often as important as the financial side. The most difficult relationship or aspect of the partnership structure has to be identified, prioritised and a direct effort be made in that direction. The partner's value option has to be anticipated and evaluated. It is important to agree on both "what" to measure, and also "how" to measure it. Analysis and evaluation makes firms more confident, agile and sensitive to differences, through framing the proposition in a positive, constructive manner. Questions or issues that arise from analysis and preparation must be addressed. Review and dispute steps in the negotiation and implementation process must be established early and communicated along the way to keep momentum and interaction with the parent companies (PwC, 2016).

- Businesses should ensure that the cost structure of the business is as low as possible to secure a position of cost leadership. The generic strategy demands that companies are low-cost producers for a given level of quality in the industry. The firm sells its products either at average industry prices to earn a profit higher than that of rivals, or below the average industry prices to gain market share. Some of the ways that firms acquire cost advantages are by improving process efficiencies, gaining unique access to a large source of lower cost materials, making optimal outsourcing and vertical integration decisions, and avoiding some costs altogether. Firms that succeed in cost leadership often have the following strengths: access to capital required to make a significant investment in production assets, the lack of which creates a barrier to entry; skill in designing products for efficient manufacturing; high level of expertise in manufacturing process engineering; and efficient distribution channels (Porter, 2016).
- The seventh strategy involves constant re-investment in the business and future growth opportunities to ensure the sustainability of growth. Instead of keeping the leverage ratio constant over time, a better approach is to keep either the debt or assets constant in the short term, and increasing slowly in the long-term. Both of these re-investment strategies minimise transactions, reduce volatility and can improve long-term performance (Yates, 2009).
- The eighth strategies involve emphasis on risk management to ensure that excessive risk is not assumed when pursuing growth. This ensures that the growth achieved is sustainable. A risk management strategy provides a structured and coherent approach to identifying, assessing and managing risk. It builds in a process for regularly updating and reviewing the assessment, based on new developments or actions taken (DIY Committee Guide, 2016).
- The ninth strategy, a "strong balance sheet for growth strategy", involves ensuring that the business has adequate resources and a strong balance sheet to allow it to pursue growth

opportunities. A balance sheet is simply a financial statement that summarises an organisation's assets, liabilities and shareholders' equity. Having a strong balance sheet is the key to surviving downturns, rather than becoming insolvent. The strength of a balance sheet is in the ratios, not in the numbers (DiLallo, 2015). Three important ratios to determine a balance sheet's strength are the current ratio, debt ratio and debt-to-equity ratio. The current ratio or liquidity ratio is current assets divided by current liabilities, and this indicates whether or not a company can pay back its short-term liabilities with its short-term assets. The ratio should be at least equal to unity. The debt ratio is the total debt divided by total assets. A debt ratio of less than one indicates that the company has more assets than debt, while the lower the ratio, the stronger the balance sheet of the company. The debt-to-equity ratio measures the company's financial leverage and equals the ratio between liabilities and shareholders' equity. A higher debt-to-equity ratio is a sign of a weaker balance sheet, and standards vary between industries.

- The tenth strategy, the people strategy, emphasises the point that people are the key differentiator, providing a competitive advantage. Developing a people strategy was once an easy matter of figuring out how to create the best possible work force to execute an already defined business strategy. People strategies involve much more complicated choices and trade-offs. The people strategy may actually drive a business as much as a business strategy drives it. Collectively, the trends that fundamentally raise the importance of people strategy are: globalisation, shifts in business processes, diversity, increased competition for senior managers, the aging of the workforce, and the advent of people businesses, which pose other assets and new technology that drives human resources processes (Schwarz *et al.*, 2006).
- The final strategy mentioned by Eitzen *et al.* (2012) involves structuring the business and incentivising key staff to achieve the growth objectives of the business, and comprises the "alignment and incentives for growth strategy". A balanced approach to total rewards – one that acknowledges the needs and growth objectives of the business, the changing environment, the aspirations and demographics of employees, the local culture and the current and future constraints, is both essential and challenging. It is important that companies' rewards strategies also align with their business strategies to achieve overall success (Mercer newsroom, 2014).

In the empirical research of the current study, all seventeen strategies will be included to determine which strategy or combination of strategies is dominantly utilised by the agribusinesses under investigation.

11. Summary and conclusion

This chapter has indicated that sustainable profitability is an important component of businesses when compared with issues such as growth and competitiveness. Sustainable profitability and economic growth are dependent on each other. Also important to note is that sustainable profitability is not a guarantee for sustainable growth.

The importance of competitiveness and sustainable competitive advantage are becoming more prevalent in terms of their importance to the success of businesses. An understanding of the Porter Diamond Model, with extensions, for becoming competitive in local and global markets, is important for businesses in compiling and executing strategies to ensure a competitive advantage (Cho & Moon, 2013). The relationship between sustainable profitability, growth, and competitive advantage not only ensures the survival of businesses, but also differentiates between the great businesses and the good businesses. A good agribusiness is an agribusiness that over a period has achieved a positive, compounded average growth rate. A great agribusiness is an agribusiness that over the same period has achieved a compounded average growth rate of more than three times the compounded average growth rate of all the included agribusinesses. Moreover, well-developed strategies are the bases of sustainable profitability, sustainable growth and competitive advantage for any businesses, given that they are successfully implemented.

The theoretical foundation laid in this chapter, together with an overview of the development of the agricultural sector in South Africa, will provide insight for the analyses of the profitability and growth of the grain segment of agribusinesses. Statistical analyses on primary and secondary data will be conducted on different data sets, followed by the identification of important determinants of profitability and the probability of them occurring. The important determinants of growth will also be identified, as well as the ranking of strategies implemented to achieve the profitability and growth. In conclusion, the analyses of the actual profitability and growth for the agribusinesses will be executed in total for the included agribusinesses and for homogeneous groups of agribusinesses.

-oOo-

CHAPTER 3

THE DEVELOPMENT OF THE AGRICULTURAL BUSINESS IN SOUTH AFRICA: AN OVERVIEW

1. Introduction

The historic development of agribusinesses in South Africa is described in this chapter. The purpose is not to describe the development of the agribusinesses in depth, but rather to focus on the most important milestones in the development of agribusinesses in South Africa. The latter will provide context in terms of the analysis and results that will follow in the next chapters. The history of South Africa's agribusinesses falls into two main parts. The first deals with the history behind the establishment and development of agricultural cooperatives up until 1994, where after the focus shifts towards the post-apartheid area and the developments that followed.

2. Historical overview: 1657 to 1994

This section describes the first commercial farming operations until the establishment of co-operatives. This is followed by the representation of co-operatives in the South African Agricultural Union.

2.1 From first commercial farmers to co-operative structures

During 1657, the first demarcated areas in South Africa that consisted of small farms of about 10 ha were allocated to nine approved persons. These persons became known as "Free Burghers", but in reality they were not so free. Although free ownership was granted to them, the Dutch East Indies Company decided what they should produce and also determined the prices of such products. For all practical purposes, this was the beginning of commercial agricultural development in South Africa (Van Niekerk, 1988).

The period from 1859 to 1870 in South Africa was characterised by the settling of farmers. The establishment of important segments such as grapes, wool, meat, citrus, tobacco and grain began in that era. The migration of farmers to the interior regions in the country followed. The settling of immigrants with knowledge of the conditions and industries in other countries, such as the wine industry in France, was important to guarantee success. In those early days, it was already necessary for farmers to stand together to protect themselves. The lack of a consumers' market and means of communication posed problems (Van Niekerk, 1988).

The years from 1870 to 1910 were significant, characterised by a series of incidents which included amongst other the accidental discovery of diamonds in Griqualand West (today Northern

Cape) between 1867 and 1871. In 1886 the world's richest gold-bearing reef was discovered on the Witwatersrand (today in Gauteng). This led to the construction of railway lines, which connected the Witwatersrand (Gauteng), the Cape (today Northern, Southern and Western Cape) and Natal (today Kwazulu-Natal). The discovery of diamonds and gold also led to the Anglo-Boer War from 1899 to 1902. The result was that the agricultural scene practically disappeared, especially in the two northern provinces, namely Transvaal (today Limpopo, Mpumalanga, North West and Gauteng) and the Orange Free-State (today Free State). During the years of reconstruction following the war, the British administrators of the former Republics tried to rehabilitate the farmers who had lost everything. One method to improve agriculture was to promote co-operatives (Van Niekerk, 1988).

Until the beginning of the twentieth century when the first co-operatives were established, the South African economy was mainly agrarian (Van Niekerk, 1988). However, expressed in monetary terms the mining and industry sectors contributed a much larger share to regional production and income, than agriculture did. The agricultural co-operatives contributed significantly to the development and growth of the agricultural sector. The focus was especially placed on the application of better agricultural techniques, mechanisation and methods of irrigation. Together with the agricultural institutions of the country, the co-operatives made an important contribution to the conservation and utilisation of the region's natural resources (Van Niekerk, 1988).

The first co-operative in South Africa was probably the Pietermaritzburg Consumers' Co-operative, which was registered in 1892 in terms of the Companies Act. Several co-operatives were established in Natal (Kwazulu-Natal), Transvaal (Limpopo, Mpumalanga, North West and Gauteng) and the Orange Free-State (Free State) up until 1922. An important development was the establishment of the Land and Agricultural Bank of South Africa in 1912, and the functions of financing agricultural co-operatives were transferred to the Land Bank (Van Niekerk, 1988).

The Land Settlement Act was quite successful in achieving the government's goals between 1912 and 1966, when it was superseded by the Agricultural Credit Act and the Land Tenure Act (History of the Land Bank, 2013). According to Van Niekerk (1988), legislation which influenced the development of agricultural co-operatives to a large extent during the period 1922 to 1939 was the Co-operative Societies Act (Act 28 of 1922). This Act repealed and consolidated all previous co-operative legislation, and subsequently the Marketing Act (1937) formed the framework, broad basis and contents of marketing different agricultural products through control boards. These control boards could then be established by proclamation of the Minister who acted on advice. The National Marketing Chamber was specially created for this purpose. In most cases, co-operatives were appointed as agents for control boards because the boards did not undertake

the physical handling of products themselves. These co-operatives also received remuneration for their services.

According to Van Niekerk (1988), a number of events shaped the development of agricultural co-operatives from 1939 to 1986. Firstly, the period after 1939 was characterised by economic growth, which contributed towards a rapid increase in total turnover of agricultural co-operatives. After 1939, the views of co-operators changed and there was a noticeable trend in the direction of larger co-operatives with more branches. This occurred especially with the co-operatives whose focus was mainly on the handling, storage and marketing of grain. The principle of unlimited liability was not acceptable to co-operators: co-operatives with divergent objectives were established and co-operatives were established at a central level for the rendering of services, particularly in terms of insurance and credit.

The Agricultural Marketing Act of 1937, with the resulting development of control schemes after the Second World War, caused the practical disappearance of product speculators in South Africa. The result was that co-operatives became the most important handlers of members' products, as well as the products of many other non-member producers. Moreover, the Marketing Act of 1937 brought stability to co-operatives and allowed for further processing and other activities in the interest of their members. A provision in the 1929 Co-operative Societies Act, which authorised co-operatives to supply farm implements, fuel and certain production requisites to members on credit and then obtain a lien over the products of members in respect of the production credit, further encouraged the development of co-operatives (Van Niekerk, 1988). Prof. W.F.J. Steenkamp led the Commission of Enquiry into Co-operative Affairs between 1963 and 1967 and made recommendations about the co-operative as a credit institution; the registrar of co-operatives' office; the election of directors; the supplying and lending of capital; voting rights in a co-operative; trading with non-members; compulsory co-operative single-channel marketing; the right to pay a bonus; and income tax issues.

The first National Co-operative Act, (28 of 1922), defined the duties of the Registrar's office (Van Niekerk, 1988). Inspectors from the Department of Agricultural Economics carried out regular inspections to see that all the functions under the control of the Registrar were executed. The Registrar of Co-operatives' main function was to register new co-operatives and the Registrar was also charged with the function of ensuring that the legal provisions were observed by the co-operatives. The Co-operative Council expanded the functions of the Registrar's office to include the responsibility of the Registrar and his staff to give guidance to co-operatives. This office was given a much expanded mandate and this office could render much more active assistance with expansion and development. A recommended reduction of the Registrar's office was rejected by the Co-operative Council (Van Niekerk, 1988). Another function of the office was the publication

of statistics on annual bases, which included the number of co-operatives per category, number of members per category, and financial information regarding turnover and balance sheet information.

The growth in the numbers of agricultural co-operatives from 1911 to 1993 is illustrated in Figure 3.1. The growth in the number of agricultural co-operatives between 1911 and 1921 was slow, with less than 50 agricultural co-operatives. The agricultural sector in South Africa had to be re-established because of the destruction during the Anglo–Boer War. Moreover, participation in First World War between 1914 and 1918 resulted in limited financial resources, which further hampered the development of the agricultural sector. Following a slow start, a period of rapid growth in the number of agricultural co-operatives was recorded towards the end of the 1920s. This was mainly motivated by the associated benefits of collective buying by agricultural co-operatives. By the beginning of the 1930s, the number of co-operatives was at a century high, with no less than 429 agricultural co-operatives being registered. During the following ten years, the worldwide economic depression, also referred to as the Great Depression, resulted in the number of agricultural co-operatives declining by more than fifty per cent – from 429 in early 1930s to 202 by the beginning of the 1940s. Following the decline in the 1930s, a steady growth in the number of agricultural co-operatives was reported up until 1973. By the end of 1973, a total of 331 registered agricultural co-operatives were active in South Africa. This was again followed by a decline in the number of registered agricultural co-operatives, with only 233 left by the end of 1989. Following the decline in the 1980s; numbers stabilised at more-or-less 250 from the late 1980s up until 1993.

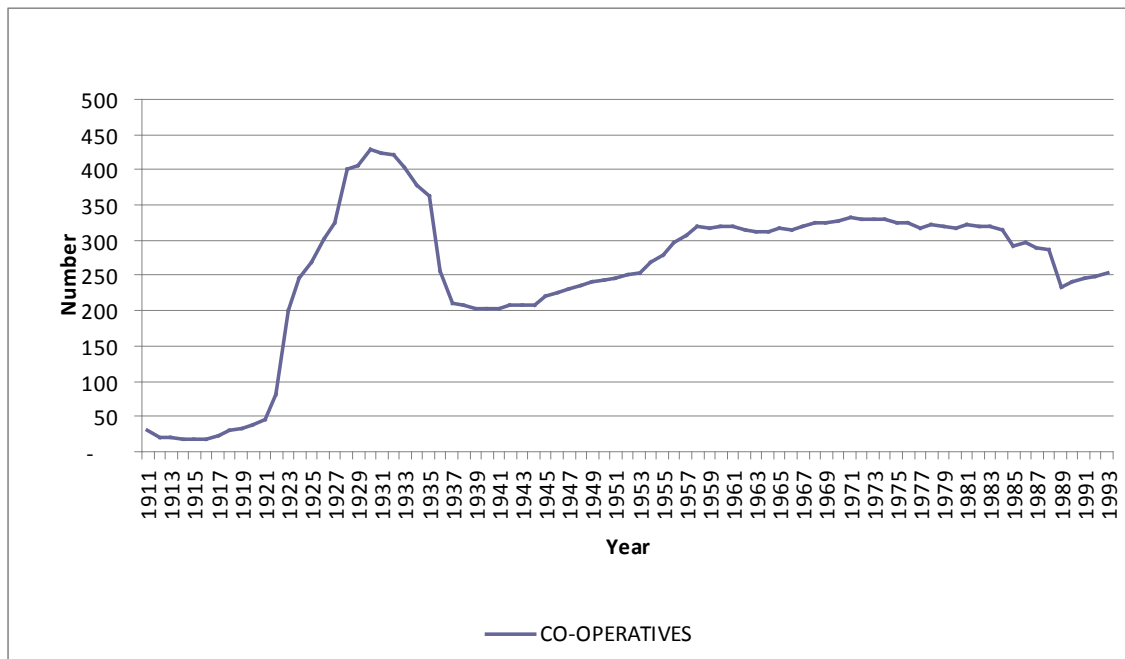


Figure 3.1: Number of Agricultural Cooperatives: 1911 – 1993

Source: Van Niekerk (1988; 1994); Statistics of Cooperatives in the RSA (1985 to 1988; 1987 to 1990; 1988 to 1992)

Figure 3.2 provides an overview of the membership base of the agricultural co-operatives from the early to the late 1980s. The number of agricultural co-operative members was fairly stable between 1911 and 1921, ranging between 9 490 and 12 339 members. After the 1920s, membership steadily grew until 1975, reaching a peak at 310 795 members. Following the peak in 1975, membership declined to 264 735 in 1987, where after it stabilised at approximately 250 000 members from 1988 to 1990.

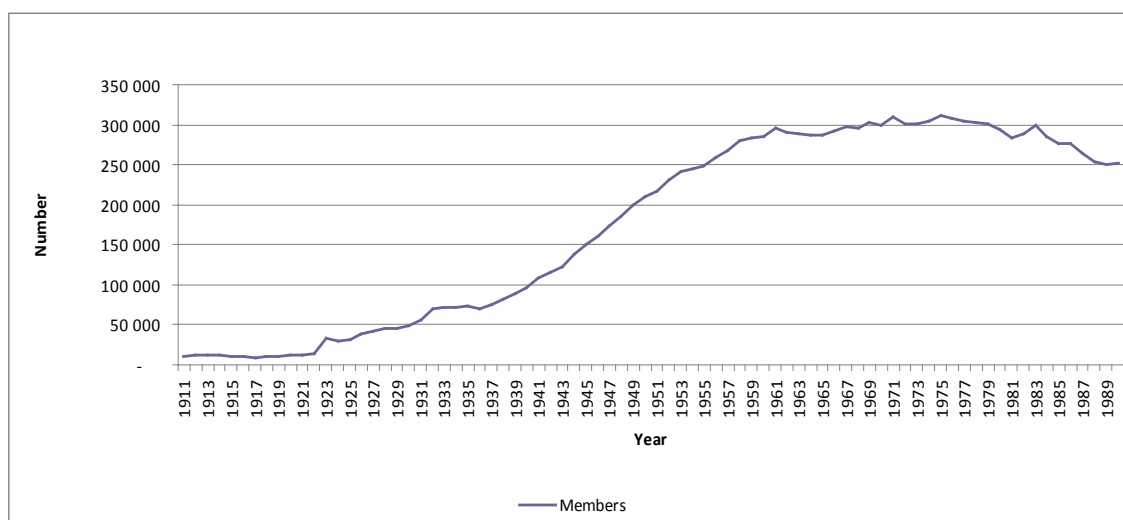


Figure 3.2: Number of Agricultural Cooperatives' members: 1911 – 1990

Source: Van Niekerk (1988; 1994); Statistics of Cooperatives in the RSA (1985 to 1988; 1987 to 1990; 1988 to 1992)

Figure 3.3 illustrates the growth in turnover of the agricultural co-operatives from 1968 to 1993, as well as the growth in turnover for agricultural products, farming requisites and services, respectively, (since 1937). The total turnover increased gradually to R100 million in 1945. After 1945, developments in terms of mechanisation contributed towards increased productivity and subsequently an increase in product volumes, which resulted in turnover breaking the R1 billion mark in the years to follow. Moreover, the exponential growth in turnover since 1968 can specifically be attributed to scientific developments in terms of agricultural practices and fertiliser applications. Contrary to the revenue growth in terms of agricultural products and farm requisites, income generated from services remained almost unchanged over the period under review. Although the providing of services such as financing and insurance were not the focus of the co-operatives, it served as enablers and risk mitigation mechanisms for grain producing members. Agricultural extension services also played an important role in terms of the economic viability of grain producing members. Today (2016), these services are still an integral part of agribusinesses, although they do not account for the same magnitude of turnover or profits.

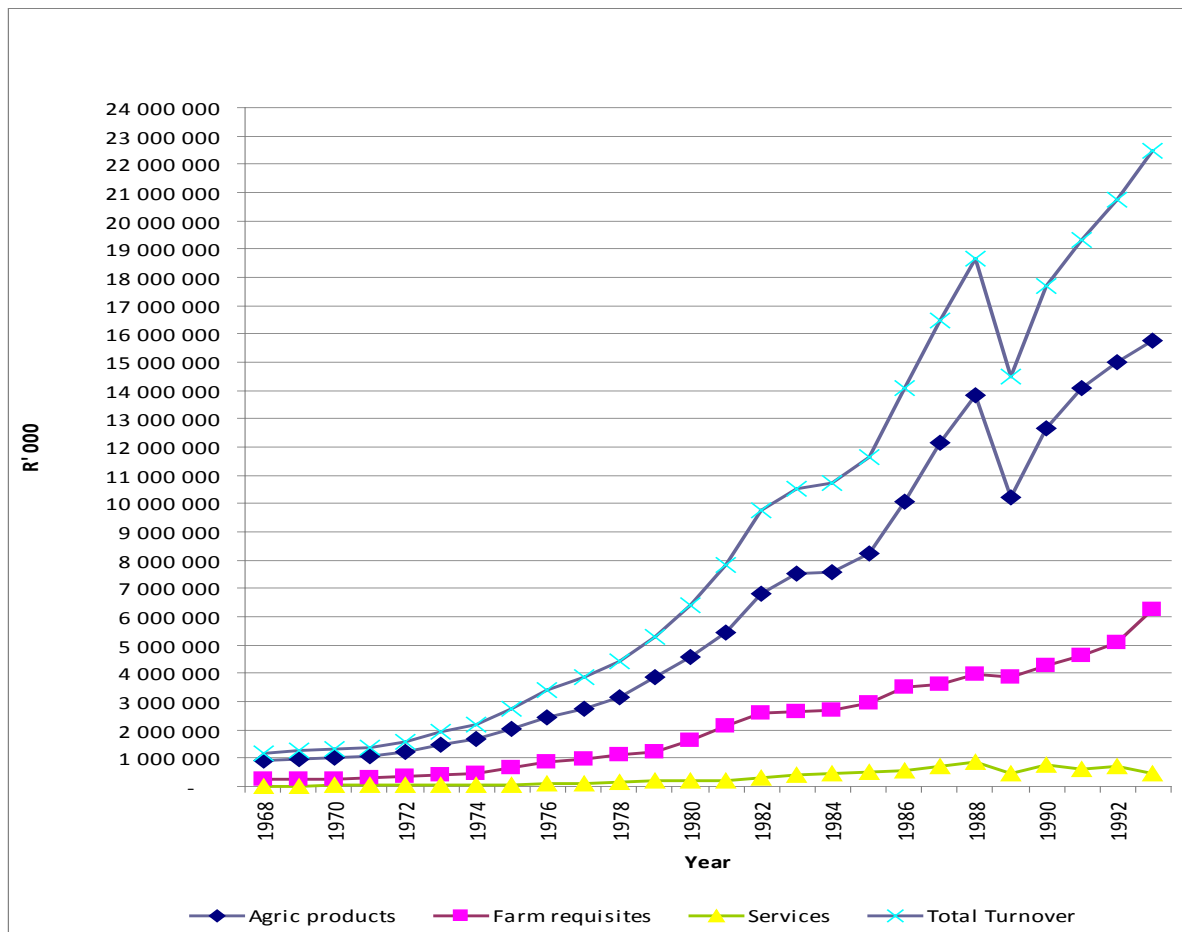


Figure 3.3: Growth in Total Turnover of Agricultural Cooperatives: 1968 – 1993

Source: Van Niekerk (1988; 1994); Statistics of Cooperatives in the RSA (1985 to 1988; 1987 to 1990; 1988 to 1992)

In 1971, a report titled “The policy document regarding future co-operative development” was tabled by a study group appointed by the Co-operative Council to implement the resolution taken at the Co-operative Congress of the South African Agricultural Union in 1970. The resolution taken was that the recommendations were accepted in principle and the Co-operative Council was instructed to submit a final plan for the implementation thereof. The recommendations included (Van Niekerk, 1988):

- i. Establishment of a co-operative credit institution as an addition to what already existed at the time;
- ii. Broader guidance and assistance from the office of the Registrar as far as concerned the expansion and development of the co-operative movement at the time;
- iii. Existing legal provisions in respect of the nomination and election of directors should be retained;

- iv. Supplying and lending of capital;
- v. Voting rights in a co-operative, in that co-operatives should be empowered to arrange the voting rights of members at their discretion, on the condition that no member should ever have the right to control more than 10 % of the total number of votes in a co-operative;
- vi. Co-operatives should be allowed to enter any field if it was in the interest of its members
- vii. Compulsory co-operative single-channel marketing;
- viii. The right to pay a bonus if and when surpluses are realised;
- ix. The proportionally principle as far as uniform or differential bonuses are concerned;
- x. Board of Directors of a Co-operative ought to have the final say in the granting or refusal of membership;
- xi. An agricultural co-operative was not liable for tax in the ordinary sense of the word and it insisted on maintaining the tax principle as in the past.

Based on the Steenkamp Commission of Enquiry report, a package agreement was announced in 1976 by the Minister of Finance, Owen Horwood. The most important point in dispute was the alleged favoured position of the agricultural co-operative sector regarding the exemption of income tax and Land Bank financing. One part of the package agreement dealt with tax liability. In the future, the ordinary rules for the determination of taxable income for ordinary companies were also apply to agricultural co-operatives, but in view of the particular type of business of co-operatives, the following adjustments were made (Van Niekerk, 1988):

- i. Surpluses of an agricultural co-operative, which were declared to members within six months after closing of the books, in whatever form except dividends, would be allowed as a deduction for tax purposes. As before, the payment would be taxable on receipt by the recipients.
- ii. As in the case of industrial enterprises, in certain circumstances, a building investment allowance and an annual depreciation allowance in respect of factory buildings were granted to co-operatives. Similar allowances were granted to agricultural co-operatives in respect of buildings used for storing of agricultural produce of producers.
- iii. For the first ten fiscal years, agricultural co-operatives were, as interim measure, when determining taxable income, allowed to deduct the repayment of loans. Subject to it being to the satisfaction of the Receiver of Revenue, this was obtained for the creation of storing facilities and/or primary processing of their members' products, bearing in mind the allowance for building investment previously referred to.

The other part of the package agreement reached between the Government and the South African Agricultural Union was finalised in 1979 when consensus was reached about certain amendments to Act 29 of 1939. These amendments were eventually accepted and incorporated in a new consolidated Co-operative Act, Act 91 of 1981 (Van Niekerk, 1988).

Agreement was reached on the following points:

- i. Land Bank financing at market-related rates of interest would be granted only to carry stocks of durable production and farming requisites; the primary and secondary processing of agricultural produce and other processing activities; and for the erection of offices, shops, workshops and warehouses for durable requirements.
- ii. Co-operatives were granted the liberty to undertake all activities in regard to the production and handling of the farmers' produce, the processing, preparation and marketing thereof, the supply and manufacture of the farmers' short-term production means and all other farming requisites, as well as the rendering of services in order to give effect on the above-mentioned activities.
- iii. Business with non-members could only be undertaken to a limited extent and in special cases with the approval of the Minister.
- iv. Only co-operatives were allowed to pay bonus on the basis of transactions.
- v. In terms of the Co-operative Act, compulsory co-operative single-channel marketing would no longer be allowed, but existing schemes would continue (Van Niekerk, 1988).
- vi. Depreciation assistance and benefits would also thenceforth be available to co-operatives.
- vii. Co-operatives would also be subjected to trade and industrial licencing.
- viii. The lien of co-operatives would be maintained (Van Niekerk, 1988).

Prof. J. Arangies undertook the investigation of "Overlapping between agricultural co-operatives in the RSA" in 1983 and 1984. This was a direct result of the decision of the Co-operative Congress of the South African Agriculture Union that the overlapping of services and facilities by co-operatives was not in the interest of the members of co-operatives, as this constituted duplication of costs, which were borne by members. The recommendation was that co-operatives should solve their overlapping problems themselves, over and above the other recommendations. During the 1986 Co-operative Council Congress, it was decided in principle that a strategy needed to be developed to guide the formation of agricultural co-operatives in South Africa. A detailed strategy document was tabled with two Appendixes, namely Fundamental aspects of the broad functioning of agricultural co-operatives and Factors favouring or obstructing agricultural co-operatives (Van Niekerk, 1988).

The strategy document mentioned specific actions, which stipulated amongst other things that “each individual co-operative is responsible to evaluate its own situation from time to time in the light of the co-operative strategy, and to make the necessary adjustments in its own strategic plan arising therefrom; and The National Co-operative Council, in collaboration with the provincial co-operative structures, is responsible: where necessary, to provide the overhead structure in which differences arising from implementation of the co-operative strategy can be settled; to evaluate at regular intervals the progress made in the acceptance and practical implementation of the co-operative strategy; to investigate from above the servicing in the national co-operative field and to initiate action to fill gaps and improve existing services; to try to eliminate, as far as possible, factors retarding co-operative development and to propagate the underlying philosophy of the co-operative strategy in its continuous educational and training programmes” (Van Niekerk, 1988). These were implemented from 1986 to 1994.

2.2 Co-operatives represented in the South African Agricultural Union

During 1922, it was decided that the co-operatives should be represented in the structure of the South African Agricultural Union (Van Niekerk, 1988). A conference was scheduled where it was decided that all the co-operatives would establish a federal co-operative that would be allowed to affiliate with the South African Agricultural Union. Numerous reasons prevented the implementation of the decision and at a second conference in 1927 the issue of representation of the co-operatives could not be resolved. In 1928, a federal or central co-operative could affiliate with the South African Agricultural Union and three did indeed join, namely the Central Agency (Central Maize Co-operative), the National Wool Growers Association of South Africa, and the South African Sugar Cane Association. In the period between 1928 and 1944, four co-operatives were affiliated with the South African Agricultural Union, namely Sentabak, Boeresake, Vleissentraal and KWV. The elected president of the South African Agriculture Union in 1943, G.J. Rossouw, wanted all the co-operatives to affiliate and organised a congress between the Executive Committee and representatives of central co-operatives on 1 February 1945 in Cape Town. The decision was taken that the co-operatives would be incorporated into the structure of the South African Agriculture Union by the establishment of a Co-operative Committee. This was a turning point in the history of the organisation of South African agriculture. Eventually, the Co-operative Council was established at a Co-operative Congress between 3 and 5 September 1946 in Bloemfontein to represent the interests of agricultural co-operatives. In 1995, after the deregulation of agriculture in South Africa, the organisation adapted the name Agricultural Co-operative Business (ACB) to address the changing needs of agribusinesses. In 2003, the name was changed to the Agricultural Business Chamber (ABC). The move to becoming a fully autonomous and independent association in 2010 was an exceptional milestone for the ABC, and

at the 2012 Congress the association was re-launched as “Agbiz”, with the slogan “The way to prosperity” (Agbiz, 2014).

3. Overview: 1994 to 2016

A number of political and economic realities influenced the development of agribusinesses after 1990s. The general development of the South African society changed with the commencement of the new political dispensation following 1994 and this also had a marked influence on the agricultural sector and agricultural business in South Africa.

3.1 Business form

In the early nineties, agribusinesses in South Africa were mainly co-operatives, although between 1995 and 2000, especially, many of them were transformed into public companies. The reasons for the transformation were politically inspired, business reasons and sought to seize opportunities the company business structure could provide (Grobler, 2006). The objectives became profitability and growth so as to realise returns on investment for shareholders. In line with public companies, shareholders would in future receive dividends based on profitability and shareholding, instead of the previous system of bonuses on turnover that were distributed between members. Simultaneously, the traditional operational area of the agricultural co-operatives collapsed and competition between adjacent agribusinesses, or for that matter any business, increased (Grobler, 2006). Agribusinesses could now differentiate in strategy to obtain a competitive advantage in the market. Superior management, quality products and excellent customer service became most important for agribusinesses, especially in the grain segment of the agriculture sector, in order to achieve sustainable profitability and growth.

Specific agribusinesses included in the current study, with the date they were transformed to public companies, are: AFGRI Operations Limited (AFGRI) – 26 June 1995, Senwes Limited – 10 April 1997, NWK Limited – 22 April 1998, Suidwes Landbou Limited (Suidwes) – 30 April 1997 (registration date, 15 November 1990), MGK Business Investments Limited (MGK – now Obaro) – 30 January 1998, Oos Vrystaat Kaap Operations Limited (OVK) – 25 February 1999, Griekwaland Wes Corporative Limited (GWK) – 19 December 1997, Kaap Agri Operations Limited (KAAP AGRI) – 13 January 1995, Overberg Agri Limited (Overberg) – 23 January 1998 and BKB Limited – 30 June 1998 (Windeed, 2015). VKB Agriculture Limited (VKB) was only transformed into a public company on 1 April 2011. Important to note is that Sentraal-Suid Cooperative (SSK) – 29 October 1943 – never transformed to a public company, although this was approved at the Annual General Meeting. AFGRI and MGK (Obaro) were converted from public companies into private companies in 2014.

3.2 De-regulation in the marketing of agricultural commodities

The regulated marketing of agricultural commodities was changed to free market principles during 1997. From 1937, the Agricultural Marketing Act of 1937 and the Agricultural Marketing Act of 1939 regulated agricultural commodity marketing. In South Africa, the grain commodities were heavily regulated by control boards, such as the Maize Board and Wheat Board (Du Plessis, 2014) and a one-channel, fixed price system existed. This price mechanism included different levies and the agricultural co-operatives were appointed as the agents of the boards and remunerated for the storage of the grain (Du Plessis, 2014). The Maize Board was eventually dismantled on 1 January 1997 (Du Plessis, 2014), and the Wheat Board on 30 October 1997 – leading to a free market era (National Chamber of Milling (NCM), 1999). The agricultural marketing system was changed to a free market system with the Agricultural Marketing Strategy (2010) that minimises or eliminates market access constraints experienced by agricultural producers and other players in both the local and international markets. It also lowered transaction costs in agricultural marketing (NCM, 1999). South African producers and agribusinesses had to adapt to this strategy. This enabled commercial farmers to market their grain themselves directly or through only utilising the agribusiness's (co-operatives and public companies) storage facilities, resulting in the income of agribusinesses declining. The effect of the adoption of a free market marketing system for grain commodities changed the marketing and risk in grain trading completely. Local grain trading and the import and export of different commodities are a high-risk business where large amounts of money are required to be successful. Some elements of the system increased the profitability of the original agribusinesses, but not all of it was successful.

3.3 Political dispensation

South Africa's political regime changed during 1994 and with that, so did the focus of the agricultural policy (NPC, 2012). The emphasis was now on the development of subsistence farmers and the provision of assistance to them to become small-scale commercial farmers and eventually economically viable commercial farmers.

According to Chapter 5 of the National Development Plan (NDP), one of the objectives is to increase investment in new agricultural technologies, research and development of adaptation for the protection of rural livelihoods, and expansion of commercial agriculture. Specific actions will be to channel public investment into research and new agriculture technologies for commercial farming, as well as for the development of adaptation strategies and support service for small-scale and rural farmers (NPC, 2012). Specific actions include the activation of rural economies through improved infrastructure and service delivery, a review of land tenure, services to small-scale and micro-scale farmers, and a substantial increase in investment in irrigation. Another objective is to create tenure security for communal farmers, especially women, and to investigate

different forms of financing of private property rights for land reform beneficiaries that do not hamper beneficiaries with a high debt burden (NPC, 2012).

The Agriculture Policy Action Plan (APAP) was released on 17 October 2014 following a cabinet resolution in July 2013 to develop a plan that addresses the vision of the National Development Plan and New Growth Path (DAFF, 2014). These documents emphasised that agriculture remains critical for employment and food security, with the assumption that agriculture delivers more jobs per Rand invested than any other sector does. Although these plans and programmes are government initiatives, the assistance of developing farmers by agribusinesses brings about additional cost and risk to agribusinesses that negatively impact on their profitability. Business models of agribusinesses have to adjust to serve these farmers according to their specific needs and requirements.

In January 2016, the document “Framework for the Rural Economic Transformation Model: One district, One Agri Park: every municipality a Comprehensive Rural Development Program (CRDP) site” was published by the Department: Rural Development and Land Reform. The goal of the CRDP is to achieve social cohesion and development by ensuring improved access to basic services, enterprise development, and village industrialisation (Department of Rural Development and Land Reform – DRDLR, 2009). The objectives of one district, one mega Agri-Park are: to ensure that various districts build their production capability by focusing on the production of commodities that will provide them with a competitive advantage; to develop a viable economic model that encourages the agriculture value chain over the next ten-year period; and to develop partnerships with other government stakeholders to develop critical economic infrastructure like roads, energy, water and transportation corridors that support the Agri-Park value chain. The viable economic model should encourage the development of a black farmer class by building their ability to supply the market sustainably at the desired market quality for the community. It should also ensure development through income generated by the value addition capability of the Agri-Park, the improvement of property rights in line with communal models of institutional rights through community buy-in, encourage black farmers working in joint ventures to participate in supplying the Agri-Park, and encourage private farmers to join the Agri-Park as an attractive investment opportunity. (DRDLR, 2016). This new initiative of Agri Parks can provide some opportunities to agribusinesses in adjusting their business model to provide extension services to the primary producers, supply farming requisites to them, provide storage facilities and a marketing platform for these farmers, and add value to the produced commodities. Agribusinesses can prevent the duplication of similar investments in Agri Parks by cooperation with the provincial and national departments of agriculture.

3.4 Legislation

The legislation implemented since 2000 and planned legislation, especially in the areas affected, will affect the landscape and the drivers of future competitiveness of all businesses in South Africa: labour; land reform; food security; developing agriculture; Broad Base Black Economic Empowerment (BBBEE); Employment Equity (EE); social responsibility; competition and rural development (Kleynhans & Kruger, 2014). The effects of these items of legislation must be taken into account in order to evaluate the future economic viability of agribusinesses in South Africa.

3.5 Agricultural subsidies

The possible export of South African agricultural products to new markets after South Africa was welcomed back into the global community enhances the importance of trade agreements with other countries. Agricultural subsidies and tariffs are important trading instruments that were also changed or demolished during previous years. The Producer Support Estimate (PSE) (Organisation of Economic and Co-operation and Development, OECD, 2016) – a measure of how much government support and subsidisation farmers receive (regardless of their nature) in different countries – confirmed that the PSE for South Africa was 5 %, which is lower than that of Japan (58 %), the European Union (34 %), the United States (20 %), Russia (6 %) and China (6 %). Tariff administration remains a balancing act between farmers on the one side and value added industries and consumers on the other.

During 2013, the importation (dumping) of chicken meat from Brazil illustrated this point when the whole local chicken industry experienced financial problems because of ineffective import duties that in effect lowered the market prices of chicken meat below levels that could ensure viable enterprises in the local chicken value added chain (Agency Staff, 2013). The international competitiveness of South African agribusinesses is an important factor for future sustainable profitability and growth of agribusinesses and agricultural industries.

3.6 Research

Through research and development, a market-based agricultural production system that enhances and promotes competitiveness in the South African agricultural sector has to be built and supported to enable access to new and existing markets (DAFF, 2008). Innovation is interactive, nonlinear and applicable at various levels, and therefore is not exclusively the business of specialised research institutions. Although the Agricultural Research Council (ARC) received a significant increase in funding during 2013/2014 for infrastructure and equipment replacement, such allocation remains highly inadequate. The ARC continues to face a large backlog that requires additional funding (ARC, Annual Report, 2013/2014). Collaboration and

partnerships are needed between private agribusinesses in the entire value added chain with a network of participating institutions, both local and abroad.

3.7 Competition

Traditionally, co-operatives operated within a specific geographical area, servicing the farmers of that region (Van Niekerk, 1988). With the transformation of many co-operatives into companies in the late nineties, these traditional borders were demolished. This enhanced competition between agribusinesses from the early 2000s, especially at the original border areas of the traditional geographical areas. This had an impairing effect on the profit margins of agribusinesses.

3.8 Value adding by farmers

Individual farmers and groups of farmers who increased the scale of their commercial farming operations, utilised the opportunities to establish enterprises that add value to the commodities produced on the farm. Some of these enterprises are in direct competition with some of the agribusinesses that also invested in the value added chain to add value to their shareholders' produced commodities. These investments not only increased the regional competition in the market, but also took business away from the agribusinesses, which affected volumes of sales, as well as adding more pressure on the margins (Marais, 2016).

3.9 Corporate farming

Some agribusinesses implemented a defensive strategy to protect their supplying of farm requisites, as well as the storage of grain in their grain storage facilities, by investing in corporate farming enterprises. The internal expertise and departments of agribusinesses were utilised to minimise risk, for example in financing, agricultural extension services, precision farming techniques, bulk purchasing of inputs such as seed, fertilisers, chemicals, utilisation of crop insurance, transportation and grain handling, storage and trading. Some or all of these are utilised in-house, depending on the type, history and experience of the agribusiness (Marais, 2016).

Agribusinesses with value added operations produced some of their own raw materials with these ventures. In practice, the bulk of the risk of the primary producer was transferred to these agribusinesses and this must be taken into account. Most of these corporate farming enterprises were not profitable and most of them closed down or went bankrupt. Corporate farming is, however, an increasingly important factor determining future competitiveness because investment companies, such as Zeder Investments Limited with Chayton Farms in Zambia (Maritz, 2012), Cofco International Limited, which acquired Noble Agri Limited and consolidated

it under Cofco Agri Limited (Cofco Agri, 2016), and other international agricultural companies, are also invested in corporative farming operations in South and Southern Africa.

3.10 Investments in Africa

From the early 2000s, numerous agribusinesses explored and invested in African countries, which was not previously possible. Sub-Saharan Africa is seen as the breadbasket for the expected world population of 9 billion people in 2050 (Janovsky, 2013). Agribusinesses that took the step to expand into different countries, especially in sub-Saharan Africa, all operate on their own, using different routes into the markets. The duplication of infrastructure and costs, as well as the establishment of similar departments that compete with each other in African countries with higher risk, see to it that South African agribusinesses use their competitive advantage of more than 100 years of experience in agricultural services for low returns on investment. A different approach and business model are essential to identify the factors that will determine their competitiveness in African countries and to ideally create joint ventures to avoid duplication of costs and competing with each other, which is the case in South Africa. Assuring the viability, improved profitability and sustained growth in the entire value chain is essential. The wider agro-food industry in sub-Saharan Africa is projected to become a US\$1 trillion industry by 2030 and is destined to play a central role in the economy in future. Agribusinesses will be instrumental in initiating economic development through building agro-based industries and providing new markets. Agriculture has the ability to activate other industries as it could provide the beginning of initiatives that start a value chain (according to PwC's (2013/14) Agribusiness Insights Survey). Potential opportunities for local agribusinesses have to be investigated continually to increase profitability and growth of the agricultural sector.

3.11 Investments in agribusinesses by local and multi-national companies

Multinational investment concerns, especially after 2010, have shown interest in South African agribusinesses. This emphasises the importance of the impact and changes in the factors that determine the competitiveness of South African agribusinesses (Strydom, 2016.). The investments by multinational companies mitigate risk carried by existing local agribusinesses and will influence profitability. Local multinational companies utilising grain in their value chain, as well as investment companies, follow the same strategy. South African agribusinesses built up large assets over the 20th century and are ready to unlock more wealth for their shareholders. A route to unlock this wealth in South African agribusinesses is to get local multinational companies to invest in traditional South African agribusinesses and unlock synergies to invent a different platform to do business with, and to obtain access to, grain in different, bigger markets. The factors that will determine the sustainable profitability and growth of agribusinesses must be identified for the various synergies and complimentary new market segments.

3.12 Value adding by agribusinesses

Agribusinesses historically entered the value added chain to supply certain products to their shareholders. With their retail infrastructure that exists in the previous agricultural co-operatives' service areas and in current agribusinesses, the network is utilised to market these products through their own distribution channel, the trading shops. In most cases, the agribusinesses eventually became regional players with their products being delivered through different distribution channels, such as wholesalers and other retail businesses. Agribusinesses are, however, not able to compete with national businesses and remain regional players, with the marketing of their products relying on lower price promotions and regional adverts on radio and in local publications. In-store promotions are very popular with displays and prizes to be won. Profits are small and do not show a constant upward trend, although big investments are required (Marais, 2016).

Economy of scale became increasingly important in the various industries for competing in the market. It is expensive to market products and to build strong brands, but this has to be done properly over time in order to compete with strong brands at a national level. New business models for agribusinesses with regard to value adding are essential in order to ensure future competitiveness. The overhead cost structure of agribusinesses, fierce competition in the market, and expensive marketing expenses force agribusinesses into partnerships to survive in the value chain (Marais, 2016).

3.13 Economy of scale in commercial farming enterprises

Farmers are, in principle, price takers at both ends of their operation, input and output side, and can therefore only, to some extent, manage seasonal price volatility by forward contracting, and making use of futures, as well as derivatives (Janovsky, 2013). Switching between commodities is margin driven. In the long term, agriculture experiences a cost curve of approximately 3 % per annum. The price of farming requisites increases faster than producer prices do. To survive, farmer businesses need to become more productive, implying higher output in relation to inputs. This is mainly accomplished through the improvement of storage technology, transport technology, information technology, biological farming practices, genetic technology and economy of scale. Farming enterprises will therefore continue to grow in size, and consolidation will continue within the agriculture industry (Janovsky, 2013).

Previously, the main income of agribusinesses in the grain segment was from the storage of grain. Improved storage technology enables the productive commercial farmer to store grain on farms rather than in the agribusiness' silos, which causes the profitability of agribusinesses in the grain segment to decline.

Increasing productivity and economy of scale have resulted in a decline of the number of commercial farming units. The number of commercial farming units were at a high of 120 000 units in 1952, and constantly declined to 40 000 units in 2007 (Van der Merwe, 2013). In relation to the decline in the number of farming units that declined, the area per farming unit has increased. The average sizes of farming units are 25 % in excess of 3000 hectares, 40.9 % between 500 hectares and 3000 hectares, and 34.1 % smaller or unspecified below 500 hectares (Van Vuuren, 2012).

The profile of farmers by 2016 has also changed, with farmers becoming highly qualified managers – the “new generation” farmers – with different needs. According to Van Vuuren (2012), 33 % of commercial farmers are between 25 and 49 years of age, 97.7 % male, and only 5.8 % without a matric qualification, while 58.7 % hold a tertiary diploma or degree. They are financing their enterprises through commercial banks, negotiating directly for best prices for their inputs, and store some of their commodities on their farms. Agribusinesses are, to a great extent, bypassed by these farmers for financing as an enabler to the acquiring of farming requisites from agribusinesses, as well as for the handling and storage of grain at agribusinesses. The failure of agribusinesses in the grain segment to adapt their business models accordingly erodes the income of agribusinesses. Efforts by agribusinesses to counter these trends have put pressure on their margins because these commercial farmers negotiate comparable purchase prices for their requisites directly from the same suppliers (Janovsky, 2013). The decline in income and pressure on margins impacts directly on the profitability of agribusinesses. The marketing environment of grain in South Africa also changed in this era.

3.14 Loyalty programmes

During the past decade, some of the agricultural businesses in the grain segment introduced different loyalty programmes that have strong characteristics of a co-operative. The different loyalty schemes include a monthly discount to bona fide farmers on their purchases, with the scheme utilising the discount to buy shares for the farmer in the agribusiness. This increase in security value of the farmers provides growth on their investment, as well as dividends on purchased shares (Van Rensburg, 2016). Another loyalty scheme is to allocate 75 % of the profit after tax to shareholders of the agribusiness, paying out only a small cash amount (10 %) to enhance future purchases. The balance is transferred to shareholders' loans (99 %) and to preference shares (1 %) – Class B shareholders' loan, with voting rights. The Class B shareholder loan will be payable to the shareholder after 15 years. A third loyalty scheme is where an agricultural business allocates 100 % of their profit after tax to the shareholders, but by paying 10 % in cash to the shareholder and allocating 90 % to a shareholder's loan account. After 15 years, the shareholder's loan with an annual growth of inflation is paid out to the shareholder.

Fourthly, an agricultural business allocates 80 % of their profit before tax to the shareholders, based on purchases and on profit per transaction. The cash amount is 20 % of the allocation, with the remaining part being in preference shares in the company. The value of a preference share is paid out when the shareholder retires, in case of death, or after 15 years (Pallidus Capital, 2015). These loyalty schemes will have a positive effect on the growth of agribusinesses in the grain sector in the future. However, on the contrary, these will have a negative effect on the attractiveness of agribusinesses for investments by external investors and they will impact on the trade-ability and value of shares of the agribusiness' operating as companies.

3.15 Result of political and economic effects on the development of agribusinesses

The changed political dispensation during 1994 and the local economic realities made it inevitable for agribusinesses in the grain segment of the agricultural sector to increase their productivity and increase competitiveness to achieve sustainable profitability and growth (Janovsky, 2013). This led to many mergers and acquisitions between agribusinesses.

In the past, agricultural co-operatives operated from their own head offices for administration purposes and provided supporting services to the farmers in a defined geographical area. The distances between head offices often did not exceed two hundred kilometres. Highly qualified personnel were appointed at each head office to perform specialised functions in the different departments. The operational cost of these duplicated head offices followed an increasing trend and reduced the profitability of the agricultural co-operatives. The declining impact on the profitability of agribusinesses caused by large-scale commercial farmers bypassing the agribusinesses, competition in the regional value chain, development of subsistence farmers, significant investment amounts to explore southern African countries, legislation issues and research costs, as well as duplicated costs of adjacent agricultural co-operatives, resulted in some important mergers and acquisitions (Marais, 2016). Mergers that took place are illustrated in Table 3.1.

Agribusinesses that do not adjust their business models according to the changed competitive business environment will not be able to achieve sustainable profitability and growth in the future, and more mergers and acquisitions will materialise (Strydom, 2016).

Table 3.1: Summary of some previous mergers and acquisitions (M&A) by agribusinesses in the grain segment

Agri-Business	M&A	M&A	M&A	M&A	Current
AFGR		Drakensberg (Co-op) Ltd Senekal (Co-op) Ltd	Natal Agricultural (Co-op) Ltd (NLK) Lowveld Tobacco (Co-op) Ltd (LTK) Lydenburg Voorspoed (Co-op) Ltd Delmas (Co-op) Ltd	Eastern Transvaal (Co-op) Ltd (OTK)	AFGR Ltd
Senwes			Sentraaloos (Co-op) Ltd Kroonstadwes (Co-op) Ltd Vaalharts (Co-op) Ltd	Sentraalwes (Co-op) Ltd	Senwes Ltd
NWK			Manico (Co-op) Ltd Koster (Co-op) Ltd	Noordwes (Co-op) Ltd	NWK Ltd
OVK	Ladybrand (Co-op) Ltd Clocolan (Co-op) Ltd Ficksburg (Co-op) Ltd Albert (Co-op) Ltd	Oos Vrystaat (Co-op) Ltd Oos Vrystaat Kaap (Co-op) Ltd Karoo Orangeriver Agricultural (Co-op) Ltd (KOLK)	Oos Vrystaat Kaap (Co-op) Ltd	Cape Mohair & Wool (CMW)	OVK Ltd
VKB				Northern Transvaal (Co-op) Ltd (NTK) VKB Agriculture (Co-op) Ltd (VKB)	VKB Ltd
GWK			Prieska (Co-op) Ltd Douglas (Co-op) Ltd	Griekwaland Wes (Co-op) Ltd (GWK)	GWK Ltd
Suidwes				Suidwes Agriculture (Co-op) Ltd Noord Kaap Livestock Ltd	Suidwes Agriculture Ltd
MGK		Magaliesburg Tobacco (Co-op) Ltd Potgietersrus Tobacco (Co-op) Ltd	Magaliesburg Grain (Co-op) Ltd	MGK Ltd (MGK)	OBARO Ltd
SSK		Riversdale (Co-op) Ltd Albertina (Co-op) Ltd George Seed Potato Growers (Co-op) Ltd Herald (Co-op) Ltd	Riversdale-Albertina (Co-op) Ltd South Western (Co-op) Ltd Langkloof (Co-op) Ltd	Central South (Co-op) Ltd (SSK) Tuinroete Agri Ltd	SSK (Co-op) Ltd
Overberg Agri			Caledon (Co-op) Ltd Riversderend (Co-op) Ltd Bredasdorp (Co-op) Ltd Napier (Co-op) Ltd	CRK (Co-op) Ltd BNK (Co-op) Ltd Moresburg (Co-op) Ltd	Overberg Agri Ltd
Kaap Agri		Western Grainfarmers (Co-op) Ltd Western Province Fruit Growers (Co-op) Ltd (WPFG) Drakenstein Fruit Growers (Co-op) Ltd (DVK) Langeberg (Co-op) Ltd	Western Province (Co-op) Ltd (WPK) Porterville (Co-op) Ltd North Boland (Co-op) Ltd (NOBO)	Kaap Agri Ltd Namakwaland (Co-op) Ltd Orangeriver (Co-op) Ltd (OKB) Loeriesfontein (Co-op) Ltd Hardap (Co-op) Ltd	KAAP Agri Ltd
BKB	Boere-Saamwerk Beperk Eastwood & Holt (SWA) Ltd DM Billson & Kie Coult & Kie Ellander & Kie Woolgrowers Auctions (WGA) Amalgamated Woolbrokers Farmers' (Co-op) Union (FCU) Gingell Ayliff PR Dodds Dunell Ebdon Hannam & Co Edward Seario	Boere-Saamwerk Beperk (B.S.B.) Billson & Coult Woolgrowers Auctions (WGA) SAWA Boere-Saamwerk Beperk (B.S.B.) Dunell Ebdon	Boere-Saamwerk Beperk (B.S.B.) Boere-Saamwerk Beperk (B.S.B.) Koöperatiewe Wolmaatskappy Beperk	Boeremakelaars (Co-op) Ltd (BKB)	BKB Ltd

Source: Author's own compilation

4. Summary and Conclusion

The development of the commercial agricultural sector in South Africa can be divided in three main periods. The first main period represents the beginning of commercial agriculture in 1657, with the Free Burgers, up to the Anglo-Boer War. The second main period was characterised by the establishment and growth of the agricultural co-operatives, the establishment of the Land Bank, and the controlled marketing with the reconstruction of the agricultural sector after the Anglo-Boer War up to 1994. The third main period is the post-apartheid period from 1994, starting with political and social transformation, free marketing of agricultural commodities and with

globalisation. The new political dispensation in South Africa from 1994 played a vital role in transforming the majority of the traditional agricultural co-operatives into public companies.

Each period had its own challenges, but changes in the country and agricultural sector emphasise the importance of analysing the sustainable profitability and growth of agribusinesses in the grain segment of the agricultural sector, identifying the important profitability and growth drivers, identifying the implemented strategies, and evaluating the financial performance of the implemented strategies. The result for agribusinesses that did not succeed to achieve sustainable profitability and growth in the past was consolidation. In future, a scenario where agribusinesses do not achieve sustainable profitability and growth will result in more consolidation of agribusinesses in the grain segment of the agricultural sector.

-oOo-

CHAPTER 4

METHODOLOGICAL APPROACH

1. Introduction

The objective of this chapter is to describe the methodological approach that was used in the study to analyse the profitability and growth of agricultural businesses, as well as the endeavour to understand the implemented strategies of these businesses.

The statistical methodology used to determine which factors determine profit and growth in agricultural businesses will be described. The study also sought to determine if there is a significant difference in profitability when comparing the co-operative era with the company era; whether the profitability of the included agribusinesses in the grain segment of the agricultural sector differ significantly from each other; and which variables are the most important in explaining the profitability of agribusinesses.

The empirical analysis of this study consists mainly of two sections. Firstly, data from financial statements and reports is analysed and secondly, the results from a questionnaire distributed to the most important role players in agricultural business will be surveyed. The importance and probability of profitability drivers and growth drivers will be determined by analysing the answers to the research questionnaires given by the participating managing directors (MDs) and chief executive officers (CEOs). Analysing the answers of the research questionnaire provides an understanding of the strategies implemented during the period 2003 to 2013. Descriptive statistics will be utilised to present trends of the achieved profitability and growth by the included agribusinesses. The remarks of the MDs and CEOs made during the structured interviews of the included agribusinesses provide the further information and contribute to a better understanding of certain parts of the questionnaire, as well as of the implemented strategies.

The methodology followed in the survey will first be described in the next section, thereafter the analytical methods applied in the analysis of the data from statements and reports will be explained.

2. Determining the correct methodology

The first step in answering the research question is to determine what methodology to follow and what data to use to ensure that the research results would be reliable and scientifically rigorous. A statistical analysis of the figures in the financial statements and reports of agribusinesses is the obvious choice. This data is easily obtainable and correct in the sense that it is audited annually. These statements provide objective figures on all the relevant variables, such as profits, turnover,

income and costs. This was also the way that researchers, such as Arnade and Trueblood (2002), Mazero and Loonam (2010), and Seok Kim, Brorsen and Anderson (2010), investigated profits, growth and sales of agricultural co-operatives and agribusiness – see Table 4.1 for a selection of related research.

Focusing specifically on co-operatives and agribusiness, Zulauf, Schnitkey, Norden and Davidson (2008), Belasco (2008), and Kumbhakar (2001) obtained their data for estimating profit functions and growth directly from surveys specifically designed and conducted. This is of special value when the financial statements do not contain all the data needed.

When it comes to specific research on agricultural business and co-operative strategies followed, researchers such as Galeotti and Goyal (2009) and Payne and Talbott (2007) did make use of financial statements and published reports. Most researchers, however, have realised that the way in which businesses are managed and the strategies followed also determines the outcomes. With the same figures on income and costs from financial statements, the strategies followed will lead to various outcomes. This will not be evident from financial reports and researchers, such as Koys (2000), Richards and Manfredo (2003), and Palmatier, Gopalakrishna and Houston (2006), therefore also conducted their own surveys and structured interviews (see Table. 4.1).

It was therefore decided that, to conduct the research for this thesis and answer the research question on profits, growth and strategies of agribusinesses, a statistical analysis would be conducted using financial statements of businesses, but this would be supplemented with a specifically designed survey and structured interviews with the MDs and CEOs of agribusinesses. The following section will provide the details involved in the design of the questionnaire utilised in the agricultural profitability and growth survey.

Table 4.1: Data sources & methods used by other researchers

Author	Topic	Data	Research Method
Profit functions & growth			
Arnade, C. & Trueblood, M.A. (2002)	Russian Agro: Profit Function & Inefficiency	Published data & financial statements: Official data sources	Standard econometric tests, incorporating allocative efficiency scores
Belasco, E.J. (2008)	Fed Cattle Profit & Price Risk Management strategy	Proprietary cattle feedlot data from five commercial feedlots & Chicago Mercantile Exchange (CME) and Chicago Board of Trade (CBOT)	Simulation techniques & sensitivity analysis

Author	Topic	Data	Research Method
Blank, S.C., Erickson, K.W. & Moss, C.B. (2005)	Agriculture Profit Patterns	Published data: U.S. Department of Agriculture / Economic Research Service	Financial, mathematical & econometric analysis
De Vivo, G. (2001)	Theory of profits	Literature	History & Literature study
Karagiannis, G. & Mergos, G.J. (2000)	Profit Function: TFP Productivity Growth & Technical Change	Published data: US agriculture	Translog profit function & productivity analysis
Kumbhakar, S.C. (2001)	Estimate of agric. profit functions, production frontiers & profit efficiency	Survey: 60 salmon farms	Mathematical analysis, with econometric analysis, regression analysis for both cross-sectional and panel data models
Kutaula, S.S. (2001)	Agro profit functions & production functions & Strategy	Farm level wheat data, survey of the Directorate of Economics and Statistics, India.	Rational Econometric Approach, Cobb-Douglas unit-output-price (UOP) profit function, Seemingly Unrelated Regression Equations (SURE) methodology & generalised least squares (GLS) regressions
Mazero, J. & Loonam, S. (2010)	Cooperatives: Supply Chain for Competitive Advantage	Published data, Internal Revenue Service (IRS) & legal cases	Law studies, cost structure analysis & survey
McGrath, J., Kroeger, F., Traem, M. & Rockenhaeuser, J. (2000)	Determinants of economic growth	Survey: 640 CEOs from mainly Europe companies	Mathematical analysis, & Econometric analysis
Pope, R.D. & Just, R.E. (2002)	Agro profit functions & Optimisation	Published data	Mathematical analysis, & Econometric analysis
Richards T.J. & Hamilton, S.F. (2006)	Agro prices & Supermarket Retailers	Weekly scanner data for 5 fresh fruit products in a single category from 4 major supermarket firms	Econometric model that includes structural equations, game theory, nested CES & regression analysis
Seok Kim, H., Brorsen, B.W. & Anderson, K.B. (2010)	Profit Margin Hedging & crop sales	Stock exchange & financial statements	Producer's utility function and price processes: Optimal profit margins: simulation, variance ratio tests are used: a simple variance ratio test, a joint period variance ratio test, & Jack-knife method
Zulauf, C.R., Schnitkey, G., Norden, C.T & Davidson, E. (2008)	Agro price & Profit	Survey: Illinois farmer-owned cooperative programme	ANOVA & panel data
Cooperative / Agribusiness			
Cook, M L. (1994)	Agricultural Cooperatives, management & Strategy	Surveys of cooperatives & their members	Statistical & Mathematical analysis
Houghton, C.A. & Sorensen, H.R. (2005)	Business Cooperatives & Agriculture	Legislation & published court reports, including costs	Case studies
Kalmi, P. (2007)	Disappearance of cooperatives	Published & collected data sets	Statistical analysis & comparisons

Author	Topic	Data	Research Method
Kanyane, M.H. & Ilorah, R. (2015)	Cooperative Landscape & strategies in South Africa	Literature study	Literature analysis, extrapolation & plain data comparisons
King, R.P., Boehlje, M., Cook, M.L. & Sonka, S.T. (2010)	Agribusiness Economics & Management	Literature study & Published data and information	Design of cooperative & organisational marketing management, market institutions, market structure and performance analysis, supply chain management and design, optimisation of operational efficiency, data & analysis for financial management, & strategic management, and (9) agribusiness
Laaksonen-Craig, S. & Toppinen, A. (2008)	Profit persistence in forest companies	Firm- level data	Panel data & time series-unit root tests
Leathers, J.D. (2006)	Cooperatives' Efficiency	Surveys of cooperatives	Mathematical analysis
Nepple, J.A. & Heller, M.L. (2004)	Business Cooperatives & Agriculture	Published court reports	Case studies
Nepple, J.A. & Jung, J. (2003)	Business Cooperatives, law & Agriculture	Published court reports	Case studies
Richards, T.J & Patterson, P.M. (2005)	Cooperative Strategies	Sample of fresh produce prices from 20 agro-retail outlets	Dynamics, game theory & Nash equilibrium
Strategy			
Collins, J. (2001)	Transformation of businesses from good to great	Analyses and comparison of American listed companies from 1965 to 2000	Conceptual analysis
Galeotti A. & Goyal, S. (2009)	Strategic Diffusion: Optimal strategies for profits	Literature study & published data	Mathematical analysis
Gerstner, E. & Libai, B. (2006)	Poor Service	Published data & literature study	Conceptual analysis
Koys, D.J. (2000)	Business & Human Resource Strategies: Quality & profit	Survey on strategies of 530 companies	Conceptual & statistical analysis
Nti, K.O. (2000)	Competition and Coordination: Profits, investments & costs	Literature study & mathematical analysis	Mathematical approach, esp. game theory
Palmatier, R.W., Gopalakrishna, S. & Houston, M.B. (2006)	Strategies for leveraging profits,	Conducted surveys of companies, managers & customers, focusing on strategy & drivers of investment & profits	Hierarchical linear modelling & regression analysis
Park, C. (2003)	Performance Characteristics of strategies	Diversification literature studies, survey & case study	Accounting-based performance measures & cross-sectional data,
Payne, C.A. & Talbott, P. (2007)	Strategies for Profitability	Financial statement & reports, & published data	Balanced Scorecard
Richards, T.J. & Manfredi, M.R. (2003)	Cooperative Mergers & acquisitions & capital Constraints	Survey of 100 largest U.S. cooperatives & financial data from agricultural cooperatives publicly available records and statements	Panel data & econometric analysis, estimates the shadow value of long-term investment cap

Author	Topic	Data	Research Method
Schwenke, M.J. (2011)	Growth drivers and strategies for sustainable growth	A study of JSE-listed companies , survey and semi-structured interviews	Qualitative analyses and descriptive statistics & linear regression
Seog, S.H. & Hyun, Y.J. (2009)	Marketing & Financing Strategy	Literature study & published data	Mathematical analysis

Source: Author's own analysis & compilation, see Bibliography for details.

3. Methodology of the conducted survey

Both primary and secondary data were used. The primary data was captured by means of a questionnaire (Appendix 1) that was completed and through a semi-structured interview with the CEO of each of the participating agribusiness in the study. The questionnaire was sent to the participating MDs and CEOs for completion before the scheduled semi-structured interviews. On receiving the completed questionnaires, it was checked for completeness and referred back for completion of missing data. Furthermore, the missing data was discussed during the semi-structured interviews and completed.

The questionnaire that was used to collect primary data consisted of several different sections. The first section of the questionnaire focused on general information in terms of profitability and growth drivers. Specific focus was also put on the steps deemed adequate for creating an excellent agribusiness. The findings by Kroeger *et al.* (2000) and Collins (2001) formed the bases in terms of the development of this part of the questionnaire.

The second part focused on the identification and weighing of key profitability drivers. This part of the questionnaire draws on the work that is done by PricewaterhouseCooper (PwC) in terms of their “Agri Insight” research. The basis of this research is similar in that it is also focused on explaining financial performances and profitability drivers of agribusinesses in South Africa. Specific mention was made of politics, government, economics, investment, human capital, competitiveness, nature/environment, finance, management, strategy, grain stock and prices, business model, and market share in terms of different categories as far as profitability drivers are concerned. Moreover, participants were also requested to rank the different profitability drivers according to importance as far as the impact on profitability is concerned. The scale to rank the importance and probability of the profitability drivers was from 1 to 6 to oblige the participants to make a decision below or above the middle of the range. If a participant chooses 3, it is just below the middle of the range and when a participant chooses 4, it is just above the middle of the range.

The third part of the questionnaire focused on the relative importance of the growth drivers in agribusinesses. The research by Schwenke (2011) formed the basis in terms of the different growth drivers included in the questionnaire. A clear definition of each growth driver was provided

to all participants. Based on this definition, each participant had the opportunity to rank the driver according to its relative importance. A Likert scale was also used to rank the importance of these growth drivers in this part of the questionnaire. This also ensured more significant results.

The final section of part three of the questionnaire was focused on capturing more general growth-related information. The aim of this section was to generate information which would assist in terms of getting a better understanding of the relationship between the growth achieved and the strategies employed.

The fourth part builds on the final section of part three of the questionnaire and focused specifically on the strategies employed by the different agribusinesses in an attempt to improve profitability and growth. This part of the questionnaire draws heavily on the work that was done by Schwenke (2011). In the first section of part four of the questionnaire, a definition was provided for each of the strategies listed, where after participants were asked to select and rank those applicable to their company. The ranking was again done according to a Likert scale with values ranging from 0 to 5. If a participant chooses 2 it is just below the middle of the range, and when a participant chooses 3, it is just above the middle of the range. An effort was made to ensure significant results at all times. A score of zero indicates that a specific strategy was not utilised at all, and the 0 to 5 scale force the participants to make a decision below or above the middle of the range.

The Survey Monkey software program was utilised to capture all the responses and for calculating the weighted rating responses. All the data was transferred to Excel computer worksheets, the weighted rating responses checked, and graphs compiled. Descriptive analyses were used where applicable to illustrate the results of the research questionnaire in table format and with various types of graphs.

4. Analysis of data from statements and reports

The secondary data consists of financial data available from annual reports of the agribusinesses covering the time period from 1980 to 2015. This information was used to compile various data sets. The financial results of the agribusinesses were transformed from nominal to real values.

4.1 The secondary data utilised

Obtaining the secondary data was a challenge, mainly because several of the former co-operatives had transformed into companies at some point in time. This was mainly the result of mergers and acquisitions that had taken place between different co-operatives, without any one of them fulfilling the anchor role with regard to the reporting of the financial result after the merger or acquisition. Examples of mergers which presented a challenge in terms of obtaining the

necessary financial information following the mergers were OVK and Overberg Agri. In some cases, the archive of the current agribusiness did not have the specific annual reports. Table 4.2 provides a summary of the data from annual reports that was obtained and included in the analysis. The financial analysis was only done up until 2013. This specific period was decided on because of data limitations. The data limitations were the result of companies transforming from public to private companies, and as a result, they are neither obliged nor willing to make the information available.

Taking the available financial results for agribusiness in Table 4.2 into account for the period 1980 to 2015, data sets of analysis were created for: agribusinesses (co-operatives and companies) for the time period 1980 to 2013 (see Table 4.3); co-operatives from 1980 to 1996; co-operatives from 1988 to 1995; companies from 2003 to 2013; and agribusinesses (some still co-operatives in the period) from 2003 to 2013 (see Table 4.4). These data sets were used in the initial statistical analyses.

**Table 4.2: Financial results from agribusinesses in the grain segment of South Africa:
1980 – 2015**

YEAR	AGRIBUSINESS											
	NWK	SENWES	SUIDWES	VKB	BKB	GWK	AFGRI	MGK	OVK	SSK	OVERBERG AGRI	KAAP AGRI
1980												
1981												
1982												
1983												
1984												
1985												
1986												
1987												
1988												
1989												
1990												
1991												
1992												
1993												
1994												
1995							26/6/95					13/1/95 -WPK
1996												
1997		10/4/97	30/4/97			19/12/97						
1998	22/4/98				30/6/98			30/1/98				
1999									25/2/99		23/1/98	
2000												
2001												
2002												
2003												
2004												
2005												
2006												
2007												
2008												
2009												
2010												
2011				01/4/2011								
2012												
2013												
2014							*	*				
2015							*	*				

Key:

Date	Date transformed from cooperative to public company
	Financial results from annual report not available
	Financial results from Cooperative annual report
	Financial results from Public company annual report
*	Financial results not available: Private company – annual report not published

Table 4.3: Financial results of agribusinesses in the grain segment of South Africa: Co-operative era compared with Company era: 1980 – 2013

YEAR	AGRIBUSINESS					
	NWK	SENWES	SUIDWES	VKB	BKB	GWK
1980						
1981						
1982						
1983						
1984						
1985						
1986						
1987						
1988						
1989						
1990						
1991						
1992						
1993						
1994						
1995						
1996						
1997		10/4/97	30/4/97			19/12/97
1998	22/4/98				30/6/98	
1999						
2000						
2001						
2002						
2003						
2004						
2005						
2006						
2007						
2008						
2009						
2010						
2011				01/4/2011		
2012						
2013						

Key:

Date	Date transformed from cooperative to public company
	Financial results from annual report not available
	Financial results from Cooperative annual report
	Financial results from Public company annual report

Table 4.4: Financial results of agribusinesses in the grain segment of South Africa: Agribusiness compared to agribusiness (Co-operative or Company): 2003 – 2013

YEAR	AGRIBUSINESS											
	NWK	SENWES	SUIDWES	VKB	BKB	GWK	AFGR	MGK	OVK	SSK	OVERBERG AGRI	KAAP AGRI
2003												
2004												
2005												
2006												
2007												
2008												
2009												
2010												
2011												
2012												
2013												

Key:		Financial results from annual report not available
		Financial results from Cooperative annual report
		Financial results from Public company annual report

In addition to the financial analysis, secondary data in terms of external independent variables were also used to determine the impact thereof on profitability in an attempt to determine profitability and growth drivers of agribusinesses in South Africa.

The importance of the exchange rate of a country is very important for economic growth, according to Rodrik (2008). Gilbert (2010) has suggested that oil price has a large impact on the cost of agricultural production and it is also stated the increase in food cost for consumers is best revealed by changes in the prices paid for a basket of foods actually consumed – the food component of the national Consumer Price Index (CPI) (Dewbre *et al.*, 2008). As credit provider, the effect of monetary policy on the agricultural sector is important, especially with regard to interest rate variability (Coetzee *et al.*, 2002). Agriculture is a resource-intensive enterprise. The manner in which food production systems utilise resources has a large influence on environmental quality and profitability (Cassman Achim *et al.*, 2003). The income and profit of agribusinesses in the grain segment are highly dependent on the storage and handling of the volume of grain that is produced. Rainfall determines the volume of grain in a particular season and therefore influences the profitability of agribusinesses to a great extent. Based on previous research, these independent variables were selected. The World Bank databases were used to collect data for external variables, including South African prime rate, CPI, Pound exchange rate, Euro exchange rate, Dollar exchange rate, and oil price in Rand for the required period (World Bank, 2015).

Rainfall information from the South African Weather Bureau was obtained for each district per month for the period (Weathersa, 2015). The districts were matched with the previous service areas of agribusinesses. The rainfall between October and March was included for agribusinesses operating in summer rainfall areas, but lagged by a year to match with the financial results of the agribusinesses. The rainfall between April and September was included for agribusinesses operating in winter rainfall areas, but lagged by a year to match with the financial results of those agribusinesses.

4.2 Statistical analysis of the data

Two databases were created, inserting all the available information per annum from all the agribusinesses for each line in the balance sheets, income statements and cash flow statements, using Qlikview software. The sorting for the different data sets was done in Qlikview, and also for the defined groups of agribusinesses. All the data was transferred to Excel spreadsheets and financial ratios were calculated. This enabled trend analyses to be done, illustrated by line graphs.

The nominal financial results of all the included agribusinesses were converted to real values by using the GDP deflator per annum, with 2010 as the reference year. The statistically analysis was performed using the real values for all the included agribusinesses. The nominal values were used in the descriptive analysis to show trends and difference in trends in total, groups of agribusinesses, and for each agribusiness for important variables and ratios on profitability and growth.

The “PANEL DATA” procedure fits the nature of the data sets in this study perfectly because the “PANEL” procedure analyses a class of linear econometric models that commonly arise when time series and cross-sectional data are combined. This type of pooled data on time series cross-sectional bases is often referred to as panel data.

4.3 Model selection

The statistical analyses were conducted with the assistance of the Statistical Consultation Service of North-West University to ensure that the procedures and the derived results are correct. The statistical approach of the study revolves around multiple regression analyses where internal and external variables were included in the statistical analyses. Multiple regressions are an extension of simple linear regression (Asteriou & Hall, 2011). Statistical models that include more than one independent variable to explain a dependent variable linearly are called multiple linear regression models (McClave *et al.*, 2001). The approach uses panel data with net profit after tax (NPAT) from the financial results collected for the included agribusiness as a dependent variable for the two data sets indicated above. The first statistical analyses were executed only with the internal

variables as independent variables. Next, the statistical analyses were performed, adding the external variables as independent variables. The general form of these models is:

$$y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots \beta_k X_k + \varepsilon$$

where:

y = is the dependent variable,

$x_1, x_2, \dots, x_k$ are the independent variables, and

$E(y) = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots \beta_k X_k +$ is the deterministic portion of the model,

is the regression coefficient which determines the contribution of the independent variable x_i .

Note: β_i represent the slope of the line relating y to x_i when all the other instances of x are held fixed (McClave *et al.*, 2001).

The method of fitting linear models (and multiple regression models in general) is identical to that of fitting the simple straight-line model by the method of ordinary least squares (OLS) and panel data analysis.

The primary difference between fitting the simple and multiple regression models is computational difficulty. Consequently, the output is presented from a variety of statistical software packages. In this study, the advanced SAS computer software package (SAS Institute Inc., 2016) was used.

The process to identify independent variables with NPAT as the dependent variable of profitability started with all the lines in the financial statements (internal variables) together, with external variables included. To account for multicollinearity (i.e. high correlations among variables), cluster analyses were performed, using STATISTICA (Stat Soft, Inc., 2016). The similarity measure was chosen as 1 – absolute value of the correlation between pairs of variables. The Ward Method was used to amalgamate the variables based upon their similarities. A tree diagram (dendrogram) was then been displayed in order to identify groups of variables with mutually high correlations. Dendograms are two-dimensional diagrams that represent the union at each successive stage of cluster analyses (Simpson *et al.*, 2008). The horizontal listing of cases indicates the variables that merely represent an ordering within clusters. The interpretation of hierarchical dendograms is based on the relationships between rescaled distances of the cluster analyses, which means that the longer the vertical distance is, the greater the dissimilarity is with the adjacent case or cluster.

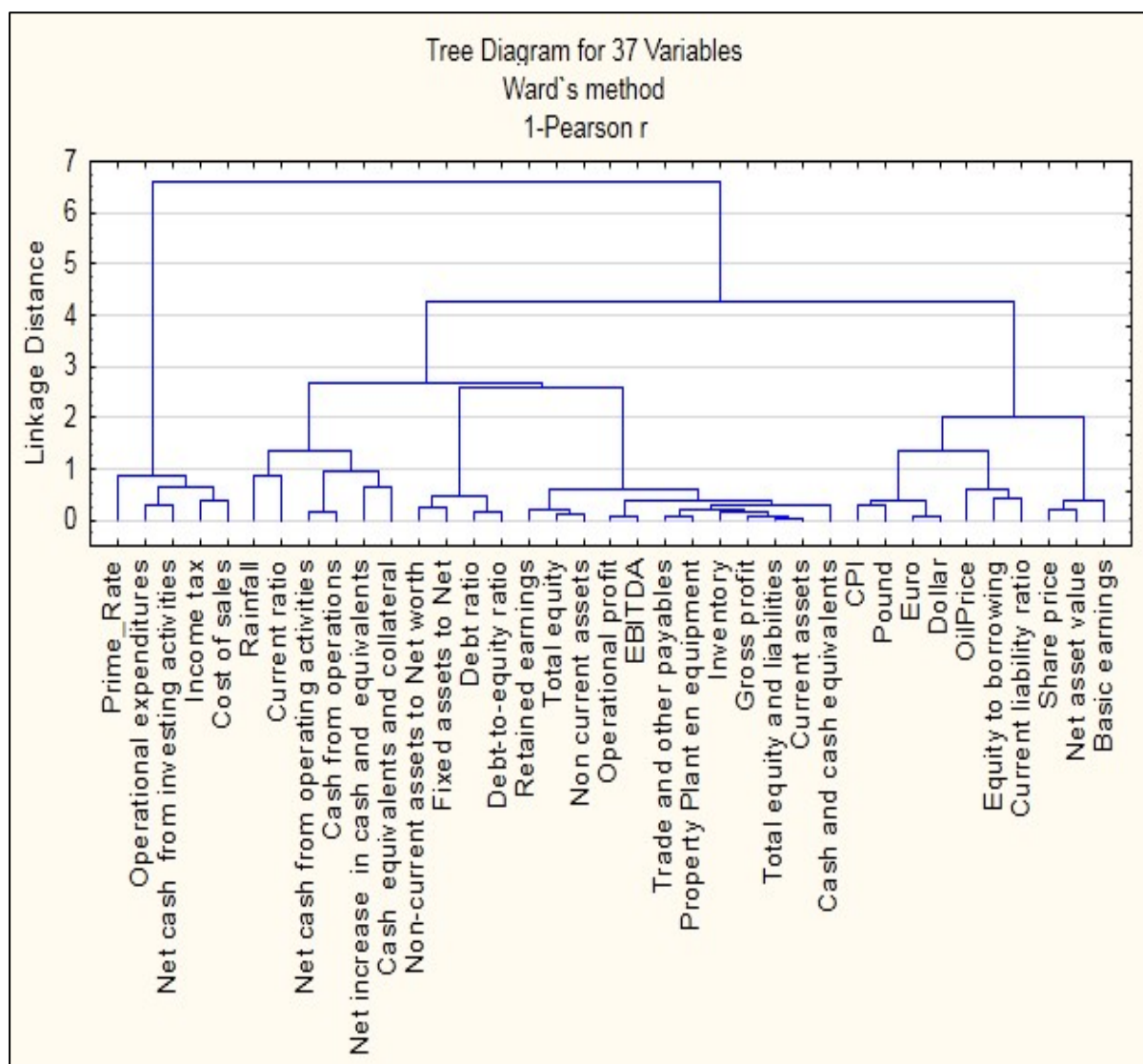


Figure 4.1: Dendrogram of the Cluster Analysis

Source: Author's own analysis

A dendrogram of the results, based on all possible independent variables for the agribusinesses between 2003 and 2013 used in the cluster analysis, is shown in Figure 4.1. This dendrogram illustrates the three main cluster groups. The first cluster group is from prime rate to cost of sales. The second cluster group is from rainfall to cash and cash equivalents, and the third cluster group is from CPI to basic earnings. Sub-cluster groups are present in each of the main cluster groups, which indicate closer relationships between certain variables. Based on the vertical distance of main cluster one that is longer than main clusters two and three, it is evident that the relationship between main clusters two and three are stronger, compared with the relationship between main cluster one and two, and between main cluster one and three. This is indicated by the linkage distance that is smaller where the linkages are stronger.

In main cluster one, the relationship between operational expenditure and net cash from investing activities is strong. The same can be observed about the relationship between income tax and cost of sales. The relationship of prime rate with the mentioned variables is weaker and close to 1 on the linkage distance.

In main cluster group two, there are three sub-cluster groups – one from rainfall to cash and cash equivalents and collateral; one from non-current assets to net worth to debt-to-equity ratio; and one from retained earnings to cash and cash equivalents. This can be seen on the dendrogram in Figure 4.1 as they are connected closely on the shortest linkage distance. The three sub-cluster groups have a more or less similar relationship in the main cluster group and are between 2, 5 and 3 on the linkage distance. Strong relationships exist between operational profit and earnings (EBITDA), trade and other payables and property, plant and equipment; inventory, gross profit, total equity and liabilities and current assets.

In main cluster group three, there are also three sub-cluster groups – one from CPI to dollar exchange rate; one from oil price to current liability ratio; and one from share price to basic earnings. The three sub-cluster groups have a more or less similar relationship in the main cluster group and are basically at 0.5 on the linkage distance. There is a stronger relationship between the first two sub-cluster groups basically at 1.5 on the linkage distance, compared with sub-cluster group three. Strong relationships exist between the Euro and the dollar exchange rates and share price and net asset value.

Eventually the result of the statistical analyses indicated that the internal variables that had a significant correlation with NPAT for this data set were: current assets, retained earnings, EBITDA and property, plant and equipment. No significant correlation could be found by the statistical analyses between NPAT and the external variables.

4.4 Dependant variable

The dependent variable in the statistical analyses of both data sets was net profit, or for clarity purposes, net profit after tax (NPAT). Net profit is calculated by subtracting a company's total expenses from total revenue. This shows what the company has earned (or lost) in a given period of time (usually one year). Net profit is often referred to as the bottom line and is also called net income or net earnings. Earnings are the reason businesses exist, and are important to investors because they give an indication of expected future dividends and the business' potential for growth and capital appreciation.

4.5 Internal variables

The detail in the financial statements and the availability of the information for the period for the included agribusinesses determined the variables that could be included.

4.5.1 Data set of 1980 to 2013

In this data set, a dummy variable was included, namely Co-operative or company. The purpose was to determine if there is a difference between the co-operative era and company era. The other included variables are listed and defined in Table 4.5.

Table 4.5: Internal variables for the period 1980 to 2013

Variable	Definition
Cash	Currency and coins on hand, bank balances and negotiable money orders and cheques
Creditors	Loans to a person or business that have to be paid back with interest
Fixed assets	Long-term, tangible asset held for business use and not expected to be converted to cash in the current or upcoming fiscal year
Inventory	Liquid assets that can be converted into cash quite easily
Loans and investments	An arrangement in which a lender gives money or property to a borrower and the borrower agrees to return the property or repay the money, usually along with interest, at some future point in time
Net current assets	Current assets minus current liabilities
Operational income	A measure of a businesses' earning power from on-going operations, equal to earnings before deduction of interest payments and income taxes
Retained income	Earnings not paid out as dividends but instead re-invested in the core business or used to pay debt
Reserves	Funds set aside for emergencies or other future needs
Share capital	Capital of a business in the form of money paid for shares
Short-term loans	Debt arising from normal business operations and recurring expenses that is expected to be satisfied within one year
Total member interest	Value of members' investment in the business

4.5.2 Data set of 2003 to 2013

The variables used in the analysis for the period for the included agribusinesses are listed and defined in Table 4.6.

Table 4.6: Internal variables for the period 2003 to 2013

Variable	Definition
Basic earnings per share	Earnings per share of common stock
Cash and cash equivalents and cash collateral investments	Currency and coins on hand, bank balances and negotiable money orders and cheques plus highly liquid, very safe investments which can be easily converted to cash, such as treasury bills and money market funds plus security by a borrower to secure a loan or other credit
Cash and cash equivalents at beginning of period	Currency and coins on hand, bank balances and negotiable money orders and cheques plus highly liquid, very safe investments which can be easily converted to cash, such as treasury bills and money market funds at the beginning of the financial year
Cash from operations acquired	Currency and coins on hand, bank balances and negotiable money orders and cheques from operating the business
Cost of sales	Cost of purchasing raw materials and manufactured, finished products. Equal to the beginning inventory plus the cost of goods purchased during some period minus the ending inventory
Current assets	Assets that are readily convertible into cash to be used to satisfy current liabilities, such as cash on hand, short-term investments, accounts receivable and inventory
Current liability ratio	A measure reflecting the financial status of funds of current assets to current liabilities. Current assets divided by current liabilities
Debt to equity ratio	A measure of a business's financial leverage. Long-term debt divided by common shareholders' equity
Debt to assets ratio	A measure that shows the portion of a business's assets which are financed through debt. Total liabilities divided by total assets
EBITDA	Earnings before interest, taxes, depreciation, and amortisation. An approximate measure of a business's operating cash flow, based on data from the income statement
Equity to borrowing ratio	Gearing ratio. A measure that compares equity to borrowing
Fixed assets to Net worth	A measure of long-term, tangible assets held for business use and not expected to be converted to cash in the current or upcoming fiscal year to total assets, minus total liabilities
Gross profit	Calculated as sales minus all costs directly related to those sales
Income tax	Annual tax levied by government on a business's net profit
Inventory	Liquid assets that can be converted into cash quite easily
Net asset value	The value of a single share based on the value of the assets minus the liabilities, divided by the number of shares
Net cash generated from financing activities	Currency and coins on hand, bank balances and negotiable money orders and cheques from financing activities, minus expenses, in a financial year
Net cash generated from investing activities	Currency and coins on hand, bank balances and negotiable money orders and cheques from investing activities, minus expenses, in a financial year
Net cash generated from operating activities	Currency and coins on hand, bank balances and negotiable money orders and cheques from operating activities, minus expenses, in a financial year
Net cash increase/decrease in cash and cash equivalents	Currency and coins on hand, bank balances and negotiable money orders and cheques plus highly liquid, very safe investments which can be easily converted to cash, such as treasury bills and money market funds, minus expenses at the beginning of a financial year minus the net amount for the same items at the end of a financial year

Variable	Definition
Non-current assets to net worth	A measurement of assets that are not easily convertible to cash or not expected to become cash within the next year to total assets, minus total liabilities
Non-current assets	An asset that is not easily convertible to cash or not expected to become cash within the next year
Operational expenses	An expense category that records on-going operation costs, excluding capital expenditures or production costs
Operational profit	A measure of a businesses' earning power from on-going operations, equal to earnings before deduction of interest payments and income taxes
Property, plant and equipment	Long-term, tangible assets held for business use and not expected to be converted to cash in the current or upcoming fiscal year
Quantity shares issued	Number of shares issued in a financial year
Retained earnings	Earnings not paid out as dividends but instead re-invested in the core business or used to pay debt
Share price	The price of one share
Total equity	Total assets minus total liabilities; also called shareholder's equity
Total equity and liabilities	Total assets equals equity plus total liabilities
Trade and other payables	Liabilities owed to suppliers for purchases or services – commonly referred to as accounts payable

The most significant independent variables explaining the dependent variable NPAT were statistically identified and included together with the external independent variables in the next statistical analyses for both data sets. For the period from 1980 to 2013, two variables were identified, namely operational income and net current assets. For the period from 2003 to 2013, four variables were identified, namely current assets, retained earnings, EBITDA and property, plant and equipment.

4.6 External variables

The external independent variables that have a possible impact on profitability and growth considered in these analyses for the period 2003 to 2013 are given and defined in Table 4.7.

One of the agribusinesses had to be excluded in both statistical analyses because of rainfall data that could not be linked to a specific area, as this agribusiness operated nationally during both the selected periods. It has to be noted that certain assumptions had to be made to turn the actual NPAT of one agribusiness to a profit instead of a loss situation during the selected periods because of the disruption effect the losses had on the statistical model.

Table 4.7: External variables for both periods External variables for both periods

Variable	Definition
Rainfall	The total amount of rainfall during the growing season for agribusinesses operating in the summer and winter rainfall areas, respectively, per annum, lagged for a year for the period
Prime rate	The South African interest rate that commercial banks charge their most creditworthy borrowers per annum for the period
CPI	Consumer Price Index – an inflationary indicator that measures the change in the cost of a fixed basket and services per annum for the period
Pound exchange rate	Rate at which a Pound is converted to a Rand per annum for the period
Euro exchange rate	Rate at which a Euro is converted to a Rand per annum for the period
Dollar exchange rate	Rate at which a Dollar is converted to a Rand per annum for the period
Oil price in Rand	Brent crude oil price converted to Rand per annum for the period

4.7 Transformation of the data

In order to restrict the influence on regression models attributable to extreme values in the variables (i.e. very large or very small values compared with the bulk of the values), transformations are performed. In order to ensure the analysis is statistically significant, the data should be normally distributed. As this is often not the case with economic data, transformation is necessary. A class of monotone transformations (i.e. such that the transformed values increase or decrease together with the original values), is the Box-Cox transformation, in the form of:

$$Y = \frac{X^{\lambda} - 1}{\lambda}$$

where: X is the original variable and Y the transformed one, while λ is an appropriate number, determining the transformation.

For example: if $\lambda = 2$ then $Y = \frac{X^2 - 1}{2}$.

When $\lambda = 0$, then $Y = \log(X)$, the logarithmic transformation. Using the STATISTICA computer programme, λ can be chosen in such a way that Y is normally distributed. A normal distribution has the property that less than 0.3 % of the values deviate more than 3 standard deviations from the mean value.

4.8 Statistical procedures

Typical examples of **panel data of SAS** include observations over time on households, countries, firms, trade, and in the current study, agribusinesses. For example, in the case of survey data on

firm income, the panel is created by repeatedly surveying the same firm in different time periods (years). The panel data models can be grouped into several categories, depending on the structure of the error term. The PANEL procedure uses the following error structures and the corresponding methods to analyse data: one-way and two-way models; fixed-effects, random-effects, and hybrid models; autoregressive models; and moving average models. The one-way analysis of variance (ANOVA) is used to determine whether there are any significant differences between the means of three or more independent (unrelated) groups (Wooldridge, 2010). The two-way ANOVA is an extension of the one-way ANOVA that examines the influence of two different categorical independent variables on one continuous dependent variable. A fixed effects model is a statistical model that represents the observed quantities in terms of explanatory variables that are treated as if the quantities were non-random. This is in contrast to random effects models and hybrid models in which either all or some of the explanatory variables are treated as if they arise from random causes. In panel data analysis, the term 'fixed effects estimator' is used to refer to an estimator for the coefficients in the regression model. An autoregressive model is used when a value from a time series is regressed on previous values from that same time series, and the moving average model specifies that the output variable depends linearly on its own previous stochastic term and on a stochastic term (an imperfectly predictable term) (SAS. 2016).

A one-way model depends only on the cross section to which the observation belongs (SAS. 2016). In this study, it was decided to use a one-way model with the cross section (agribusinesses) as fixed effect. If the effects are fixed, the models are essentially regression analysis models with dummy variables (agribusinesses) that correspond to the specified effects. For fixed-effects models, ordinary least squares (OLS) estimation is the best linear unbiased estimator.

Any observation in the input data set with a missing value for one or more of the repressors is ignored by PROC PANEL and is not used in the model fit.

The following notation represents the usual panel structure, with the specification of u_{it} dependent on the particular model:

$$y_{it} = \sum_{k=1}^k x_{itk} \beta_k + u_{it} \quad i = 1, \dots, N; t = 1, \dots, T_i$$

The total number of observations is $M = \sum_{i=1}^N T_i$. For the balanced data case, $T_i = T$ for all i . The $M \times M$ covariance matrix of u_{it} is denoted by V . Let X and y be the independent and dependent variables arranged by cross section and by time within each cross section. Let X_{ζ} be the X matrix without the intercept. All other notation is specific to each section.

The specification for the one-way fixed-effects model is

$$u_{it} = y_i + \varepsilon_{it}$$

where instances of y_i are non-random parameters to be estimated.

The first-differenced (FD) estimator for one-way models is an approach that is used to address the problem of omitted variables in econometrics and statistics by using panel data. The estimator is obtained by running a pooled OLS estimation for a regression of the differenced variables. To eliminate the fixed effects, you use first-differenced methods to difference them out, instead of using the within transformation.

Let i be the cross sections and t be the time periods. The regressors and dependent variables are denoted as $X_{i,t}$ and $y_{i,t}$, respectively. For the models that have only cross-sectional effects, as in the current study, the data are transformed by first-differencing within each cross section. Therefore, the transformed variables are $\tilde{X}_{i,t} = X_{i,t} - X_{i,t-1}$ for regressors and $\tilde{y}_{i,t} = y_{i,t} - y_{i,t-1}$ for the dependent variable.

The conventional **coefficients of determination** (R^2) measure is inappropriate for all models that the PANEL procedure estimates by using GLS because a number outside the $[0,1]$ range might be produced. Hence, a generalisation of the R^2 measure is reported. This is a measure of the proportion of the transformed sum of squares of the dependent variable that is attributable to the influence of the independent variables. In the case of OLS estimation, both of the R^2 formulas given here reduce to the usual R^2 formula.

4.9 Steps in the Panel procedure

The following steps were applied on the two different data sets:

Step 1: Panel Pool ability Test

The null hypothesis of poolability assumes homogeneous slope coefficients. An F-test can be applied to test for the poolability across cross sections (i.e. agribusinesses) in panel data models. A large F-value (small p-value) indicates deviation from poolability.

Step 2: Panel Cross Sectional Dependence Test

The two tests for the executing the Panel Cross Sectional Dependence are the Breusch-Pagan LM Test and the Pesaran CD and CDp Test.

Breusch-Pagan LM Test

Breusch and Pagan (1980) propose a Lagrange multiplier (LM) statistic to test the null hypothesis of zero cross-sectional error correlations.

Pesaran CD and CDp Test

Pesaran (2004) proposes a cross-sectional dependence test that is also based on the pairwise correlation coefficients $\hat{\rho}_{ij}$.

Step 3: Panel Stationary Tests

Panel unit root tests for the null hypothesis of unit root against a homogeneous stationary hypothesis are performed by using Breitung's Unbiased Tests. Small p-values indicate deviation from homogeneous stationarity.

4.10 Summary of statistical methodology

The steps performed in the statistical analyses in this study are summarised as follows:

Step 1: Extract actual nominal numbers from the included agribusinesses annual reports

Step 2: Calculate the real values with the GDP deflator per annum, with 2010 as the base year, to limit downward and upward spikes and express the nominal values into 2010 terms.

Step 3: Ensure that the data sets are balanced data sets with no vacant spaces as described theoretically.

Step 4: Cluster analyses were performed to decrease multicollinearity and the number of variables.

Step 5: Transform data to normalise the data sets.

Step 6: Execute the Panel Poolability Test on the data sets.

Step 7: Execute the Panel Cross Sectional Dependence Test on the data sets.

Step 8: Execute Panel Stationary Tests on the data sets.

Step 9: Execute the PANEL procedure because time series and cross-sectional data are combined in the data sets.

Step 10: Execute First Difference Estimates for One-Way Models (FD) to address the problem of omitted variables in econometrics and statistics on the Panel data sets.

5. Descriptive statistics of the profitability and growth drivers, strategies and performance of agribusinesses: 2003 – 2013

Descriptive statistics are used to describe basic features of data (Mendenhall *et al.*, 2013) and will be used to provide summaries about the profitability and growth drivers, and strategies implemented, as well as trends regarding the calculated profitability and growth indicators.

The data to evaluate the actual profitability and growth performance of the included agribusinesses was captured from the annual reports. A model was created with all the income statement, cash flow statement and balance sheet data per annum for each company, and then a total for the year was calculated and summarised from 2003 to 2013, per annum. Extensive numbers of financial indicators were calculated for each company per annum and for the total of all the included agribusinesses. This model was utilised to determine the same results for the more homogeneous groups of agribusiness. It has to be noted that one agribusiness that reported excessive income in two financial years had to be left out of the group where agribusinesses operating in winter rainfall areas was analysed. These businesses' data were outliers, skewing the total analysis.

Compounded average growth was calculated by also utilising the data from the model for executing the profitability analyses. The compounded average growth was calculated for an eleven-year period starting with 2003 as base year and ending with 2013 for all the included agribusinesses in total and for each homogeneous group of agribusinesses. The compounded average growth rate is a number describing the rate at which an investment would have grown if it grew at a steady rate over the period. Compounded average growth for this study was defined as:

$$\text{Growth} = \frac{(\sqrt[n-1]{\frac{a}{b}} - 1) + (\sqrt[n-1]{\frac{c}{d}} - 1)}{2}$$

where:

a = Revenue in 2013 – the eleventh year

b = Revenue in 2003 – the base year

c = Earnings attributable to shareholders in 2013 – the eleventh year

d = Earnings attributable to shareholders in 2003 – the base year

n = Number of data points i.e. 2003 to 2013 = 11 (n -1 = 10)

Line and bar graphs will be used to illustrate the trends of different profitability indicators for all the included agribusinesses and the comparison of the nominal values of NPAT and EBITDA for all the included agribusiness for the period 2003 to 2013. The results of the compounded average growth calculations will be presented with tables for the included agribusinesses in total and for the more homogeneous groups of agribusinesses for the different five-year periods.

The identified homogeneous groups are:

Group 1: Agribusinesses operating in the summer rainfall areas with mostly dry-land production.

Group 2: Agribusinesses operating a grain division in the fibre industry (wool and mohair), livestock auctions, property business, and diversified in industries.

Group 3: Agribusinesses operating in the summer rainfall areas with mostly production under irrigation and diversified in industries.

Group 4: Agribusinesses operating in the winter rainfall areas – excluding an agribusiness with exceptional income from investments during the period.

Group 5: Agribusinesses operating in the summer rainfall areas with mostly dry-land production, mainly in the north-western part of South Africa.

Group 6: Agribusinesses operating in the summer rainfall areas with mostly dry-land production and diversified in industries in the eastern parts of South Africa.

Group 7: Agribusinesses categorised as small (Group 7a), middle size (Group 7b) and big (Group 7c) according to NPAT.

5.1 Strategies-analyses

The strategies implemented by all the participating agribusinesses acquired from the completed questionnaires will be illustrated in table format. The information gathered from the semi-structured interviews will be interpreted in general and, supporting the results, will be presented in a table.

6. Summary and conclusion

Various statistical methods will be utilised by means of advanced SAS computer software to analyse the profitability and growth of included agribusinesses in the grain segment of the agricultural sector. This will include multiple regression models for different data sets as basis, followed by Panel procedure. Descriptive analyses, econometric analyses, trend analyses of profitability and growth indicators, and semi-structured interviews will explain profitability and growth drivers, as well as the most successful strategies implemented by participating agribusinesses, including the status of profitability and growth of the included agribusinesses during the research period.

-oOo-

CHAPTER 5

STATISTICAL ANALYSIS

1. Introduction

One of the main purposes of this study is to identify the significant internal and external variables which determine the profitability of agribusinesses with strong linkages to the grain segment in South Africa. This chapter describes the results of the statistical analyses conducted on the financial statements and reports of the agribusinesses studied. Firstly, an analysis of the various data sets will be investigated to determine the effects of the internal variables on profits and growth. Based on the results, the variables that significantly influence the financial performance of agribusinesses will be highlighted.

Secondly, the identification of the significant external profitability variables is important for agribusinesses in the grain segment because of the risks involved in grain production, especially under dry-land conditions. Nature determines the volume of grain produced and has, among other factors, a noticeable effect on the profitability of agribusiness. This information can be utilised for improved planning and managing the risks of an agribusiness to ensure sustainable profitability and growth in the long term.

Firstly, the co-operative era will be compared with the company era between 1980 and 2013. The results will be investigated to determine whether a significant difference exist between these agribusinesses. Then, a description of their differences in profitability will be highlighted.

The description of the most significant internal variables explaining the differences in profitability of agribusinesses during the periods of 1980 to 2013 and 2003 to 2013 will be explained. The study focuses on these time periods because of the availability of data. Following the results based on the internal variables from the financial reports, the significant external variables that determine growth and profits in agribusinesses will be described. The probability of attaining an optimal level of profitability in the agricultural industry will then be studied.

2. Results from the statistical analysis

The available financial results for agribusiness, for the period 1980 to 2015, were summarised in Chapter 4. The data sets of analysis were initially created for: agribusinesses (co-operatives and companies) for the time period 1980 to 2013; co-operatives from 1980 to 1996; co-operatives from 1988 to 1995; companies from 2003 to 2013; and agribusinesses (some still co-operatives in the period) from 2003 to 2013. These data sets were used in the initial statistical analyses, excluding the Panel procedure (Step 9 given in Section 3.11 of Chapter 4). The analysed results

indicated that only two data sets are significant for the final statistical analyses. These are the data set for agribusinesses (co-operatives and companies) from 1980 to 2013, and the data set for agribusinesses (some still co-operatives in the period) from 2003 to 2013.

The data sets eventually utilised were prepared for the final statistical analyses according to the steps explained in Chapter 4, steps 1 to 5. Actual nominal values were obtained from the annual reports (Step 1). Then, real values were calculated, removing the effect of inflation, with 2010 as base year (Step 2). This also limited downward and upward spikes. Both data sets were checked to confirm that they were balanced data sets with no vacant spaces (Step 3). This was then followed by cluster analyses to decrease multicollinearity and the number of variables (Step 4). If the dendograms indicated that two or more variables delivered the same results, only one was chosen. Finally, the data was transformed to normalise the data sets (Step 5) and tested to determine whether the division into particular groups would make sense, which is the topic of the following section.

2.1 Co-operatives and companies: 1980 to 2013

In this study on profits and growth of agribusinesses, “Net Profit after Tax” (NPAT) is accepted as the dependent variable. The SAS statistical computer software programme was utilised to execute the Panel Poolability Test (Step 6), the Panel Cross-Sectional Dependence Test (Step 7) and the Panel Stationary Test (Step 8). The results are displayed in Table 5.1.

The Panel Poolability test was undertaken with a sub-programme of SAS called the “First Difference One Model” or “FDONE Model”. In the top section of Table 5.1 this model revealed that the data set was not poolable over cross sections, since $Pr > F$ (i.e. the p-value) was smaller than 0.0001. That implies that the regression coefficients are not the same for all the agribusinesses. All three of the panel cross-sectional dependence tests were rejected (i.e p-values very small), which meant that independence between agribusinesses’ errors in the fitted model cannot be assumed (see the second section of Table 5.1). From the Breitung tests for stationarity, two of the three tests showed stationarity for this model (i.e the p-values are > 0.05), which implies that the first differences of observations over years are not auto-correlated.

Table 5.1: Results of the Panel Poolability Test, the Panel Cross Sectional Dependence Test and the Panel Stationary Test

Test Results: Panel Poolability Test								
Restricted model			F			Pr > F		
FIXONE			3.27			<.0001		
Test Results: Panel Cross Sectional Dependence Test								
BP's LM Test			BP's LM (Normalised)			Pesaran's CD Test		
BP	Pr > BP		BPs	Pr > BP s		CD	Pr > CD	
47.4	<.0001		5.91	<.0001		6.07	<.0001	
Test Results: Panel Stationary Test								
Breitung Test Options								
ADF Lags Maximum ADF Lags		MAIC 8						
Breitung Test Results								
	UB Test		Robust t			GLS t		
Deterministic Variables	UB	Pr < UB	Phi	T	Pr < t	GLS phi	T	Pr < t
CS Fixed	-0.41	0.34	-0.02	-1.74	0.04	-0.03	-0.73	0.23

Source: Author's own estimations

Because time series and cross-sectional data were combined in the data sets, the PANEL procedure was executed (Step 9). The Panel procedure on this data set included the Box-Cox transformed financial results of six agribusinesses for the period 1980 to 2013 (variables are denoted in the form T_X, where X is the original variable). The dependent variable in all instances is transformed NPAT (T net profit after tax).

One of the six agribusiness's financial results was randomly chosen as a reference to compare the financial results of the remaining five agribusinesses with, after which dummy independent variables, based on these five agribusinesses (CS1 – CS5), were included. Also included was a dummy variable, Company_Co-op, to indicate the years when an agribusiness was a co-operative or company. The independent variables were the transformed operational income before interest and net current assets. The last step in the statistical analyses (Step 10) was to utilise the SAS

software to execute the First Difference Estimates for One-Way Model (FD or FDONE) to address the problem of omitted variables in econometrics and statistics on the Panel data sets. Table 5.2 displays the results of the fitted model.

Table 5.2: Results of the First Difference for One-Way Test

Test Results					
Model description		Fit Statistics			
Model statement Label	Model for FDONE	SSE	8660651.81	DFE	190
Estimation method	FDONE	MSE	45582.44	Root MSE	213.50
Number of Cross Sections	6	R ²	0.76		
Time Series Length	34				
Parameter Estimates					
Variable	Estimate	Standard Error	t Value	Label	
CS1 (1 vs 6)	328.98	113.70	2.89	Cross Sectional Effect 1	
CS2 (2 vs 6)	-70.59	62.77	-1.12	Cross Sectional Effect 2	
CS3 (3 vs 6)	76.70	69.97	1.10	Cross Sectional Effect 3	
CS3 (4 vs 6)	156.00	60.60	2.64	Cross Sectional Effect 4	
CS3 (5 vs 6)	413.21	111.70	3.70	Cross Sectional Effect 5	
Intercept	-2736.09	372.80	-7.37	Intercept	
Company_Co-op	-126.64	87.65	-1.44		
T_Operational income before interest	87.39	6.96	12.56		
T_Net current assets	0.03	0.01	2.34		

Source: Author's own estimation

Note: The Fit Diagnostics is displayed in Appendix 2

The t-values are obtained by dividing the regression coefficient (i.e 'Estimate' in the lower part of the table) with its standard error, and give an indication of its significance. When $t < -2$ or $t > 2$ are taken as practically significant effects, irrespective of the negative sign, then the t-values indicate that agribusiness 1, 4 and 5 do significantly differ from the comparing agribusiness 6, with regard to NPAT. On the other hand, agribusinesses 2 and 3 with t-values below 2 (irrespective of the negative sign), do not differ from the comparing agribusiness.

The explanation why agribusinesses 1, 4 and 5 differ significantly from the comparing agribusiness, with regard to NPAT, is firstly because of the different business models followed by the various businesses, with different levels of diversification in value added products. This also includes a range of products to which value is added. From an inherent risk profile viewpoint, one of the agribusinesses also differs from the comparing agribusiness in that it operates mainly in an

irrigation area. The other agribusiness is a dominant player in the livestock and fibre segments. The remaining agribusiness' main grain production areas are located more to the eastern part of the country under dry-land conditions, with a higher percentage of winter grain produced, compared with the comparing agribusiness operating in the western part of the country. Agribusinesses that do not differ from the comparing agribusiness with regard to NPAT follow a more similar business model and are operating in the central and western parts of the country where summer grain is mainly produced under dry-land conditions. This result is actually a logical one. Noteworthy is that not even the scale of the three different agribusinesses in NPAT could outweigh their characteristic differences in the business models of the individual agribusinesses.

Variables that have an effect on the transformed NPAT (t -values > 2 , irrespective of the negative sign) are transformed operational profit before interest and transformed net current assets. The high R^2 value implies that 76% of the variation in the dependent variable NPAT may be explained due to the linear relationship of NPAT with the independent variables.

Increasing operational profits begin with the increase of sales volumes, competing sales prices, lower cost of sales, and effective cost management. The depreciation on assets and new investments is included in the operating cost. Managing sales prices which are competitive in the market, and controlling gross profit percentage and net profit percentages are very important managerial functions. These financial ratios are part of a range of financial ratios that have to be controlled on a regular basis, as described in Chapter 4. With the transformation from co-operatives to companies, this became even more important to managerial functions. Increasing operational profit results in an increase of NPAT. The difference is the amount of interest that has to be paid, as well as income tax. The amount of interest an agribusiness is liable for is dependent on the liabilities of the business. Income tax payments will, however, increase when operational profits rise.

The components of net current assets are debtors, inventory and creditors. Net current assets are calculated by adding the debtors and inventory together and deducting the creditors. Managing of the inventory level is important because this is directly linked to customer service. The main category of debtors in an agribusiness with strong linkages to the grain segment comprises their shareholders that are financed with production loans. Surety for production loans is important to prevent business exposure to debtors that are not able to repay their loans. Agribusinesses in the grain segment sometimes assist their shareholders through drought periods, when harvests are small, with carry-over debt schemes and re-scheduled repayment periods. This protects the customer base of the agribusiness and minimises bad debt that has to be written off. This normally impacts on the cash flow of agribusinesses as the amount allocated to debtors increases. It is also important to manage other debtors according to the respective

payment policy. At the same time, it is important to manage the payment to agribusiness' creditors, where the inventory is bought and longer payment terms negotiated. A good payment record to creditors enables negotiation for better purchase prices, as well as the volume purchased per annum. Important financial ratios to manage are the inventory days, current ratio, quick ratio, debtor days and creditor days as part of the normal financial ratios in an agribusiness, as mentioned in Chapter 4.

The same model can be utilised for companies and co-operatives (Company_Co-op) because the t-value of minus 1.44, irrespective of the negative sign, has no effect on NPAT (Table 5.2). Transforming the agribusinesses from co-operatives to companies was expected to have had an influence on the whole approach of doing business. In the past, the purpose of a co-operative was to supply farm requisites at the best prices to its members, handling and storage of their produced commodities, and other services, and even adding value to their commodities, but it still had to be profitable. The profit was distributed to the members of the co-operative in relation to the turnover of the member at the co-operative after membership funds for expansion and reserves to bridge difficult periods were retained in the co-operative. With the transformation of its business form, the members of the co-operative became shareholders of the company. Another important change was that the traditional service areas of co-operatives collapsed with increased competition. Since the transformation to companies, the objective became profitability on all operations, competing in the free market environment. Excellent services were required to retain the business of shareholders. Dividends are paid to shareholders after year end from the NPAT, according to the agribusiness' dividend policy. The remainder of the NPAT is called "retained earnings", which can be utilised for company growth. The importance of this result is that it indicates that the same variables in the co-operative-era are also the variables for profitability in the company-era, but in a free market environment it has to be supported by excellent customer service. Essentially, the amounts became bigger over the years and profits went up because of the focus of return on investment and return on equity that provide value to shareholders through the value of the shares.

2.2 Agribusinesses: 2003 to 2013

Analysing the performance of agribusinesses since 2003 utilised the statistical SAS computer software to execute the Panel Poolability Test (Step 6), the Panel Cross Sectional Dependence Test (Step 7) and the Panel Stationary Test (Step 8); and the research results given in Table 5.3.

Table 5.3: Results of the Panel Poolability Test, the Panel Cross Sectional Dependence Test and the Panel Stationary Test

Test Results: Panel Poolability Test								
Restricted model		F		Pr > F				
FIXONE		4.58		<.0001				
Test Results: Panel Cross Sectional Dependence Test								
BP's LM Test		BP's LM (Normalised)		Pesaran's CD Test				
BP	Pr > BP	BPs	Pr > BP s	CD	Pr > CD			
78.65	0.14	2.06	0.02	0.63	0.53			
Test Results: Panel Stationary Test								
Combination Test Results with PP Rho								
	Fisher Test		Asymptotic Fisher Test		Inverse Normal Test		Logit Test	
Deterministic Variables	Chi-Square	Pr > ChiSq	Fisher _i	Pr > Fisher _i	Z	Pr > Z	L	Pr < L
CS Fixed	12.81	0.97	-1.62	0.95	2.21	0.99	2.76	1.00

Source: Author's own estimations

The Panel Poolability test for agribusinesses, using the FDONE Model, showed that the data set is not poolable over cross sections, which means that the regression coefficients are not the same for all the agribusinesses. In the top section of Table 5.3 this model revealed that the data set was not poolable over cross sections, since $Pr > F$ (i.e. the p-value) was smaller than 0.0001. That implies that the regression coefficients are not the same for all the agribusinesses. The panel cross-sectional dependence tests were rejected in only one of the tests (i.e p-values very small), which means that independence between agribusinesses' errors in the fitted model can more or less be assumed (see the second section of Table 5.3). From the Breitung tests for stationarity, two of the three tests showed stationarity for this model (i.e the p-values are > 0.05), which implies that the first differences of observations over years are not auto-correlated.

The PANEL procedure was executed (Step 9) because time series and cross-sectional data are combined in the data sets. The Panel procedure on this data set included the Box-Cox transformed financial results of twelve agribusinesses for the period 2003 to 2013 (variables are

also denoted in the form T_X , where X is the original variable). The dependent variable in all instances is again the transformed NPAT ($T_net_profit_after_tax$).

One of the twelve's financial results was randomly chosen as reference to compare the financial results of the remaining eleven agribusinesses. If another agribusiness was chosen as a reference the results might have differed because of the characteristics of the model used. As before, the dummy variables were denoted by CS1 to CS11. Independent variables were transformed current assets, earnings before interest, tax, depreciation and amortisation (EBITDA), property, plant and equipment, and retained earnings. The last step in the statistical analyses (Step 10) was to utilise the SAS computer software to execute the First Difference Estimates for One-Way Model (FD) to address the problem of omitted variables in econometrics and statistics on the Panel data sets. Table 5.4 displays the results of the fitted model.

Table 5.4: Results of the First Difference for One-Way Test

Test Results					
Model description		Fit Statistics			
Model statement Label	Model for FDONE	SSE	76.87	DFE	113
Estimation method	FDONE	MSE	0.68	Root MSE	0.82
Number of Cross Sections	12	R ²	0.79		
Time Series Length	11	F Test for no fixed effects			
		Num DF	Den DF	F Value	Pr > F
		11	113	8.51	<0001
Parameter Estimates					
Variable	Estimate	Standard Error	t-Value	Label	
CS1 (1 vs 12)	-0.74	0.55	-1.35	Cross Sectional Effect 1	
CS2 (2 vs 12)	0.44	0.43	1.02	Cross Sectional Effect 2	
CS3 (3 vs 12)	0.14	0.43	0.32	Cross Sectional Effect 3	
CS4 (4 vs 12)	0.67	0.49	1.36	Cross Sectional Effect 4	
CS5 (5 vs 12)	0.62	0.52	1.20	Cross Sectional Effect 5	
CS6 (6 vs 12)	-0.16	0.52	-0.31	Cross Sectional Effect 6	
CS7 (7 vs 12)	0.10	0.53	0.18	Cross Sectional Effect 7	
CS8 (8 vs 12)	0.70	0.52	1.34	Cross Sectional Effect 8	
CS9 (9 vs 12)	0.70	0.37	1.82	Cross Sectional Effect 9	
CS10 (10 vs 12)	-0.07	0.44	-0.15	Cross Sectional Effect 10	
CS11 (11 vs 12)	0.40	0.46	0.88	Cross Sectional Effect 11	
Intercept	4.98	1.81	2.75	Intercept	
T_Current_assets	-0.42	0.24	-1.76		
T_EBITDA	0.89	0.09	9.54		
T_Property_plant_and_equipment	-0.55	0.48	-1.15		
T_Retained_earnings	0.20	0.09	2.16		

Source: Author's own estimations

Note: The Fit Diagnostics is displayed in Appendix 2

Test parameters, such as the coefficient of determination (R^2), is again high (79%), which indicates a close correlation between the variation of the dependent and independent variables. The t-values are obtained by dividing the regression coefficient with its standard error and suggest statistical significance. Take $t < -2$ or $t > 2$ as practically significant effects, then t-values above the absolute value of 2 indicate that no agribusiness significantly differs from the comparing agribusiness 12, regarding transformed NPAT. Compared with the results in the period 1980 to 2013, this is a significant result.

Despite the facts that one agribusiness was only transformed to a company near the end of the period and one still operates as a co-operative, all of the agribusiness still operate mainly from their original servicing areas, and the only differences are the business models, different levels of diversification, different climatic circumstances, different commodity ratios and difference in the scale of operation. No significant differences exist between the agribusinesses regarding NPAT. The logical conclusion is that all the agribusiness, irrespective of business form, adjusted to the new set of rules of a freer market orientation. The differences in business models, business structure and implementing different strategies, focus on the return on equity and the creation of value for members or shareholders. This will be further investigated in Chapters 6 where the profitability and growth drivers are identified and described. In Chapter 7, the focus will be on important strategies and the actual financial results achieved with the implementation of different strategies or combination of strategies.

Variables that have a significant effect on transformed NPAT are (t-values > 2, irrespective of the negative sign): transformed Earnings before Interest, Tax, Depreciation and Amortisation (T_EBITDA), and transformed retained earnings.

The expectation was that the result would be the same in this period, as in the co-operative case, but the business form was found not to have any effect. It is the earnings (EBITA) instead of operation profit (profit before interest and tax, or 'PBIT') that changed significantly. The difference between EBITDA and PBIT is that PBIT includes depreciation and amortisation. This is linked to existing assets and new investments. Therefore, the effect of EBITDA on NPAT is not only significant, but also justified. Increasing EBITA is similar to increasing PBIT and starts with the increase of sales volumes, competing sales prices, lowered cost of sales and effective cost management. The depreciation on assets and new investments, as well as amortisation, is excluded from EBITDA. Managing sales prices to be competitive in the market, controlling gross profit percentage, and net profit percentage are important managerial functions. These financial ratios are part of a range of financial ratios that have to be controlled continually, as described in Chapter 4.

Retained earnings are the balance after dividends paid to shareholders and deducted from NPAT according to the dividend policy. This amount is available for the repayment of debts and new investments for growth. It has to be noted that some agribusinesses implemented different loyalty schemes to shareholders that decrease NPAT and, therefore, retained earnings. The bases of the different loyalty schemes are seen in turnover in the case of agribusiness, which is similar to the bonus on turnover schemes during the co-operative era. Except for the purchasing of shares, it is in essence actually a loan with low or even zero interest rates from the shareholder, because the agribusiness has to repay the amount, under different conditions, after a specific period. With

some of the agribusiness that have outside investors that want dividends as high as possible, the implementation of loyalty schemes that decrease retained earnings could be problematic. When retained earnings are utilised to pay debt, the financial soundness of the agribusiness will improve and the amount of interest will be reduced, with an increasing effect on NPAT and retained earnings. When retained earnings are utilised for new investments to promote growth, the transfers can be financed partly from equity and partly from a new loan. This will not reflect on the EBITDA earnings, but in lower PBIT and higher interest payments, and thus a decreasing NPAT and lower retained earnings in the short term. When the new investment starts contributing to higher NPAT, retained earnings will also increase. The financial soundness of the agribusiness will dictate the financing method or combination of equity and loan financing. Important financial ratios, such as debt to equity, gearing ratio, and solvency ratio, have to be managed to prevent agribusiness experiencing cash flow and financial difficulties (see Table 4.6 for the relevant definitions).

Variables that do not have a significant effect on transformed NPAT, are (t-values < 2, irrespective of the negative sign): transformed current assets and transformed property, and plant and equipment. Although it could not be statistically proven that current assets and property, and plant and equipment do affect NPAT significantly, they are still important internal variables. A large part of current assets are stock and debtors, representing mainly production loans to farmers and the farming requisites required by them. The capacity and condition of property, plant and equipment determines the storage income of agribusinesses. It is important to take note of the dominant effect that EBITDA has on NPAT, according to the results. The same came to the fore when the external variables were statistically analysed.

Current assets include inventory and debtors. Compared with the years 1980 to 2013, the inherent characteristics of the agribusinesses did not change, and it remains important to manage inventory and debtors closely. In the period 2003 to 2013, most of the agribusinesses made investments to grow and even their capital structure had changed, according the financial analyses (see Chapter 7). The amount of assets of agribusinesses in property, plant and equipment increased due to these investments, and to increase value for shareholders, return on investment is important in the set of financial ratios that has to be managed.

2.3 The effect of external variables on co-operatives and companies: 1980 – 2013

The empirical research results reported revealed that the significant internal variables identified with the Panel procedure are operating profit before interest and net current assets. They were included as independent variables, together with all the external independent variables, after steps 1 to 8 were executed, where applicable, to prepare the data set for the statistical analyses. The most important external variables studied included rainfall, the prime rate, inflation (CPI), the

Dollar, Euro and Pound exchange rates, and the oil price. The Panel procedure was repeated once again (Step 9). Then, the statistical analyses (Step 10) were executed by applying the First Difference Estimates for One-Way Model (FD or FDONE) on the Panel data set with NPAT as the dependent variable. The result was, however, that no external independent variable, such as the weather or exchange rates, was statistically significant, with t-values larger than 2 (irrespective of sign), and therefore had no significant effect on NPAT.

Elsayed and Paton (2005) studied the impact on environmental performance on firm performance in the United Kingdom and concluded that the dynamic panel estimates revealed only very weak evidence that environmental performance affected financial performance. In contrast, their cross-section and pooled estimates using the same data suggested that lagged environmental performance exerted a strongly significant impact on performance. The most likely explanation for the difference between these findings is that managerial business strategies and unobservable business effects exist that are important in explaining financial performance. Firm heterogeneity is much more important than allowing for dynamic effects in studies of the environmental/financial performance relationship. However, the weight of their evidence was that environmental performance had very little impact on financial performance.

2.4 The effect of external variables on agribusinesses: 2003 – 2013

The internal variables were included as independent variables, together with all the external independent variables, after steps 1 to 8 were executed on the applicable data set for the statistical analyses. The Panel procedure was repeated again (Step 9). Then, the statistical analyses (Step 10) were executed by applying the First Difference Estimates for One-Way Model (FD) on this Panel data set, with NPAT as the dependent variable.

The independent variable, earnings (EBITDA), has a very strong effect on NPAT, to such an extent that none of the independent variables had a significant absolute t-value larger than 2, and therefore had no significant effect on NPAT. Various different Panel procedures were executed (Step 9), as well as Step 10, by changing the internal independent variables, for example taking out current assets or retained earnings. EBITA was dominant and was the only significant independent variable. When EBITDA was taken out as an independent variable, together with current assets or retained earnings, and steps 9 and 10 were repeated, no defensible explanation could be formulated on the results achieved. Even the Panel procedure was executed, replacing NPAT as dependent variable with EBITDA, current assets, property, plant and equipment or retained earnings with the external independent variables in the model, repeating steps 9 and 10 every time. The explanation for the differences in profits and growth must lie in strategies that the MDs or CEOs of agribusinesses follow.

Although the external variables are important, no significant t-values larger than the absolute value of 2 were recorded. One possible reason for these results was that the data ranges are not extensive enough. Also, with the exception of rainfall, all the external variables are experienced equally by all agribusinesses simultaneously. The result of a previous study by Elsayed and Paton (2005) was referred to for the period 1980 to 2013, which showed similar results. The same applies to the results on the statistical analyses on the external variables for this period.

3. Summary and conclusion

This chapter reported on the empirical analysis that was conducted on the financial statements and reports of co-operatives and agricultural businesses since 1980. The aim was to ascertain from these data sets what the drivers are that determine the profitability and growth of agribusinesses in the grain segment in South Africa.

The statistical analyses were a challenging exercise because of limited data. With most of the co-operatives being transformed into public companies, mainly during the late 1990s, the expectation was that the profitability objective are mainly influenced by the internal variables from the financial statements but also significantly influenced by the external variables.

The most important result is that there is no significant difference in the internal variables explaining NPAT that can be linked to the specific business types, whether co-operatives or companies.

For the period 1980 to 2013, it was found that three of the agribusinesses studied differed significantly from the comparing agribusiness, and that two agribusinesses did not differ significantly with regard to NPAT. This was contrary to what was a priori expected. The main reason is differences in business models, involvement in different segments, and operating in different areas. Despite all the differences between the agribusinesses studied, no agribusiness differed significantly from the comparing agribusiness regarding NPAT during the period 2003 to 2013.

The internal variables which statistically and significantly explain NPAT between 1980 and 2013 are operational profit before interest and net current assets. The internal variables that explain NPAT significantly during 2003 to 2013 are earnings (EBITDA) and retained earnings. EBITDA is more significant and justified explaining NPAT, and is also the most dominant internal variable. Although the effect of current assets and property, and plant and equipment were not found to be statistically significant, generating NPAT, based on the current data set used, they remain important to manage carefully to ensure sustainable profitability.

It is recognised that external variables, such as rain and exchange rates, are important for the profitability and growth of agribusinesses, but could not be statistically proven as determinants of NPAT. An explanation for this is that the external variables, with the exception of rainfall, are the same for all agribusinesses over the period because they operate under the same economic and political conditions.

The reason for this should lie in the way MDs and CEOs manage their businesses and the strategies they follow. This cannot all be ascertained through a quantitative and econometric analysis of the figures from financial statements, and accordingly a survey was conducted among the managers of agribusinesses in the grain industry. The factors that managers deem important as determinants and drivers of profits and growth are studied and reported in the next chapter and Chapter 7 will study the strategies they followed and the outcomes it led to.

The explained results and the limited data ranges made it impossible to develop an explanatory profitability index for agribusinesses in the grain segment of the agricultural sector.

The statistical analyses led to important results. The fact that certain expected results could not be proved through the qualitative research and statistical analyses moved the focus to a greater extent on to qualitative research. The next chapter will describe the steps necessary to transform a good agribusiness into a great agribusiness. Furthermore, the focus will be on the qualitative results of the important profitability drivers, their probability of occurring, and the importance of the growth drivers. Then, the reasons to grow an agribusiness will be described.

Chapter 7 will focus on the qualitative research results of the strategies implemented and the approach of the various MDs and CEOs. The achieved performance of the agribusinesses regarding profitability and growth, with their implemented strategies, will be analysed. This will be important because no external variables had any significant effect on the profitability of agribusiness in the quantitative analysis. Important to note is that all the agribusinesses are exposed to the same external variables, but they differ in profitability and growth.

-oOo-

CHAPTER 6

RESULT OF THE

AGRICULTURAL PROFITABILITY AND GROWTH SURVEY

1. Introduction

The previous chapter identified several determinants of profitability and growth through the empirical analysis of the financial statements of agribusinesses. There are, however, factors that should have a statistically significant influence on profits, but which did not show up in the analysis of the data set studied. The same applies to external factors, such as the weather and exchange rates. This indicates that not all profit and growth factors regarding the management of agribusinesses and their specific strategies can be inferred from the figures on financial statements. This emphasises the need to survey managing directors (MDs) and chief executives officers (CEOs) directly to determine the effect of these aspects.

The steps to transform a good agribusiness into a great agribusiness are important for sustainable profitability and growth. When the profitability and growth drivers are known, management will be able to adjust their planning and strategies accordingly. In the process, the reasons to grow an agribusiness will be compared with previous research. The reasons to grow an agribusiness will provide direction in strategic planning. The survey and semi-structured interviews that were conducted present valuable information from experienced executives, which gives insight into the general aspects of growth and the strategies implemented. It is, however, important to note that the research findings made in this thesis were based on the specific methodology used, another model might have led to different results.

In this chapter, the approach of executives concerning the important steps to transform a good agribusiness into a great agribusiness will be investigated. The results of the descriptive analyses done on the determinants of profitability and growth from the survey will be reported. The results from this study will, amongst other things, also be compared with those of similar studies. The chapter will conclude with a summary of the reasons to grow and of the most important growth drivers for agribusiness in South Africa.

2. Active steps to advance agricultural Business

The results of previous research with regard to the steps deemed adequate to create a great agribusiness were given in Chapter 2. Emphasis was placed on the perceptions of participants in terms of the steps required to ensure that agribusiness evolve from being good to being great. Table 6.1 now provides an overview of the results as obtained for the agricultural growth and

profitability survey. In order to assess what the most appropriate steps are which agribusinesses should follow to enhance its economic success with regard to profits and sustainable growth MDs and CEOs were questioned on the steps that led to the highest rate of success. This links with the concept developed in previous chapters where the factors that made a difference between success and failure, and when companies succeed how they should move from good to great to ensure sustainable economic progress in agribusinesses.

Table 6.1: Important steps to move from good to great

Important steps	% of participants
Next MD/CEO must be appointed internally	60
Remuneration linked to profit and growth in a specific form	90
Best results will be achieved by compiling and implementing a superior strategy	90
Best chance of success is to focus equally on what to do, what not to do and on what to stop doing	90
Technology (IT) should only be part of the larger strategy followed	70
Mergers and acquisitions form an integral part of the strategy	90
Focus should be on strategy when it comes to the motivation of employees and the alignment of different business units	60
Business transformation that propose a leap in business profitability and growth do not have to be a revolutionary process	50
Creating an excellent agricultural business is a function of conscious choice	100

Source: Author's own analysis

A total of 60% of the respondents are of the opinion that for any agribusiness in South Africa to move from a good to a great business, the top executive should be appointed from within the business. The reason pertains to the fact that an internally appointed top executive already knows the internal operations and culture of the business, and to some extent, already has the loyalty and support of the employees. It should, however, be noted that long-term succession planning with the objective of attracting highly talented senior employees is a prerequisite, to enable the appointment of a top executive internally. Contrary to this viewpoint, some participants prefer a new top executive to be appointed from outside the business, especially if the business has no logical internal successor. The view is that value will be added with outside knowledge and experience, and new talent can bring new energy to the business. This is especially the case if the business is anchored on low growth for a period of time.

The current study utilised the research done by Collins (2001) as a comparable example and in this way also provided a scientific base to the work done by Collins. He and his research team identified a set of American companies that made the leap to great results and sustained those results for at least fifteen years. They contrasted the good-to-great companies with a carefully selected set of comparison companies that failed to make the leap from good to great. The

compelling question to answer was how a good company can become a great company? Collins (2001) describes the key determinants of greatness they discovered.

Strong arguments were also given during the survey and interviews for the appointment of the right manager, irrespective of whether the person is internal or external. Collins (2001) found that celebrity leaders who are appointed from elsewhere were negatively correlated with taking a company from good to great. Ten managers that managed to lead their businesses from good to great, were appointed from inside the company. Companies that did not succeed appointed their top executives from outside six times more often. The appointment of top executives from outside is a difficult task. He or she, and the rest of the management team, play an important role in the future profitability and growth of the business. In the following chapter, more information will be given on the results flowing from the strategies implemented by top management and the results achieved under the leadership of various top executives.

A majority of 90% of the participants stated that the remuneration of the top executive of an agribusiness should be linked to the profitability and growth of the agribusiness in a specific form. The remuneration should be linked to strategic objectives which must be clear, achievable and challenging. A balance between short-term and long-term incentives is important in order to retain and extract high growth at the same time. Collins (2001) found no correlation between specific forms of executive compensation and moving from good to great. The idea that no definite structure of executive compensation is a key driver in corporate performance was not supported by the current study. Incentivising top executives is important for sustainable profitability and growth.

Ninety per cent of the respondents indicated that the best results are achieved with a superior strategy. The argument was that a superior strategy aligns all structures and clearly identifies the objectives of a business. With clear communication and an appropriate funding model, commitment and a sense of responsibility to succeed, company growth is promoted. Strategy per sé did not separate the good-to-great companies from the comparison companies, as reported in Chapter 2. Previous studies by Collins also found that all sets of companies had well-defined strategies, but there was no evidence that the good-to-great companies spent more time on long-range strategic planning than comparison companies did (Collins, 2001). In conclusion, a strategy for future profitability and growth, whether formal or informal, is important.

Consensus exists between the view of the local respondents and the previous results of Collins (2001) that to transform from a good to a great business, the focus has to be principally on what to do to become a great business. Equally, the focus must be on what not to do and what to stop doing. The participants had strong views such as: a "Clear focus is part of a long-term strategy. It is important to make decisions on where to invest and where to exit"; "Strategy in most cases is

what not to do. To distinguish between an opportunity and a distraction”; “to continuously improve, one must equally know what is required for the future as well as what must not be repeated from the past” and “by actively deciding what not to do a company can strengthen its core focus and competitive advantage”. From the experience of the participants, it follows that sustainable profitability and growth depends on the right decisions being taken preceding action on the correct conduct, and what not to do or stop doing, and that this is essential.

The majority of respondents described the importance of technology, but stated that technology should only be part of a larger strategy to lead the company to greatness. Technology should support human capital, finance, legal services, internal audit and all the other supporting functions, and not dictate it. Technology, similar to structure, follows strategy and enables business. It was, however, stated that with rapid technological developments, technology-based strategies are essential and that market requirements are changing, with technology at the forefront. Technology could make the current business model redundant and should be utilised to ensure a competitive advantage. Collins (2001) found that technology and technology-driven changes have little to do with the initiation of a transformation from good to great. “Technology can accelerate a transformation, but technology cannot cause a transformation” (Collins, 2001). The speed of technological development and the competitive advantage it can offer is of great importance.

The majority of respondents are of the opinion that mergers and acquisitions have to form an integral part of the strategy for any agribusiness to proceed from a good to great company in South Africa. This is in contrast to the findings of Collins (2001). Collins (2001) concluded that mergers and acquisitions play virtually no role the initiation of the transformation to greatness. Although mergers and acquisitions may not play an integral part to creating a great business, some of the advantages of mergers and acquisitions are that: they enable role players to combine forces rather than to compete against each other; they remain an approach to grow, consolidate, expand and compete against international competitors; and they provide economy of scale, contrary to non-viable businesses that are forced into consolidation. It was also mentioned that mergers and acquisitions often fail and should be handled when an opportunity arises, but should not be part of an initial business strategy to achieve greatness. Opportunities for mergers and acquisitions must be based on sound evaluations and form part of the strategic planning.

The majority of respondents were of the opinion that the focus should rather be on strategy when it comes to the motivation of employees and the alignment of different units within an agribusinesses. In support of this statement, respondents are of the view that people will willingly follow excellent strategies. Moreover, the process of execution is much more about change management and this change management should be part of the strategy. Lastly, if the strategy

has clear goals, the commitment of management is secured and everybody is aligned, easing motivation. The good-to-great companies paid special attention to managing change, motivating people and creating alignment. Under the right conditions, the problems of commitment, alignment, motivation and change largely disappear (Collins, 2001). Alignment and commitment of people in the strategy remain important in the execution of any strategy.

The views of respondents were evenly spread about a revolutionary process that should be named, have a timeline, event launch and a programme to signify the business' transformation process. The same applies to business profitability and growth. Some participants were of the opinion that a clear strategy drives the process to a revolutionary process that can work if it develops to a radical, new and different business. In the middle of the spectrum, there were respondents stating that there is, in practice, no "yes" or "no" to these two approaches. Collins (2001), on the other hand, found in his study that the good-to-great companies had no name, timeline, event launch or programme. Some respondents are unaware of the magnitude of their business' transformation at that time, but later it became clear. This produced a significant difference from previous results. In practice, both a revolutionary and less revolutionary process of transformation to great agribusiness can be successful, but it will depend on the culture of the business and specific circumstances at that stage.

Respondents were unanimous as far as the creation of a great agricultural business is concerned. All agreed that the creation of a great agribusiness is a function of conscious choice. This result corresponds with the result that Collins (2001), who stated that greatness is largely a matter of choice. In line with this, remarks from participants include that one "always have a choice to outperform circumstances"; "without choice you have no purpose"; "first purpose, then profit"; and "a matter of choice, although circumstances does play a role in achieving your goals".

3. Profitability drivers

The results from the analysis of the survey in terms of profitability drivers will be reported in the following sub-sections. Each sub-section will deal with a specific set of factors that was deemed important from a profitability point of view, as described in the literature overview in Chapter 2. This part of the questionnaire used in the survey is based on the annual PricewaterhouseCooper (PwC) survey in terms of their "Agri Insight" research on the profitability of agribusinesses. As mentioned in Chapter 4, this research also focused on the explanation of financial performances and the determinants of profitability drivers of agribusinesses in South Africa. Specific mention was made to politics, government, economics, investment, human capital, competitiveness, nature, environment, finance, management, strategy, grain stock and prices, business model, and market share in terms of different categories as far as profitability is concerned. Respondents were requested to rank the factors influencing profitability drivers according to importance as far

as they impact on profitability, as well as their view on the certainty that any such factor does play a role. The scale to rank the importance and probability of occurring of the factors of each profitability driver was from 1 to 6. This scale was deliberately chosen to oblige respondents to make a decision below or above the middle of the range. If a participant chooses 3, it is just below the middle of the range, and when a participant chooses 4, it is just above the middle of the range. It should especial be noted that the best rating, which is “very certain” is awarded a “1” on this scale while a “6” indicates most uncertain. The higher the score, the higher uncertainty. The questionnaire is included in Appendix 1.

3.1 Politics and Government

The political situation in a country and the performance of the government determines the environment for businesses to thrive or to find it difficult to achieve sustainable profitability and growth (Kleynhans & Kruger, 2014). Government’s proper role is a catalyst and challenger to encourage companies to raise their aspirations and increase their levels of competitive advantage (Porter, 1998). From a political and/or government perspective, renewal of business confidence is regarded as the most important factor that leads to higher profits (see Figure 6.1). It should, however, be noted that there exists a close relationship between government support, political stability and higher confidence. Within the South African context, effective government support to the emerging and commercial farming sectors benefits agribusinesses much (Strydom, 2016). This is not only confined to support for primary production, but also to the broader sector in terms of policy directives and infrastructure. This all creates an enabling environment for doing business more efficiently and effectively. The same applies in terms of political stability, which has a significant impact on investment confidence in the country (Cho & Moon, 2013).

Political and governmental factors that respondents rated the most important are the renewal of confidence and political stability. Newton and Norris (1999) concluded that social trust and confidence in government and its institutions are strongly associated with each other at national level. Social trust can assist in building effective social and political institutions, which can help governments perform effectively, and this in turn encourages confidence in civic institutions. Political stability and the absence of corruption promote Foreign Direct Investment (FDI) because these factors advance large local markets, natural resource endowments, good infrastructure, low inflation, an efficient legal system and a good investment framework (Asiedu, 2000).

Government support and the compliance with Broad Based Black Economic Empowerment (BBBEE) requirements are also more important, compared with the other factors, and form part of local policy. Government support of the agricultural sector fundamentally influences food security and employment creation in the country. In South Africa, the compliance with BBBEE goals is important because black businesses criticise the slow pace of reducing white domination

in the corporate world. Reconciling populist goals with capitalist economic growth, however, remains problematic (Tangri & Southall, 2008). The other factors, namely the reduced regulatory burden on companies, successful land reform, inadequacy of basic infrastructure and rising energy costs, are not rated as high in importance but are still necessary for businesses to perform well. The effects of government regulations were rated the least important factor, but are especially important regarding the difficulty in starting up a business in South Africa.

As illustrated in Figures 6.1 to 6.12, which illustrate the factors influencing the profitability of agribusinesses, respondents were requested to comment both on the importance of the various factors, as well as the probability of them occurring. The probability of these factors impacting on business is less certain, especially regarding inadequate basic infrastructure, government support, and political stability (see Figure 6.1).

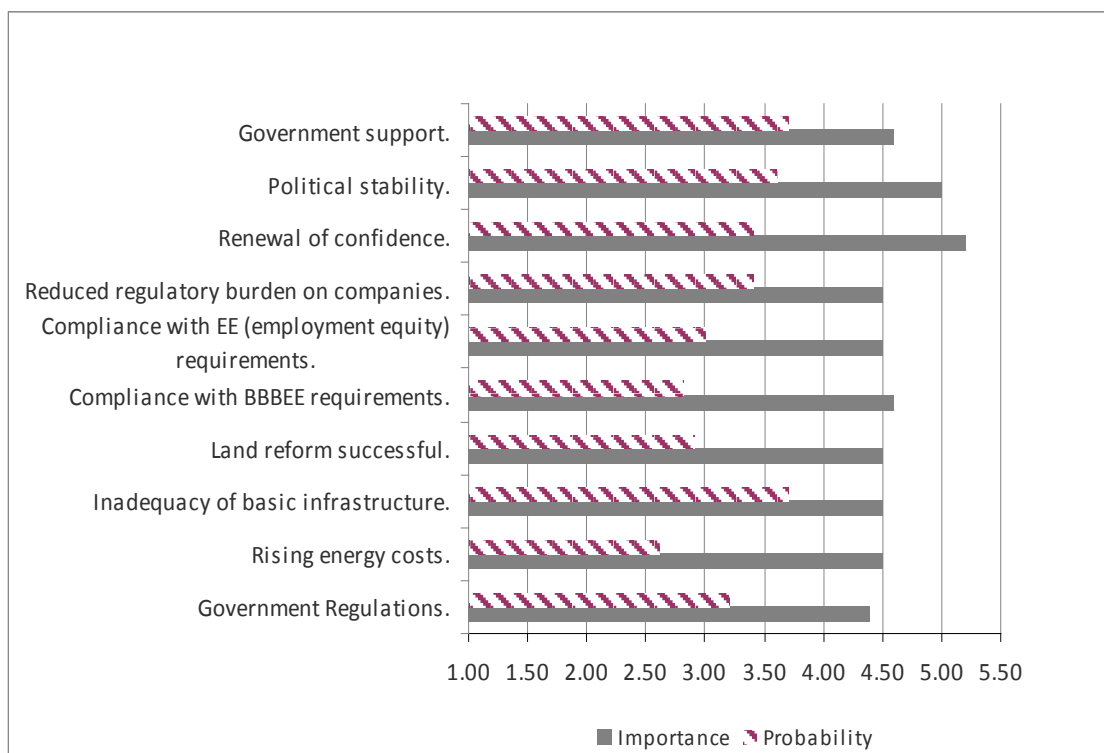


Figure 6.1: Importance and probability of political and governmental factors influencing the profitability of agribusinesses
Source: All the figures in this chapter were designed by the author from the survey results

The uncertainty about the inadequacy of basic infrastructure is positive because basic infrastructure is a necessary for economic activities. When government fails to provide support and political stability declines, this has negative consequences for the country as a whole and for the agricultural sector as well. The probability of energy costs rising, which will have a negative effect on the primary agriculture, as well as on agribusinesses, is more certain to occur. In a local

context, it is more certain that compliance with BBBEE requirements and land reform will be enforced by government (Kleynhans & Kruger, 2014). With enlarged fines being imposed when agribusinesses do not comply with the BBBEE requirements, there will be pressure on the profitability of agribusinesses in actually complying in future. Land reform is also more certain to occur, according to respondents. This is of high importance for confidence in investing in the agricultural sector and will secure agribusinesses in proceeding to serve primary producers and simultaneously improve profitability and ensure food security for the country (NPC, 2012).

3.2 Economic factors

Economic factors that enhance the profitability of agribusinesses are closely related to the political and governmental factors. Respondents view economic growth and job creation as most important economic drivers of profits. The creation of employment is dependent on economic growth and is important, especially to people who are unemployed (Mankiw, 2014). In South Africa, economic growth and job creation are even more important for decreasing poverty and narrowing the income-gap that exists between the rich and poor people of the population. Economic growth represents an increase in the capacity of an economy to produce goods and services, compared from one period of time to another, and can be measured in nominal or real terms. Traditionally, economic growth is measured in terms of gross domestic product (GDP) (Mankiw, 2014).

Inflation and exchange rate volatility are important economic factors and also play a role in the rate of economic growth and the number of jobs created (Mankiw, 2014). Individually, these two factors affect the total South African economy, but in particular, the primary agricultural producers that have to pay more for their farm requisites when inflation increases and the exchange rate decreases. (It has to be noted that export commodities gain through declining exchange rates). When the profitability of the primary producers is under pressure, they find it difficult to repay their loans to agribusinesses. The opposite is also true when inflation decreases and the exchange rate improves, thus having a positive effect on the profitability of primary producers and agribusinesses (Mankiw, 2014).

The probability of economic growth occurring is more certain, but less so when inflation rises. From a political perspective, the probability of economic growth occurring declines when the inadequacy of infrastructure and government support and lack of political stability are taken into consideration (Coetzee & Kleynhans, 2017). The uncertainty of inflation occurring is in the same category as the mentioned political and government factors. Factors that support economic growth, such as employment creation and exchange rate volatility, are more certain to occur than inflation is (Mankiw, 2014). The conclusion reached when the research was executed, during May

2016, is that economic factors outweighed political factors. Economic growth is important for sustainable profitability and growth of agribusinesses as illustrated in Figure 6.2.

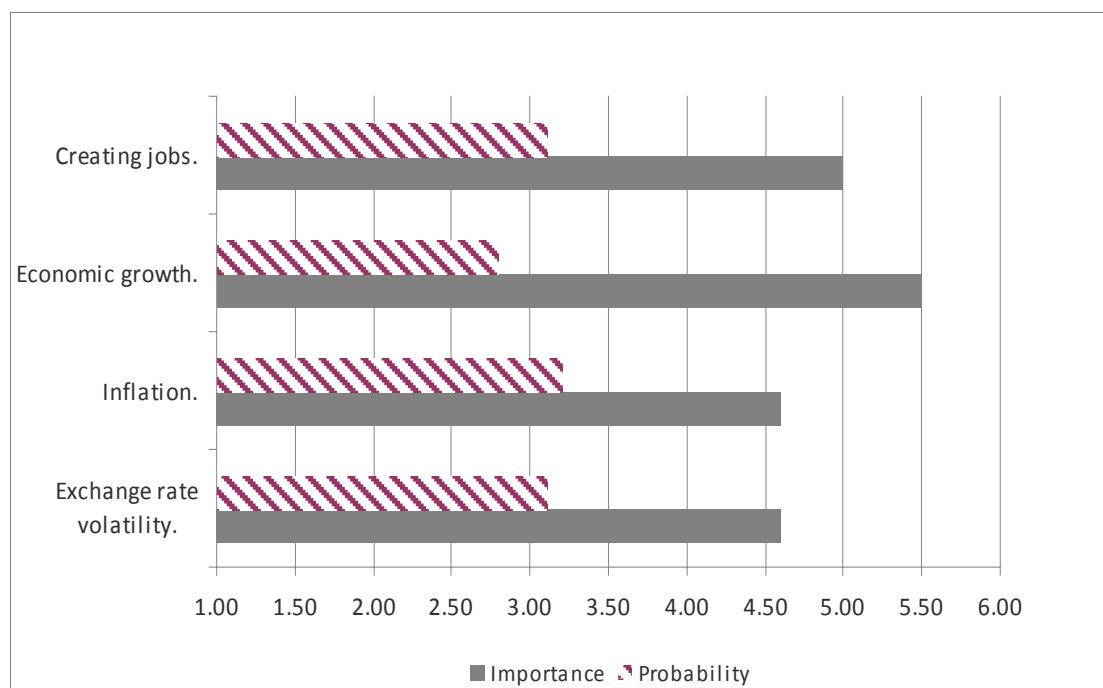


Figure 6.2: Importance and probability of economic factors influencing the profitability of agribusinesses

3.3 Investment

Every investment opportunity should be judged carefully because an investment decision (locally or in Africa) not only influences profitability in the short term, but especially in the longer term. Sound evaluation of investment opportunities and expected returns on capital investment were rated by the respondents to be the most important factors in terms of investment factors and the impact thereof on profitability (see Figure 6.3). Sound evaluation of investment opportunities and the expected return on capital investment are dependent on the accuracy of the assumptions in the proposed business plan and the risk assessment of the opportunity. Return on investment in Africa tends to be less important, compared with investments locally, because not all the agribusinesses included investments in Africa as part of their strategies. The risk of investing in Africa is normally higher and an even higher return on investment is therefore required to motivate investment.

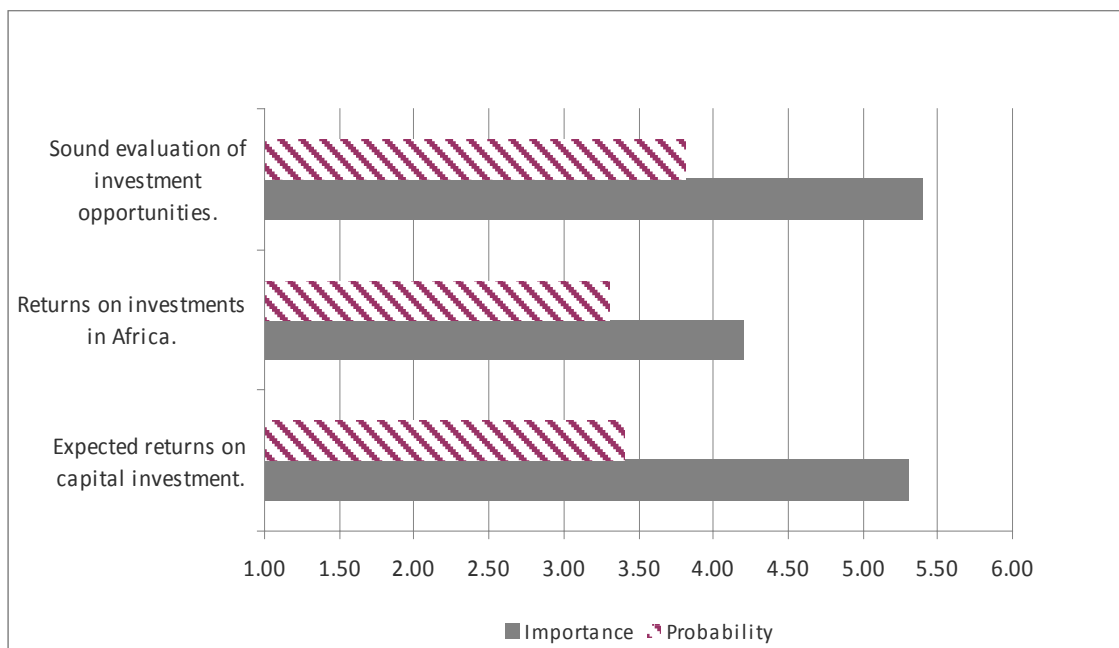


Figure 6.3: Importance and probability of investment factors influencing the profitability of agribusinesses

The weighted average rating of the three drivers for certainty is between 3.3 and 3.8. This average was weighted to enable comparison. The sound evaluation of investment opportunities is more certain to occur with no difference where the investment is made – locally and in Africa. This is part of the executive and the management boards' responsibility. Basically, the same level of certainty for return on investment in Africa and for local capital investments was reported by the participants. Higher risk that does exist in African countries is based on different market factors, and higher uncertainty of achieving desired returns on investment. Noteworthy is the influence of the political and economic factors in the various individual African countries.

3.4 Human capital

Profitability of agribusinesses is dependent on the right people being in the right positions. The availability of key skills was ranked by respondents as being the most important amongst the different human capital factors that are perceived to have an influence on the profitability of agribusinesses in South Africa (see Figure 6.4). The most important human capital drivers of sustainable profitability are the availability of key skills, staff training and development, and the stimulating of executive management through compensation initiatives to achieve long-term profitability and growth. The cornerstones of a policy framework for the development of a suitably skilled workforce are: a broad availability of good-quality education as a foundation for future training; a close matching of skills supply to the needs of enterprises and labour markets; enabling workers and enterprises to adjust to changes in technology and markets; and anticipating and preparing for the skills needs of the future (International Labour Organisation, 2011). Workforce

training is an indispensable way to keep an organisation competitive. Continuous training enables the workforce to respond to technological changes, which may affect their job requirements; helps workers respond to the changes that come from organisational restructuring; gives them the ability to adapt to changes resulting from increased diversity in the workforce; works to facilitate career development; and helps to meet the employees' need for continued development (Lessonly, 2016). The objective of a properly designed executive compensation package is to attract, retain and motivate the best employees, especially CEOs and senior management (Conyon, 2006). High pay itself is not evidence of inefficient contracts, but may reflect the market for CEOs. Boards of directors need to design compensation arrangements to align the interests of businesses with those of managers.

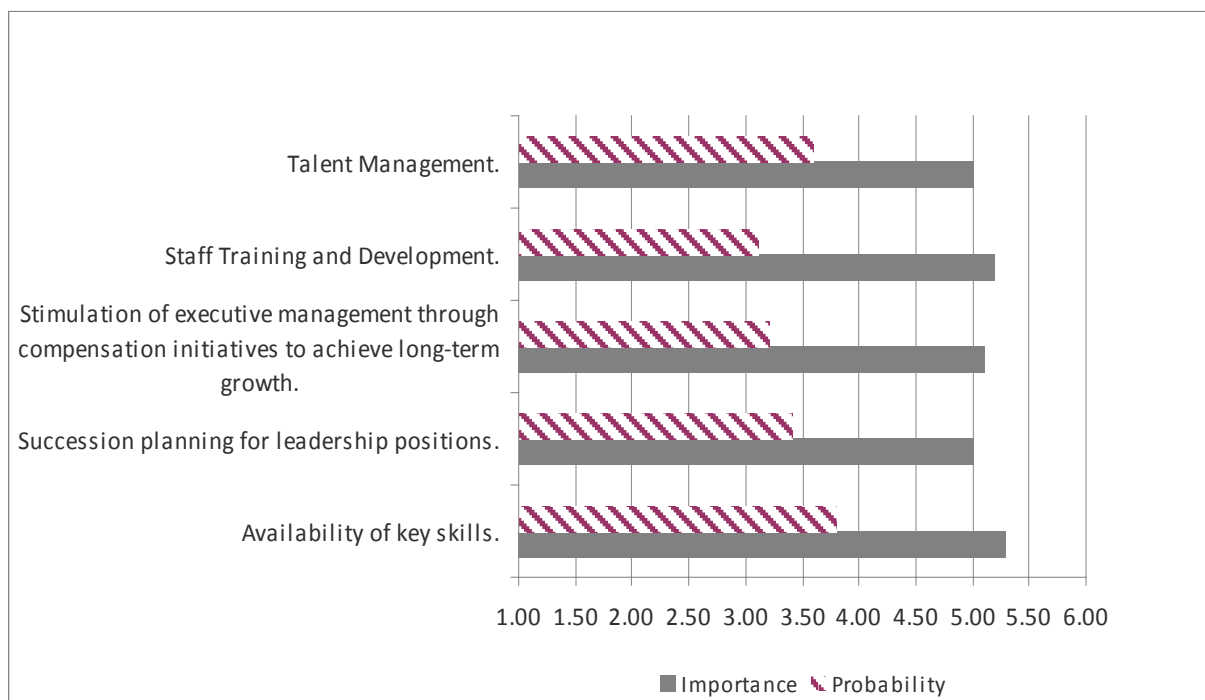


Figure 6.4: Importance and probability of human capital factors influencing the profitability of agribusinesses

The probability of these human capital factors arising is most certain in the case of staff training and development, and the stimulating of executive management through compensation initiatives to achieve long-term growth. Staff training and development is an important factor and is achievable by internal programmes and objectives by agribusiness. Stimulation of executive management through compensation initiatives is approved by the board of directors and is more certain to be utilised to retain the executives. Talent management and succession planning is linked and will always be important with a significant certainty to occur when they form part of the

long-term planning. The probability of adequate skills becoming available is more uncertain to occur because it is a government function and is to a great extent out of the executive's control.

3.5 Competitiveness

The most important factors regarding competitiveness that influence the profitability of agribusinesses were indicated by the respondents to be a declining market environment, international competitiveness and price competition (Figure 6.5). Companies that are better equipped to respond to market requirements and anticipate changing conditions, whether declining or increasing, are expected to enjoy long-run competitive advantage and superior profitability (Day, 1994). A comprehensive change programme aimed at enhancing these capabilities includes: the diagnosis of current capabilities; anticipation of future needs for capabilities; bottom-up redesign of underlying processes; top-down direction and commitment; creative use of information technology; and continuous monitoring of progress. According to Esterhuizen (2006), the South African agribusiness sector was classified as a “Rising moderate performer”, based on the general increase in the level of competitiveness that was reported between 1993 and 2002. Price competition refers to rivalry between suppliers based solely on price, usually for identical items. Increasing exports is linked to international competitiveness and price competition in the global market. The involved country's exchange rate is another important factor which enables profitable exportation. In the local market, the security of the supply chain to the producers and price competition is linked. A declining market environment is moreover linked to the described political and economic factors but has a severe impact on the profitability of agribusinesses.

The probability of international competitiveness and price competition occurring is most certain (Figure 6.5). Since South Africa became a global competitor after 1994, this result was expected and options to export have to be analysed carefully for profitability. The probability of a declining market environment occurring which is positive is less certain, indicated by a high probability in Figure 6.5. This means that the market environment will be more stable or even increasing. The inadequacy of basic infrastructure to influence internal and global competitiveness is uncertain. This is especially relevant where the figure illustrates security in the supply chain. Some political factors, such as government support and political stability, are, however, more uncertain to occur and have a negative impact on the profitability of agribusinesses. The same situation is noticeable concerning economic factors such as inflation and exchange rate volatility and its illustrated effect on exports and the worsening market condition. A declining market environment is significant because a stable or increasing market environment will have a positive effect on the profitability of agribusinesses.

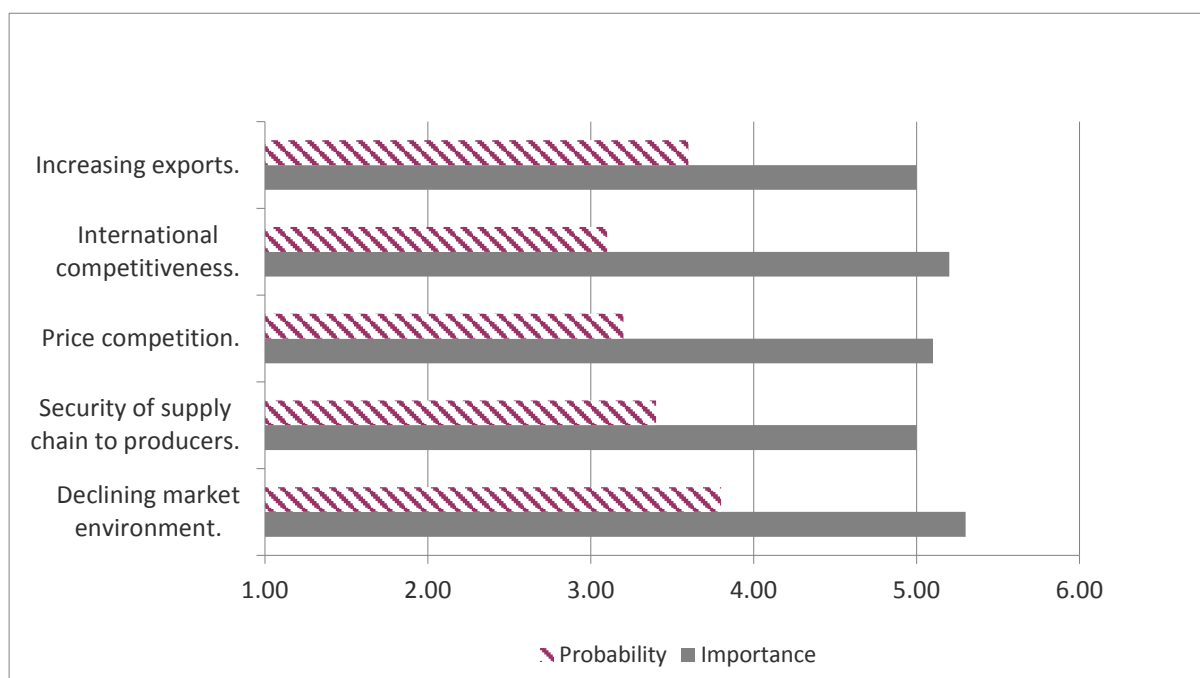


Figure 6.5: Importance and probability of competitive related factors influencing the profitability of agribusinesses

3.6 Nature and environment

The participating executives rated the most important factors regarding nature and the environment as being rainfall, followed by climate change (see Figure 6.6). The amount and spread of rainfall, and climate change, especially the increase in average temperatures experienced during the growing season of grain production, impact directly on the volume of grain produced. The volume of grain produced then determines the volume of grain stored in the facilities of the agribusinesses. This is the core business of agribusinesses in the grain segment and therefore rainfall has a direct influence on the profitability of these businesses. The scarcity of natural resources, consistent long-term environmental policies, and the protection of the ecosystem and biodiversity are linked, and also more importantly, form the basis for long-term sustainable agriculture.

The probability of rainfall occurring is certain to a large extent consistent. Long-term environmental policies and scarcity of natural resources are also certain on the same level. Rainfall is rated the highest in terms of importance on profitability; however, the probability of climate change is more uncertain to occur and its effect on profitability can be severe. The scarcity of natural resources is a fact, but it should be protected by consistent long-term environmental policies of government. The probability of protection of the ecosystem and biodiversity and climate change occurring is less certain. The protection of ecosystem and biodiversity is in the same category of governmental policies that have to be enforced to achieve the desired results. Climate

change is not under human control but the impact on agricultural practices, profitability of producers, and eventually on the profitability of agribusinesses, has to be noticed.

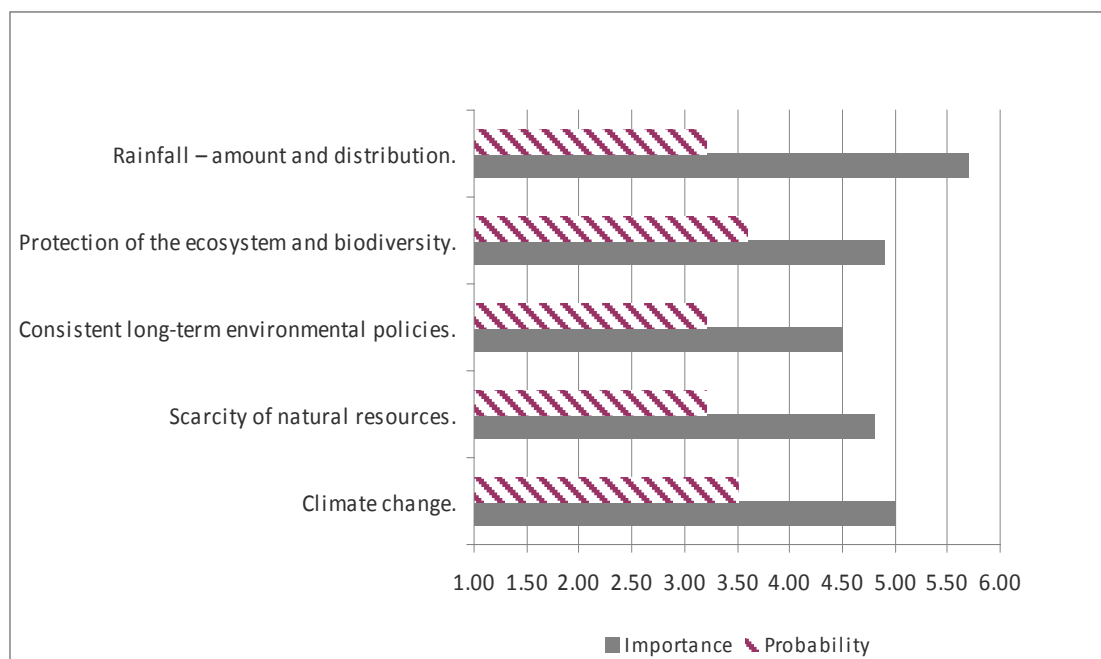


Figure 6.6: Importance and probability of nature/environmental factors influencing the profitability of agribusinesses

The probability of rainfall occurring is certain to a large extent consistent. Long-term environmental policies and scarcity of natural resources are also certain on the same level. Rainfall is rated the highest in terms of importance on profitability; however, the probability of climate change is more uncertain to occur and its effect on profitability can be severe. The scarcity of natural resources is a fact, but it should be protected by consistent long-term environmental policies of government. The probability of protection of the ecosystem and biodiversity and climate change occurring is less certain. The protection of ecosystem and biodiversity is in the same category of governmental policies that have to be enforced to achieve the desired results. Climate change is not under human control but the impact on agricultural practices, profitability of producers, and eventually on the profitability of agribusinesses, has to be noticed.

3.7 Finance

The results from the survey questionnaire about finance as a driver of profitability are shown in Figure 6.7. The profitability of agribusinesses is influenced by the inability to achieve financial growth, followed by the financial soundness of producers and industry clients that are under financial pressure. Profitability is important for finance growth because growth is normally financed by retained earnings or debt. Retained earnings depend on the dividend policy of an agribusiness. Agribusinesses finance grain producers and their ability to qualify for loans, and to

pay back the loans, impacts on the cash flow of the agribusiness. Nature and environmental factors, especially severe droughts, cause debtors to increase in numbers and extent, with some of the debt originally rolled over from previous seasons that cannot be repaid. When clients of agribusiness are under financial pressure they are unable to pay their accounts according to the payment terms and this also impacts on the cash flow of agribusinesses. Producers and industry clients that are not able to meet their commitments not only affect the cash flow of agribusinesses, but can end up as bad debtors. If not enough security was put in place, this situation directly impacts negatively on the balance sheet of agribusinesses.

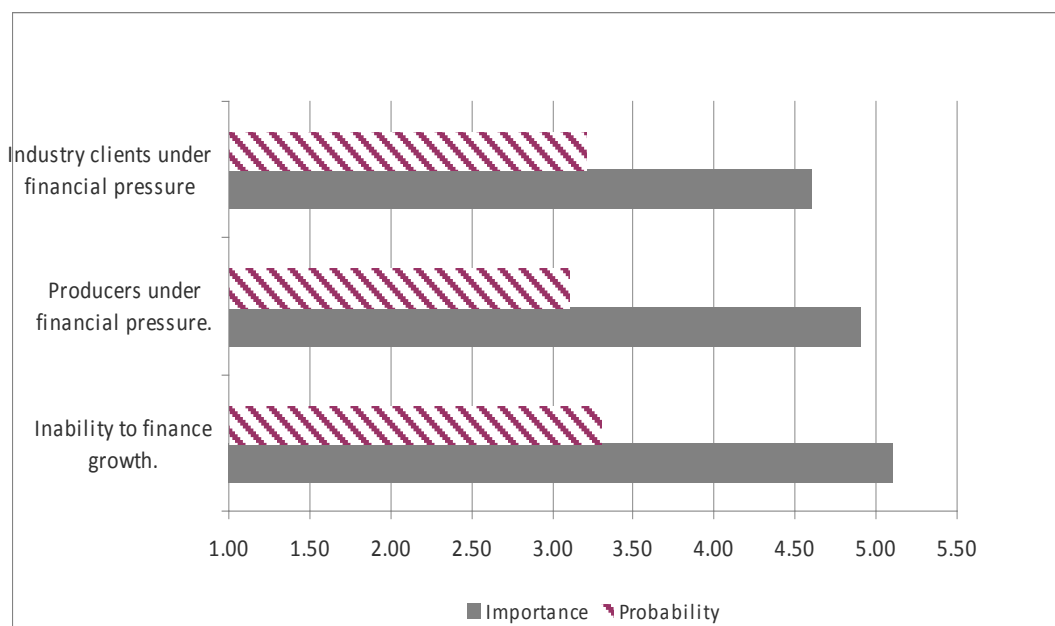


Figure 6.7: Importance and probability of financial factors influencing the profitability of agribusinesses

The weighted average rating of these three financial factors for probability lies between 3.1 and 3.3. Basically, this indicates the same level of certainty for these factors to occur. With knowledge of the agricultural sector and of the agribusiness with the risks involved in financing farmers and industry clients, appropriate steps can mitigate the uncertainty to some extent. Managing the finances of the agribusiness conservatively within acceptable financial norms, and with the required surety in place, will reduce uncertainty in financing growth of the agribusinesses. Financing can, in fact, make a contribution to the profitability of an agribusiness.

3.8 Management practices

Good management practices are essential to the profitability of any business. The most important factors concerning management are ensuring high ethical standards and a positive cash flow. This is followed by income growth, capital structure, compliance with laws and regulations, and

the sound financial position of the company (Figure 6.8). It should, however, clear be noted that this is according to the perceptions of the respondents.

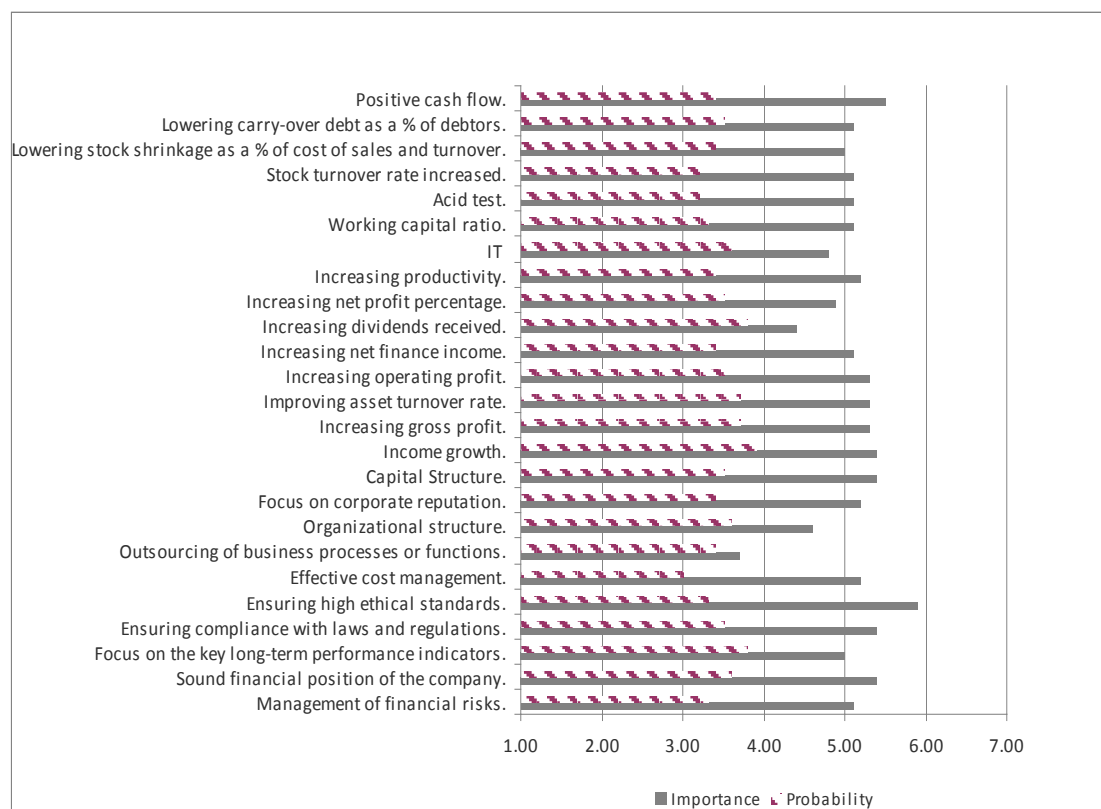


Figure 6.8: Importance and probability of managerial factors influencing the profitability of agribusinesses

The majority of these managerial focus areas received a weighted average rating of above 5. This indicates that management has to pay attention to the whole package of factors because they all influence the profitability of the agribusiness on their own and in concert with some of the other factors. The sound financial position of the agribusiness is, for example, dependent on income growth, increasing gross and net profits, effective cost management, optimal working capital ratios, the capital structure, and low carry-over debt with a positive cash flow. Management involves the interlocking functions of creating corporate policy and organising, planning, controlling and directing an organisation's resources in order to achieve the objectives. Factors that were ranked the lowest in importance regarding their influence on profitability were the outsourcing of business processes and functions, increasing of dividends received, and organisational structure. These factors still have an impact on profitability because they influence, for example, productivity, effective cost management and the management of financial risk

The probabilities of effective cost management, increasing stock turnover rate, a good acid test, a sound working capital ratio, ensuring high ethical standards, and the management of financial risks occurring, are more certain. These factors are within the direct control of the management

team and can be managed closely. The probabilities of achieving income growth, increasing dividends received, and focusing on the key long-term performance indicators, are less certain to occur. In practice, these factors are dependent on the market situation, and the performance of associate companies that are managed by other management teams, as well as short-term events that sometimes have major impacts on the profitability over the long-term.

3.9 Strategy

Strategy, and more importantly, the execution of strategies are essential in realising sustainable profitability. The views of the participating executives on the strategic factors and their influence on profitability are illustrated in Figure 6.9.

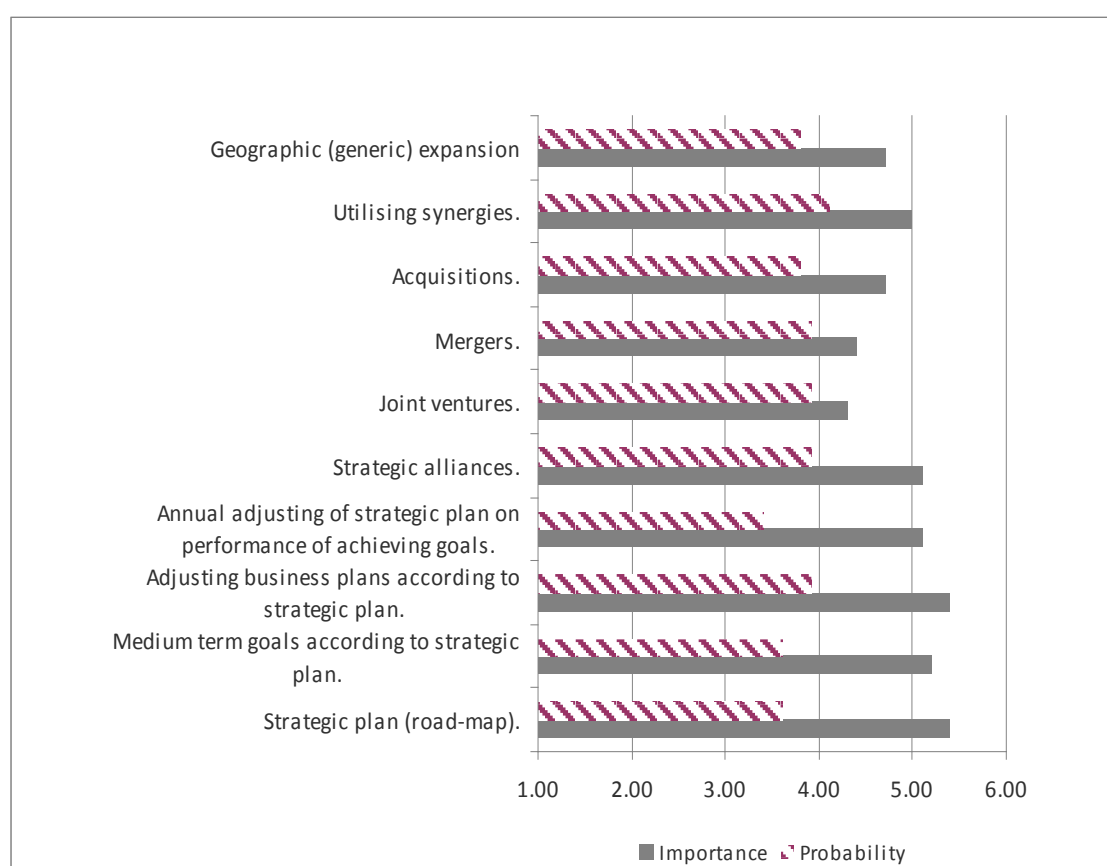


Figure 6.9: Importance and probability of strategic factors influencing the profitability of agribusinesses

The most important strategic factor for sustainable profitability, according to the respondents, is a strategic plan and adjusting the business plans according to the strategic plan. This will ensure that short-term objectives will be achieved, but by still bearing the long-term objectives in mind. Supportive of this is the utilising of synergies, strategic alliances, and the adjusting of the strategic plan on performance of achieving goals and medium-term goals according to the strategic plan, and these are within managements' control. Geographic expansion, acquisitions, mergers and

joint ventures are important strategic factors, although the opportunities are limited and have to be investigated continuously. Experience has also dictated that a combination of strategic factors is often important to ensure profitability. The following chapter will focus specifically on the strategies of agribusinesses learned from the survey conducted and semi-structured interviews.

The probability of an annual adjustment of strategic plans, based on the performance of achieved goals under the board of directors' and management's direct control, is most certain to occur. The probability of the utilisation of synergies is, however, less certain. The utilisation of synergies is, by definition, doing business with different divisions or subsidiaries in the group instead of taking the business to outside businesses. The utilisation of synergies in the group is an easy way of capturing money within the group and is to the benefit of the total group. Sometimes, however, it is difficult to treat an internal division on the same basis as a client would be treated. Situations also occur where a decision has to be evaluated regarding the best interests for the division and the group. Special attention and objectives are needed to utilise synergies in such a group. A strategic plan was, however, rated as more important by respondents than the utilisation of synergies which influence profitability; however, the probability of the utilisation of synergies, by the compiling of a strategic plan (road map) for the agribusiness, was more likely to occur. This may be an indication that most of the respondents are of the opinion that they have a strategic plan in place to secure profitability and growth.

3.10 Grain stock and prices

The profitability of agribusinesses in the grain segment in South Africa is influenced to a great extent by grain stock and prices because these are at the core of their business. The participating executives indicated that the most important factors to them are the volume of grain production, followed by local input prices (see Figure 6.10). The importance of the volume of grain production on the profitability of agribusinesses in the grain segment was highlighted under nature and environmental drivers. Input costs of grain producers are affected by international crude oil prices because they use diesel to cultivate the lands and for transportation, and the oil price influences the price of chemical products utilised in the production process. Agribusinesses are also affected by the effect of international oil prices on fluctuations in commodity prices. This is because of the marketing function of grain they have to pay for themselves and on behalf of clients and shareholders. Transportation costs for farm requisites to the retail outlets of agribusinesses, for grain to and from storage facilities, and the transportation of value added products are also affected by international oil prices. The local carry-out grain stock (volume of stock from one season to the following season) is important, but to a lesser extent than international carry-out stock, because of the size of local grain volumes compared with international grain volumes.

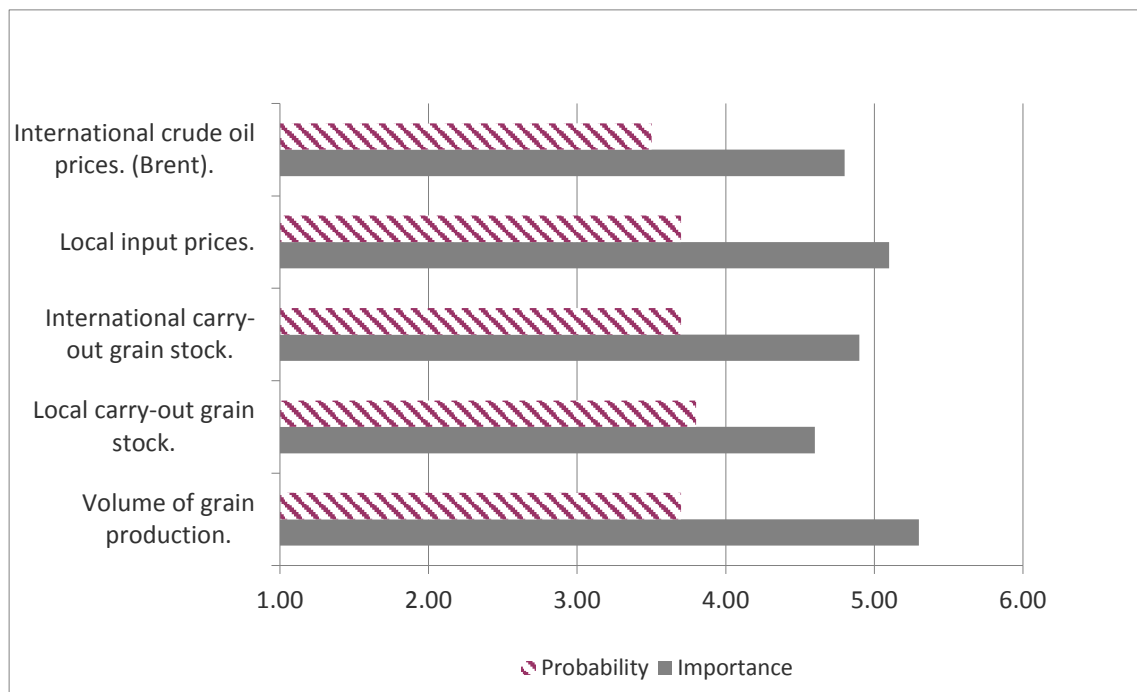


Figure 6.10: Importance and probability of grain stock and price factors influencing the profitability of agribusinesses

The weighted average rating of the five drivers for certainty is between 3.5 and 3.8, basically indicating the same level of certainty for these factors. This average was weighted to enable comparison. International crude oil prices comprise the factor that is the most certain to occur, but this factor is dependent on the South African exchange rate. Except for local input prices, all these factors influence commodity prices. Local carry-out stock was rated as the least important of the factors contributing to profitability, but it was rated as the most uncertain to occur of these factors. This is linked to nature and environmental circumstances, and especially so when a few drought years are experienced. Then, the effect of low carry-out stock levels negatively impacts on the profitability of agribusinesses to a large extent.

3.11 Business model

The ratings of the business models and individual factors by the participating executives are illustrated in Figure 6.11. Servicing large-scale commercial farmers, the extent of diversification, involvement in value adding industries and simple business models are the most important factors influencing the profitability of agribusinesses. The least important profitability factor is corporate farming by agribusinesses. A business model describes the rationale of how an organisation creates, delivers and captures value (Osterwalder & Pigneur, 2010). A business model can best be described through nine building blocks that show the logic of the way in which a company

intends to make money. The nine building blocks cover the four main areas of a business: customers, offering, infrastructure, and financial viability. The business model is like a blueprint for a strategy to be implemented through organisational structures, processes and systems. Traditionally, agribusinesses in the grain segment had a simple business model consisting of grain, trading, financing, and mechanisation departments servicing commercial farmers.

Some agribusinesses included value adding of their shareholders' produced grain as an input driver of profits. With commercial farmers becoming large businesses, by-passing the agribusiness, the political landscape that has changed, and emerging farmers having to be served, as well as the influence of technology, agribusinesses will have to revisit their business models. Taking into account the servicing of emerging farmers, small-scale commercial farmers, large-scale commercial farmers, and irrigation farmers, as well as the extent of diversification, value adding and risk, a more complex business model is needed. Some factors, such as servicing emerging farmers, small-scale farmers, large-scale commercial farmers and irrigation farmers, have aspects in common, because all of these farmers need farm requisites to produce grain, the handling and storage of their commodities, and the marketing of their commodities.

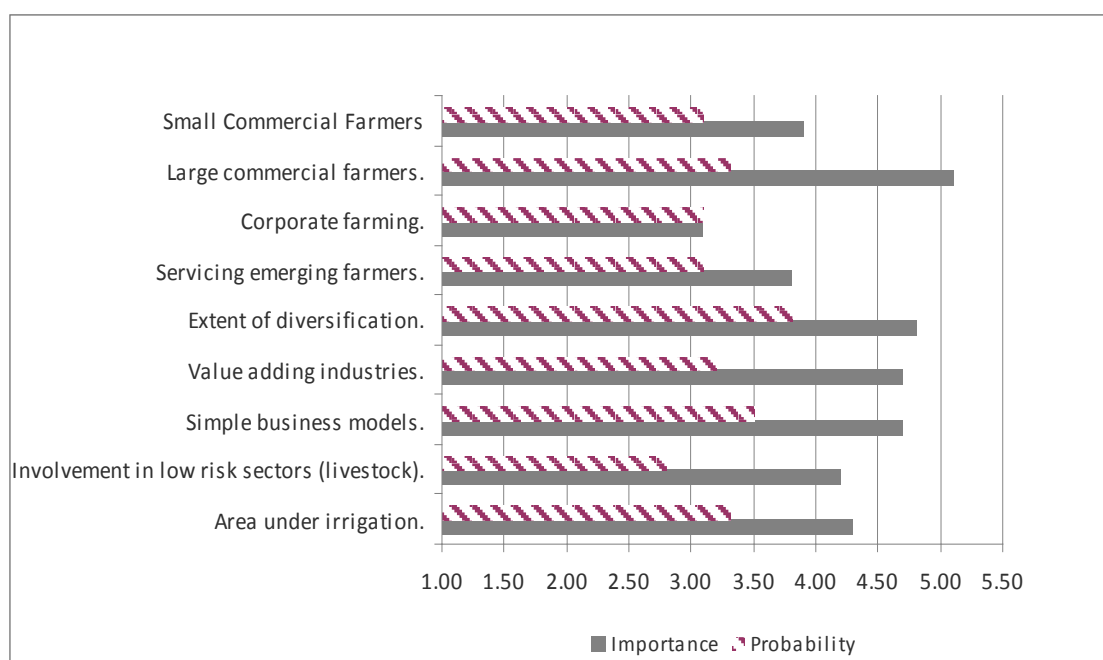


Figure 6.11: Importance and probability of business model factors influencing the profitability of agribusinesses

Large differences that impact on business plans are, for example, the level of mechanisation, volume and timing of farm requisites, bargaining power for prices of farm requisites, handling and storage alternatives for produced commodities, alternative marketing channels for produced commodities, and the approach by the agribusiness to service them (Van Rensburg, 2016). The

extents of diversification and of value adding industries are also linked and are important factors regarding the profitability of an agribusiness. These factors normally contribute to more complex business plans. Risk mitigation is important for agribusinesses in the grain segment and the importance of involvement in areas under irrigation and in low-risk sectors, such as livestock, emphasises this fact (Strydom, 2016).

Because of the inherent risk of agribusinesses in the grain segment, and the expectation of high returns on investment by shareholders, risks should be closely managed (Marais, 2016). The respondents indicated that the probability of involvement in low-risk sectors, such as livestock and the involvement in irrigation areas, is high. Because of the risk and the increased complexity of the business plan, the probability of diversification occurring is less certain. The different categories of farmers that have to be accommodated will in any case put pressure on a simple business plan and therefore the probability of a simple business plan is less certain to occur.

3.12 Market share

The respondents view increasing market share and retaining market share both as being very important for retaining and increasing the profitability of agribusinesses. The results regarding these factors related to market share is illustrated in Figure 6.12. It is widely recognised that market share is one of the main determinants of business profitability (Buzzell *et al.*, 1975). Under most circumstances, enterprises that have achieved a high share of the markets are much more profitable than their smaller-share rivals are. Market share and return on investment (ROI) are strongly related. The retaining and increasing of market share became very important, especially after the late 1990s, when most of the agribusinesses were transformed into companies and their traditional services areas collapsed. Market share is profitable because of economy of scale, market power and quality of management (Walsh, 2016).

The probability of retaining and increasing market share is high and therefore more uncertain. Normally it is a conscious decision by management as part of their strategy. To retain market share and to increase market share in current operating areas or even for geographical expansion to other areas, it is essential to utilise proven competitive advantages such as price, quality and availability of products and services. Competition from other players in the market make the increasing of market share difficult to achieve.

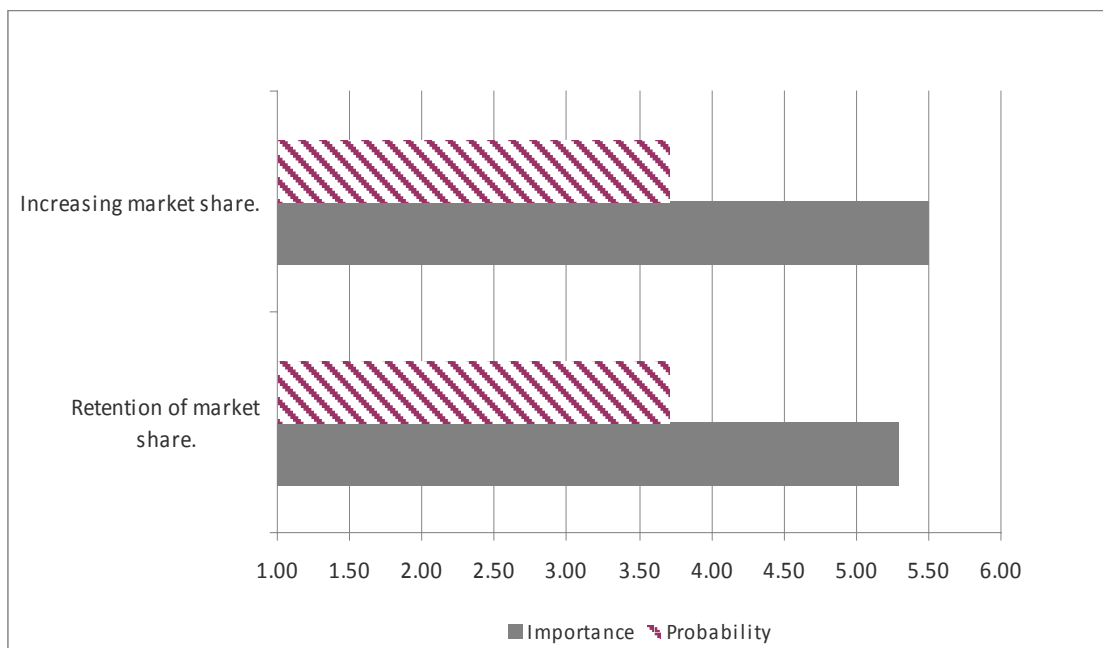


Figure 6.12: Importance and probability of market share factors influencing the profitability of agribusinesses

4. Growth and growth drivers

The focus in this section will be on growth-related findings from the questionnaire survey. The reasons to grow an agribusiness will be discussed, followed by the importance of growth drivers. Finally, general information on growth by the participants is discussed.

4.1 Comparison of the reasons to grow an agricultural business

The reasons for growth of a business were described in Chapter 2. These reasons were included in the questionnaire for evaluation by the participants of agribusinesses in the grain handling and marketing sectors. Each of the respondents' answers had to add up to 100 %. Averages were calculated on the responses and the reasons for growth are summarised in Table 6.2.

Table 6.2 also depicts the results from a similar study by Kroeger *et al.* (2000). It should, however, be noted that the study by Kroeger *et al.* (2000) did not specifically focus on agribusinesses, but rather on the reason for growth of European business in general. Although different from a regional and business focus perspective, it was still deemed important and appropriate for comparing the results.

Table 6.2: Comparison of reasons to grow a business

Reason for Growth	Previous research by Kroeger <i>et al.</i> (2000) (Europe)	Agribusinesses South Africa (Avg. Response)
To achieve superior brand recognition	0.0 %	5.5 %
Improve cost position	0.0 %	13.0 %
To attract stronger alliance partners	3.0 %	5.0 %
Gain access to capital	3.0 %	8.0 %
Attract superior people	3.0 %	12.7 %
Raise profits	12.0 %	13.5 %
Obtain a superior strategic position	30.0 %	20.5 %
Generate superior value	49.0 %	21.8 %
TOTAL	100.0 %	100.0 %

Source: Kroeger *et al.* (2000) and own calculations based on survey results

Contrary to Kroeger *et al.*'s (2000) study, relatively strong emphasis was placed on brand development and a better cost position was recognised by local South African agribusinesses as one of the main benefits that could be achieved through growth. Similarly, local agribusinesses put much more emphasis on benefits, such as attractiveness in the possibility of forming alliances with stronger partners, increased or easier access to capital, and attracting highly skilled and competent individuals. The ability to increase profits was, however, indicated as a significant benefit by both studies. This is an indication that, irrespective of the different dynamics resulting from different regional aspects and/or business focus, profits remains a central factor to success. Similarly, superior strategic value and position are also factors that could be deemed to be of universal importance in terms of growth. Similar to the results from the study by Kroeger *et al.* (2000), these are also the factors rated as the most important by South African based agribusinesses.

4.2 The importance of growth drivers

This part of the questionnaire focused on the relative importance of the determinants of growth in agribusinesses and was based on the research done by Schwenke (2011), as described in Chapter 4. A clear definition of each growth driver was provided to all participants. Based on this definition, each participant had the opportunity to rank the driver according to its relative importance. A Likert scale was used to rank the importance of the growth drivers. The values

ranged from 1 to 6, deliberately obliging respondents to make a decision below or above the middle of the range. This will ensure more significant results.

The views of the participating executives on the importance of the growth drivers are illustrated in Figure 6.13. The various drivers identified in the survey are summarised in Table 6.3. All of the listed growth drivers are deemed to be important by the participants. However, focus, professional leadership, and consumer focus in the context of this study specifically refer to a communication strategy as far as growth is concerned. In other words, ensuring that all staff members are well informed in terms of the growth targets and what is expected of each in terms of reaching these targets. The most effective way to communicate this is through an effective performance measurement system which aligns and incentivises growth (Schwenke, 2011). Leaders who possess professional will and personal humility are posited to contribute to higher levels of growth, and an in-depth understanding of customers will allow customers to be better serviced and will suggest new product opportunities for future growth.

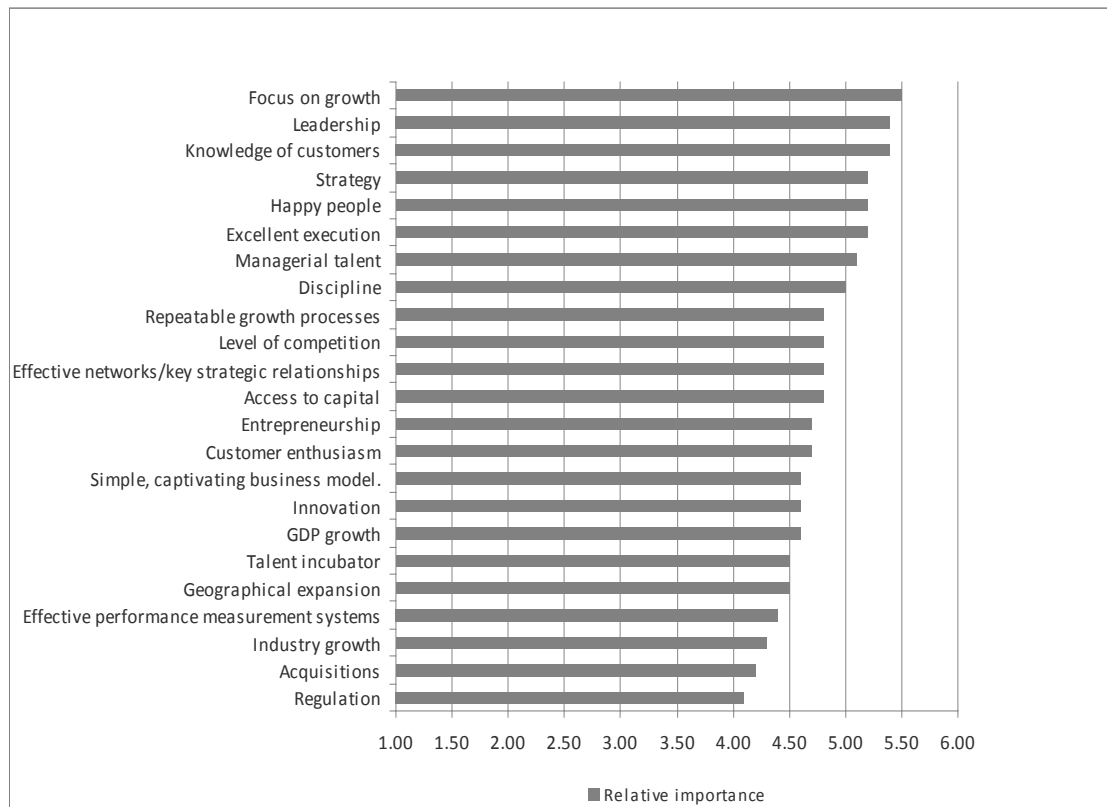


Figure 6.13: Relative importance of growth drivers of agribusinesses

Table 6.3: Summary of important growth drivers

Driver	Relative importance	Reason	Source
Focus on growth	5.50	Communicate growth strategy to all employees	Ansoff, 1968
Leadership	5.40	Inform all staff members of growth targets	Schwenke, 2011
Knowledge of customers	5.40	Understanding customers needs for better service	Schwenke, 2011
Strategy	5.20	Clear business objectives and direction of resources	Schwenke, 2011
Happy people	5.20	Productive, creative and energetic employees improves profitability	Achor, 2012; Pugh <i>et al</i> , 1993
Excellent execution	5.20	Effective implementation of the strategy is crucial	Hrebiniak, 2013
Managerial talent	5.10	Influence on growth potential	Penrose, 1959; Barringer & Jones, 2004
Discipline	5.00	Detailed analysis and constant focus on efficiency and effectiveness	Schwenke, 2011
Repeatable growth process	4.80	Systemisation of growth process and advantage of learning-curve	Zook, 2003
Level of competition	4.80	Improves business performance	Schwenke, 2011
Effective networks/key strategic relationships	4.80	Obtaining and sustaining a competitive advantage	Jarillo, 1989
Access to capital	4.80	Ability to take advantage of any opportunity	Schwenke, 2011
Entrepreneurship	4.70	Pursuit of opportunities	Stevenson & Jarillo, 1990; Getz & Baptista, 1995
Customer enthusiasm	4.70	Recommending products and services	Reichheld, 2003
Simple, captivating business model	4.60	Satisfying customers needs and clear value proposition	Doing & Choo, 2008
Innovation	4.60	New developments in resources, processes and business models	Knight, 2005
GDP growth	4.60	Adjustment of strategy accordingly	Schwenke, 2011
Talent incubator	4.50	Managerial talent and compatibility drives profitability and growth	Cohn <i>et al</i> , 2005
Geographical expansion	4.50	Sustained growth through a proven business model	Schwenke, 2011
Effective performance measurement systems	4.40	Alignment and incentivisation of growth improves communication	Schwenke, 2011
Industry growth	4.30	Agricultural sector influenced by nature but industry growth important	Schwenke, 2011
Acquisitions	4.20	Instant increase in size and subsequently growth	Freese & Willard, 1990
Regulation	4.10	Lead to competitive advantages or disadvantages	Schwenke, 2011

Source: Author's analysis from the conducted survey

Strategy was ranked the fourth highest by the respondents in terms of factors for influencing growth. Strategy in the context of growth in this study specifically refers to the alignment of the business objectives with the deployment of resources. In other words, it portrays the path that is followed in the quest for sustainable growth. Strategy also relates closely to a strategic focus, which according to Ansoff (1968), refers to the choice of whether to focus on market penetration, product development, market development, diversification or a combination thereof. The implementation and execution of strategy, in addition to the formulation of strategy, is stressed by Hrebiniak (2013). The execution of company strategy is vital to secure sustainable growth. Many companies have impressive plans setting out the company's strategy, yet few execute their strategies effectively. Hess (2007) concluded that high-growth companies generally do not have unique strategies, products or services, nor are they market leading innovators, but they are execution champions. Through an excellent strategy of execution, a company can position itself as the best service provider in the industry, which should lead to customer loyalty and growth.

Besides strategy, happy people also emerged as an important factor in terms of ensuring sustainable growth. The importance hereof is stressed by the findings by Achor (2012) who argues that happy people tend to be more productive, creative and energetic, and as a result make a more significant contribution to profits and growth on the balance sheet. Pugh *et al.* (1993) elaborate on this by arguing that a happy, motivated and engaged workforce is a powerful driver of growth. The authors, however, concluded that it is difficult to measure and quantify the link between staff morale, motivation and business success.

The works by Penrose (1959) and Barringer and Jones (2004) emphasised managerial talent as one of the most important contributors, or on the other hand, one of the most significant limitations to a firm's potential to grow. The results from this study are in line with these findings, with managerial talent being ranked amongst the most important factors that have the ability to influence the growth potential of local agribusinesses. With managerial talent being a scarce resource, successful companies need to ensure that they have a reliable supply of talent in order to ensure long-term growth (Schwenke, 2011). The participating executives indicated that the next appointment of the top executive should be made internally to transform an agribusiness from good-to-great. Some executives, however, emphasised that appointing the right person is more important, even if it is an external appointment.

Another important factor that has emerged from the results of the questionnaire is discipline. The latter specifically refers to discipline in terms of administrative and financial structures and processes. Discipline also plays a role in the introduction of professional management into a business and a more disciplined approach to the business, which involves understanding the

underlying business. A very detailed analysis of the business and constant focus on efficiency and effectiveness need discipline.

Closely linked to discipline are repeatable processes, which also emerged as an important factor in terms of growth. The importance of repeatable processes is in line with the findings of Zook *et al.* (2003) who reported that companies who consistently outgrow their rivals do so by developing processes in order to grow in predictable, repeatable ways. A repeatable growth formula enables companies to achieve higher growth rates in what is normally complex, experimental and chaotic. The repeatability of the process allows companies to systematise the growth and take advantage of learning-curve effects (Zook *et al.*, 2003).

Networks comprise another factor that is deemed to be important in terms of growth for agribusiness in South Africa. According to Jarillo (1989), the use of networks refers to the conscious effort by growth-seeking companies to establish long-term relationships with other companies in order to obtain and sustain a competitive advantage. Growth-seeking companies use networks more often than low-growth companies do. This is an indication that the use of networks is a proven resource used towards achieving above-average growth. The basis of networks is that they allow firms to pursue opportunities that often lie beyond their financial ability (Jarillo, 1989).

Access to capital, whether of a debt or equity nature, is another important factor that emerges in terms of the growth of local agribusinesses. A strong balance sheet, together with readily available access to capital, provides companies with the ability to timely take advantage of any opportunity that present itself, rather than being restricted by a lack of funding. Schwenke (2011) states that a link exist between access to capital and the ability to pursue attractive acquisition opportunities. It is this link which enables companies to increase the size of the business in relatively short periods of time (Schwenke, 2011).

An entrepreneurship approach is important for growth. Entrepreneurship has been defined as being primarily motivated by the pursuit of opportunities, as opposed to the practice of those managers who are exclusively concerned with the efficient management of resources already controlled by the company (Stevenson & Jarillo, 1990). Gertz and Baptista (1995) stated that growth is considered to be a logical consequence of innovative, proactive and risk-taking behaviour on the part of the company, as these are dimensions which define entrepreneurship. Normally, there is a link between entrepreneurship and access to capital that has to be managed carefully because of the risk attached to any opportunity.

Enthusiastic customers are a key driver of profitable growth because they not only become repeat customers, but also recommend the company's products and services to friends and

acquaintances, which serves to sustainably grow the company's customer base and revenues (Reichheld, 2003). The link between the knowledge of customers and entrepreneurship and innovation plays a definite role in creating enthusiastic customers.

A simple, captivating business model is a means to achieving sustainable growth. An effective and carefully designed business model is critical for success and growth (Diong & Choo, 2008). Satisfying the needs of customers and the value proposition comprise important components of the business model for ensuring growth.

Innovation is widely accepted to be a key driver of sustainable balance sheet growth (Diong & Choo, 2008). The link to a simple, captivating business model follows logically. Knight (2005) states that innovation also encompasses advancements of new developments in resources, processes and business models.

GDP growth is economic growth, but it is not a prerequisite for company growth because a well-run business can grow in difficult economic times by growing market share. However, the effect which GDP growth has on a company's growth is often under-estimated (Schwenke, 2011). An adjustment of company strategy when GDP growth is low is often required to sustain growth. Disciplined action is also especially important in periods of low growth.

Increasing profitability and growth is dependent on managerial talent and capabilities. Managerial talent is a scarce resource and companies need to ensure that they have a reliable supply of talent. An effective talent development programme provides a company with a long-term competitive edge. It is important to have the right people in the right roles to lead and grow the business, especially during periodic upheavals, which all businesses are likely to encounter (Cohn *et al.*, 2005). Managerial capability not only influences all growth drivers, but also has an effect on the factors of profitability, as previously described.

Geographical expansion essentially involves carrying out a company's operations in specific locations. Spatial expansion involves certain operational risks, especially if the characteristics of a new market are different to those of the company's established markets (Schwenke, 2011). The links with geographical expansion are strategy and duplicating the business model in new areas. By utilising the competitive advantages presented by various locations through a proven business model, enables sustained business growth.

An effective performance measurement system is essential because without measurement, there is no way to gauge performance (Diong & Choo, 2008). Effective performance management systems assist in the identification of best practice and in rectifying problem areas timeously. Moreover, a performance system measures whether the strategic goals of the company are being achieved, and will provide valuable information on the level of the goals reached. How efficient

the strategy and business model was executed in achieving the desired growth can then be assessed.

The least important growth drivers from a South African agribusiness perspective are regulation, acquisitions and industry growth. These factors are, moreover, less important than, for example, leadership and customer knowledge. Although rated last by respondents, they still remain important, however, with a weighted average rating of above 4 on the Likert scale, where 6 was the maximum (see Figure 6.13). The growth rate of the agricultural sector is influenced by nature and environmental factors, and although the direct contribution of agriculture in terms of GDP is small, the backward and forward effects caused by nature and environmental factors are significant. It is often expected that growth in a specific industry will correlate with the size of the companies in that industry. However, Schwenke (2011) revealed that the growth rate of the industry, which the company serves, is far more important.

Acquisitions are included in many strategies to enhance business growth. Acquisitions provide key resources, which are integral to growth. The results of acquisitions are an instant increase in size and subsequently growth of the business. According to Freeser and Willard (1990), the benefits of acquisitions include the possibility of obtaining far more rapid access to larger markets, securing a supply of limited inputs, and increasing production capacity more cheaply than internal development would allow.

Regulations can also have a positive or negative effect on growth in that they can lead to competitive advantages or disadvantages. It is often when a regulation becomes an administrative burden, adds excessively to a company's costs, or changes regularly and creates uncertainty, that it can be viewed as an inhibitor of growth (Porter, 1998).

4.3 General information on growth

The survey questionnaire included the capturing of more general growth-related information. The aim was to generate information which could assist in obtaining a better understanding of the relationship between the growth achieved and the strategies employed, which will be described in Chapter 7.

It was stated at the beginning of this chapter that all of the growth drivers, listed in Figure 6.13, were deemed to be important by the respondents from the various agribusinesses. With this being established, acquisitions contributed towards a 21 % increase in the income of local agribusinesses in 2013. Similarly, investments made by the various agribusinesses in South Africa since 2003 yielded an additional increase in income of more than 22 % by the end of 2013.

The importance of these factors in terms of the success of local agribusiness is also evident in terms of the changes in leadership styles and communication strategies, with only 29 % of management staff that knew, understood and were able to explain the business model to strangers in 2003, compared to 71 % in 2013 according to the survey. Specific strategies for achieving this included the establishment of forums, which allowed for the incubation of new ideas and collective identification of opportunities to ensure sustainable growth. This outcome was formalised in 90 % of the cases into repeatable processes which are to a large extent driven by a project management system. The participating executives stated that cost management in agribusinesses is at excellent levels, because in 9 out of 10 years, the budgeted expectations were achieved. The differences were normally experienced in expected income because of nature and environmental factors.

Respondents were unanimous in their opinion that competent personnel are important, especially when agribusinesses have invested in training and development, which 90 % of the agribusinesses did. Agribusinesses managed to keep their trained personnel. Their average staff turnover rates stayed below 10 % during the research period.

The operational efficiency of agribusinesses is very good, with a rating of 90 % response with a four and five out of six. An important focus on growth is that all the agribusinesses include growth of the business on the agenda of executive meetings, and on average, 36 % of the meetings are allocated to the discussion of growth opportunities.

Agribusinesses are dependent strategic partners, and specifically with the following, in order of importance: financial institutions, suppliers, value adding partners, and partners in joint ventures. Investors as partners are not so important, with a weighted response of only an average of 2.6. The understanding of the key producers and the understanding of key industry clients were rated the highest, at 4 and 5 out of six, which supports the knowledge of customers as a growth driver.

Geographical expansion took place locally because agribusinesses operated on average in two provinces in 2003, while the agribusinesses are operating, on average, in five provinces by 2017. The same happened regarding the countries where their operations expanded from operated only South Africa in 2003, to operating in more than two countries in 2013. The result is that, on average, 2.7 % of the total revenue and 9.4 % of net profit are earned from African countries, excluding South Africa.

The accessibility of capital for investments and working capital is not a major problem according to respondents, with the ratings indicating that it has been between easy, and event very easy in some cases, to acquire capital. Agribusinesses experienced the fact that it is not so easy doing business in Africa, even in 2013 (Van Rensburg, 2017). The role of agribusinesses in the creation

of employment areas is important in rural areas, as they employed 14 479 permanent employees and 3 236 temporary employees during 2013 (DAFF, 2015). This information indicates that the executives are serious about growing their agribusinesses, especially in the post co-operative era, when traditional service areas collapsed and shareholders are expecting rising dividends to be declared.

5. Summary and conclusion

The analyses of the responses of participating executives to the questions in the questionnaire, which surveyed the profitability and growth of agribusinesses in the grain sector, are valuable and enabled the author to bring definite findings to the fore. The views of the MDs and CEOs on the importance and steps to ensure profitability and growth of agribusinesses were similar in many instances to those expressed in previous research results.

A unanimous response from the participating executives was that the transformation of a good agribusiness to a great agribusiness is a function of conscious choice. The correlation between their responses as to ensuring profitability and growth was strong, especially concerning the following steps: the remuneration of executives has to be linked to profit and growth in a specific form; the best results will be achieved by compiling and implementing a superior strategy; the best chance for being successful is to focus equally on what to do, what not to do, and on what to stop doing; and mergers and acquisitions form an integral part of their strategies. The majority were of the opinion that top executives must be appointed internally, that it is important to focus on the strategy when it comes to the motivation of employees and the alignment of different business units, and that technology is an important enabler of strategy. Respondents were indifferent regarding the assumptions that business transformation raises business profitability, as well as that growth does not require revolutionary processes.

The most important factor identified for each determinant of profits (given in brackets) are: the renewal of confidence (political/government); economic growth (economics); the sound evaluation of investment opportunities (investments); availability of skills (human capital); a declining market environment (competitiveness); rainfall – amount and spread (nature/environment); inability to finance growth (finance); ensuring high ethical standards (management); a strategic plan (strategy); volume of grain production (grain stock and prices); servicing large-scale commercial farmers (business model); and an increasing market share (market share).

Political and economic profitability drivers have a constant influence on each other, positively or negatively. When the confidence in the country's political system is high and the perception is that government applies good management practice, with high ethical standards, the economy will

grow internally and attract global investments that will enhance economic growth. The reversed situation is also true. Without confidence in the country's political system, and with bad management practices with low ethical standards being experienced, economic growth will decline and international investor countries might even disinvest. Furthermore, this will lead to a declining market environment and the availability of skilled personnel will become an even bigger problem. A downward spiral, building momentum, will be detrimental to all businesses. Agribusinesses will not be able to achieve sustainable profitability and growth. This will be amplified during situations of consecutive years of drought and severe climatic changes, resulting in low production volumes of grain. A counter action in such a situation is a conscious choice to out-perform the circumstances. With a superior strategy that is executed exceptionally well, sound investment opportunities, and an affordable financing policy, the management of agribusinesses may nevertheless still achieve exceptional results. With a relevant business model focusing especially on large-scale commercial farmers, but including all other farmers, agribusinesses may still be able to retain market share, and even successfully gain a larger market share.

The profitability factors which are most certain to occur, according to the respondents, are: rising energy costs, economic growth, returns on investments in Africa, the training and development of staff, increasing international competitiveness, rainfall, farmers experiencing financial pressure, effective cost management, the annual adjustment of the strategic plan on the performance of achieved goals, effect of international crude oil prices, involvement in low risk sectors, and the increasing of market share.

Agribusinesses will have to invest in alternative energy sources to counter the rising costs of energy. This is part of the expected economic growth. Opportunities to invest in African countries with acceptable returns on the investments have to be investigated, but nevertheless by using sound investment principles. Linked with investments in Africa, is increasing international competitiveness because many global companies see South Africa as the gateway to sub-Saharan African countries. With the local demographic composition, management of agribusinesses will have to expand the development of staff. Critical managerial steps will include the adjustment of business models to reduce the risk inherent to agribusinesses in the grain segment. This includes rainfall and climate changes, international oil price, and the involvement in low-risk sectors. Continuously important will be effective cost management in agribusinesses and in financing farmers that experience financial pressure. The progress of implementing the decided strategy must be evaluated according to a performance system and the goals adjusted as may be necessary. This will include a measurement of the retained or increasing market share and of the financial indicators on sustainable profitability and growth.

The least certain profitability factors to occur, according to the respondents, are: the inadequacy of basic infrastructure, inflation, sound evaluation of investment opportunities, availability of skills, declining market environment, the protection of the ecosystem and biodiversity, inability to finance growth, income growth, utilisation of synergies, local carry-out of grain stock, extent of diversification, and the retaining of market share. Many of these factors are still important, but respondents rated their probability of occurring, or having an influence, as being very low.

An important enabler of political confidence and economic activity is the adequacy of basic infrastructure. For economic growth, it is important that inflation be managed well in the country; however, inflation is inevitably linked to political and economic occurrences, locally and abroad, and this may affect a declining market environment. The protection of the ecosystem and biodiversity entails the enforcement of governmental policy, as well as a contribution by every person involved in agriculture. The same applies to the responsibility to deliver a skilled workforce. The soundness of an agribusiness' financial position for enabling the financing of growth, increasing income growth, the utilisation of synergies, and level of diversification and protection of market share all lie within management's control. Even with the importation of grain when low carry-out grain stock is experienced, management can influence the effect. Note has to be taken of the factors most uncertain to occur to protect against risk, ensure sustainable profitability, and growth of agribusinesses in the grain segment. This is often a more difficult task for agribusinesses, compared with the remainder of the sectors in the economy.

The three most important reasons to grow an agribusiness, according to the respondent executives, are to generate superior value, to obtain a superior strategic position, and to raise profits. These results correspond with the response of executives given in previous research. In this study, an important result is also that improving the cost position of an agribusiness was rated evenly important to the rise in profits to grow the business. This result differs from the results of the previous research. Local executives rated accumulation of capital, achieving a superior brand position, and attracting stronger alliance partners as being more important for the growth of an agribusiness, compared with the reasons to grow a business abroad.

The result of the executives' responses on the growth drivers identified in this survey was that they are all important to ensure sustainable growth. For a better interpretation, the determinants of growth were ranked from the highest weighted average response to the lowest. The most important growth drivers are a direct focus on growth, professional leadership, and knowledge of customers. The three growth drivers with the lowest relative importance according to the weighted response average are regulations, acquisitions and industry growth.

The included growth drivers do actually comprise a package of elements in a growth strategy, which forms part of the total strategy of an agribusiness. Each agribusiness can decide to place

emphasis on some of the elements in their strategy and create a combination package with different weights on certain growth drivers, or for certain periods. Some important growth drivers not in the top three are, for example, excellent execution of strategy, repeatable growth process, a simple business model, a talent incubator and an effective performance management system. Some of the most important elements, such as acquisitions for example, may even be discarded, as long as the total package is send in the right direction and the correct strategy is followed. In the following chapter, the growth results achieved by the various agribusinesses following various strategies will be described. The results on the general information about growth gave additional insight in support of the growth drivers in the strategies that are implemented.

In conclusion, the result of the agricultural profitability and growth survey provided answers on the importance of, and steps to ensure, the profitability and growth of agribusinesses. The important factors for each profitability driver were identified and can be focused on. Simultaneously, the factors most certain to occur and most uncertain to occur emerged to be taken into account in future planning. The comparison of the reasons to grow an agribusiness gives insight into the local situation, although the most important reasons correspond with previous research. Growth drivers, ranked from the most important to the least important according the rating of the executives, together with the results acquired from the general information on growth, give direction for future planning.

-oOo-

CHAPTER 7

STRATEGIES IMPLEMENTED BY AGRIBUSINESSES TO OPTIMISE PROFITABILITY AND GROWTH

1. Introduction

The general economic and political risks that agribusinesses in South Africa, and especially grain producers, experience have an impact on the volume of grain produced, and subsequently on their potential for profitability and growth. Much of the potential in terms of profitability and growth also links to specific strategies that are employed to address these risks and challenges. An improved understanding of the relationship between the profit and growth drivers and the different strategic approaches is, therefore, of much value in the quest for sustainable profitability and growth.

This chapter focuses on the results obtained from the sustainable profitability and growth survey of South African agribusinesses in the grain sector. Specific focus will be placed on the different strategies employed by the participating agribusinesses. The chapter will also report on the findings from the profitability and growth analysis for the period 2003 to 2013. The latter provides some perspectives in terms of the effectiveness of the different strategic approaches, views and perceptions. This will also assist in providing an understanding of, and improving insights into, the findings reported in previous chapters.

This chapter starts with a discussion of the different strategies and the extent to which these strategies were employed by the various agribusinesses studied. This is followed by the profitability and growth analysis, giving insight into the effectiveness of each of these strategies. Thereafter, the different strategies and the extent to which these strategies were employed by individual participating agribusinesses will be discussed. This will be followed by the profitability and growth analysis of individual agribusinesses.

2. Strategies implemented by agribusinesses in South Africa

This sections investigates the strategies implemented by agribusinesses, starting with the most important strategies, followed by the market results that were obtained following those strategies.

2.1 The most important strategies of agribusinesses

It was explained in Chapter 4 the sustainable profitability and growth questionnaire and the specific focus on the strategies employed by the various agribusinesses. This chapter now reports on the results obtained by this survey. Firstly, a definition was provided for each of the strategies

listed. Respondents selected and ranked the applicable aspects and strategies of agribusiness. The ranking was set according to a Likert scale, with values ranging from 0 to 5, where zero indicated that a specific strategy was not utilised, while 5 indicated that a corresponding strategy formed an integral part of the agribusiness' overall strategic approach.

The semi-structured interviews focused on gathering information in terms of the success of the different strategies employed by the various agribusinesses since 2003. The strategic direction of any agribusiness is determined by its board of directors. Normally, once a specific strategy is approved, the responsibility shifts to the executives and management for implementation. The success of any strategy is closely related to the effectiveness of its implementation. Unsuccessful strategies, which had historically failed to promote profit and growth, led to the implementation of more modern strategies or the return to previous strategies that had been successful in the past. This is an example of a strategic focus which has shifted from integration in the past towards consumer-orientated strategies today. Integration is the process of attaining close and seamless coordination between several departments and complementary business units, including value adding enterprises. In the endeavour to add value for the customer, integration remains important, but should also support the shift to the main focus of meeting the customers' requirements.

A limitation of semi-structured interviews is that they can be influenced by opinions and perspectives of the current executives, rather than those of the personnel who may have been responsible for implementation. The majority of the participants interviewed have many years of experience at managerial level or as top executives in the same or even different agribusinesses. It must be noted that two of the agribusiness' CEOs did not wish to take part in completing the questionnaire or the semi-structured interviews. However, the financial results of these two agribusinesses were included in the financial analyses to calculate the trend of NPAT of all the included agribusinesses.

The survey results and insight gained from the semi-structured interviews provided detail in terms of the way in which different strategies were utilised in the past. This builds on the theoretical background that was provided in Chapter 2. Moreover, many participants referred to the fact that it was a combination of strategies, rather than one specific strategy, that led to the successful achievement of the set objectives. Furthermore, the timing of implementation was also highlighted as being an important factor for success. The aforementioned should be kept in mind in terms of the interpretation and discussion. Figure 7.1 provides an overview of the different strategies employed by the various participating agribusinesses.

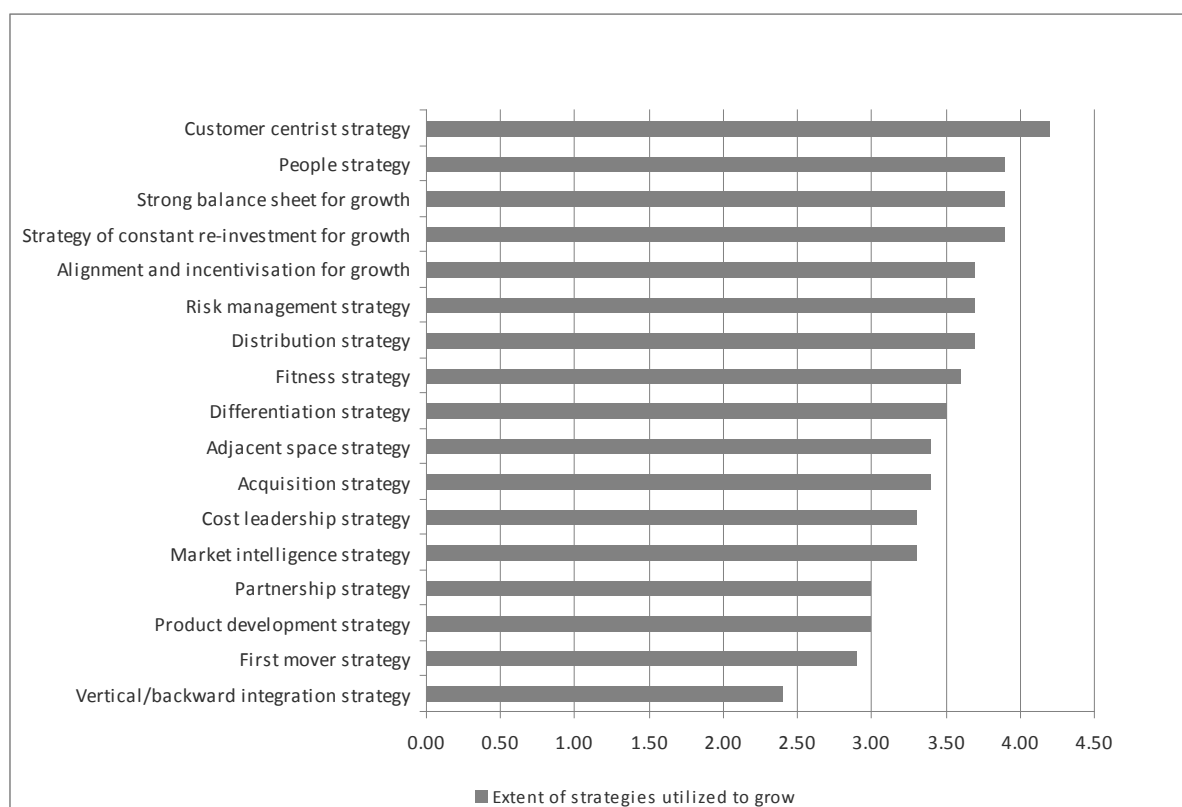


Figure 7.1: Strategies utilised to grow agribusinesses in total

Source: Author's own analysis

According to the survey results (as portrayed in Figure 7.1), all the strategies included in the survey are utilised to some extent in the quest to achieve sustainable profitability and growth. The results indicate that the main focus is on customer-related strategies, with a customer-centric strategy being ranked as the most frequently used amongst the different strategies. This specific strategy refers to increasing value to selected customers. Increasing value to customers refers to extending agricultural knowledge, which represents the basis for viable farming operations. Extended knowledge is normally delivered through agricultural extension services. The latter is described as an expansion tool for attracting business, both locally and on the rest of the African continent. It is commonly acknowledged that agricultural extension services and research should provide breakthroughs regarding higher yields and productivity to improve the profitability of farmer shareholders.

Moreover, to retain current business and also increase their market share, agribusiness should focus their offer on value and unique services instead of on price (Marais, 2017). Increasing the market share in operational areas will improve the profitability and growth of the agribusiness at a low cost. Complimentary to this is the point that excellent business relationships with customers are essential. Another basic principle of a customer-centric strategy is to know the customers' requirements and the company's abilities. The modern farmer should increase productivity and

yields with precision farming techniques and utilising the latest research results. To be a market leader, an agribusiness has to attract prominent farmers, universities and global players in the market (Van Rensburg, 2016). The survey indicated that this will contribute to the utilisation of technology, a practical in-time application and availability of information.

State-of-the-art information technology is a big advantage and also an important marketing tool (Van Rensburg, 2016). This is especially attractive to young commercial farmers that require to be serviced through technology. Technology enables agribusinesses to utilise synergies in business to their full extent and simultaneously increase service levels to the clients. Agribusinesses were transformed from co-operatives to companies as a business form, but loyalty-, discount- and share-purchase-schemes for farmer shareholders are growing in importance (Van Rensburg, 2016). Agribusinesses will have to adjust their business models in such a way that external investors still receive good returns on their investment.

The importance of having a customer-centric strategy in agribusinesses escalated after transformation to companies because competition tends to increase as agribusinesses expand into new areas. Increasing value is achieved through connecting customers with the business's products and services in the most effective way (Marais, 2017). Agribusinesses with strong links to the grain segment own inherently large components of logistics operations because of their purchasing of farm requisites that have to be distributed to all their trading outlets. Another aspect is the collection and transporting of grain to the storing facilities of the agribusiness, as well as the delivery of grain to their clients (Marais, 2017). Agribusinesses which invested in value adding chains focus on the distribution strategy. The distribution of fuel is an increasing source of profit for agribusinesses. This was traditionally intended for the farming communities and especially those in rural areas. Customers in cities have now also become important consumers of fuel for some agribusinesses. All these aspects place more focus on a customer-centric strategy for agribusinesses in achieving sustainable profitability and growth.

An important element of a customer-centric strategy is to differentiate the business's products and services in order to become the indispensable provider of choice to its customers (Marais, 2017). The view of some executives was that diversification is a good strategy when the original agricultural sectors are declining. Important to bear in mind is that value chains differ between different sectors and business units. Diversification in sectors complimenting the agricultural sector, through having customers in other industries in the economy, can be highly profitable, especially in niche markets that normally provide high value and profitability. Product development should be unique and products have to be better than competing products in the market, otherwise the company might eventually experience liquidity problems and need to search for partners. Product innovation and development will grow in importance in future

agribusinesses. In principle, buying inputs creates dependency, while producing products creates value (Strydom, 2016).

Other strategies that form an integral part of the strategic focus of the agribusiness include a people strategy, a strong balance sheet for growth strategy, a strategy of constant re-investment for growth, an alignment and incentives for growth strategy, a risk management strategy, and a fitness strategy.

A people strategy revolves around people as being the key differentiator in terms of providing a competitive advantage (Schwarz *et al.*, 2006). Figure 7.1 indicates that this is the second most important strategy. According to the results from the survey, the importance of having the right people plays an important role in realising profitability and growth. Superior quality employees who are motivated by their responsibility to the business are preferred by most agribusinesses. Moreover, a flat management structure is preferred by several executives, the reason being is that this enhances focus on strategic planning (as a road-map) and implementation. Considering the history of the co-operative era, the role of the directors and executive management has to be clarified beforehand to minimise conflict and to improve the execution of the approved strategic approach or specific strategy (Bronkorst, 2016). A better commitment to agribusinesses will be achieved through the creation of employee trust, as well as shareholding by employees in the agribusiness. This may add value for all the different parties and contribute to Broad Based Black Economic Empowerment (BBBEE) in a significant way (Kleynhans & Kruger, 2014). The allowance for employees to buy company shares is seen as a way to ensure commitment from employees to contribute more to the improvement of the profitability and growth of the agribusiness.

In addition, a strong balance sheet strategy ensures that the business has adequate resources to pursue growth opportunities (see Figure 7.1). This strategy was utilised to the same extent as the people strategy. The same accounts for the constant re-investment for growth strategy. A strong balance sheet enables an agribusiness to survive low grain volume years and to pursue profitable opportunities. Combined with the aforementioned strategies, a strong balance sheet and the ability to re-invest in the business and/or in other attractive opportunities contribute toward the ability of agribusinesses to sustain growth.

Given the high risk profile of agribusinesses with strong links to the grain segment, emphasis has to be placed on risk management when pursuing opportunities that could lead to growth. This will contribute towards sustainable growth. According to some of the participants, one way of lowering risk associated with grain production or levels of production by farmers and shareholders of the company is to enter into profitable value adding opportunities. In line with this, the view is that risk can be lowered through export opportunities and the associated exchange benefits, and even

through pursuing profitable ventures outside the agricultural sector. The latter should, however, to some degree, compliment the current core business.

Other participants were of the opinion that the focus should rather be on the businesses' expertise as providing a risk management tool and subsequently ascertaining a way to achieve sustainable growth. The focus should thus rather be on growing the current profitable business units and product ranges, before exploring alternative options.

Fitness strategy is also amongst the more important strategies employed by the participating agribusiness. A fitness strategy ensures that the business is disciplined financially and operationally so that it has the flexibility and "fitness" to weather any adverse conditions, as well as pursue any opportunities that arise. It is evident that a fitness strategy is closely aligned to both a strong balance sheet and re-investment strategic approach.

Also amongst the most important strategies is an alignment and incentive strategy. The basis of this strategy revolves around the correct structuring of the business and incentivising key staff members to achieve the growth objectives of the business. According to the participants, there exists a big difference in terms of the attitude of employees that are shareholders, compared with those that are not. Those that are allowed to become shareholders or to take part in long-term shareholding incentives tend to serve the company better in terms of achieving the growth and profitability objectives.

Other strategies also deemed relatively important are the adjacent space strategy, acquisition strategy, a cost leadership strategy, and a market intelligence strategy, with weighted average ratings of between 3 and 3.5. The adjacent space strategy came into play following the end of the co-operative era. Extending the boundaries of core business into an adjacent space was the logical strategy in an attempt to expand the customer base. However, in hindsight, many agribusinesses revealed that geographical expansion is difficult. This is mainly because of increased levels of competition, and successive lower margins, as well as lower cost effectiveness. A good entry point into an adjacent space is to focus on a unique or specialised product or service and to grow the business, along with complimentary traditional product ranges.

Except for the cost advantage, with regard to the closest servicing area, it is always important to ensure that the cost structure of the business is as low as possible to secure a position of cost leadership. Traditionally, a cost leadership strategy is an integral part of an agribusiness, especially in the grain segment when successive droughts are experienced. Better prices for the purchase of agricultural products and receiving services provide a competitive advantage, which may increase profits. Cost effectiveness is also embedded in superior systems and people. In practice, cost effectiveness is a continuing and important management strategy.

Understanding the market and how it is likely to change in order to optimally position the business is central not only in terms of identifying opportunities, but also in obtaining competitive advantage. A proper market intelligence strategy is central in terms of this and revolves specifically around the branding of the agribusiness and its products. Market intelligence, on the other hand, plays an important role in term of identifying opportunities for growth.

Cost leadership is another strategy that was deemed to be of relative importance. Cost leadership is often achieved through the acquisition or consolidation of similar businesses or business units. The latter provides economy of scale and/or a larger market share, which is important for a cost leadership strategy to be successful. Different responses from the different respondents were obtained as far as acquisition strategies are concerned. Some of the participants were very positive, while others differed. The uncertainty and/or negativity around acquisitions stems from previous takeovers that were unsuccessful. It was stressed by several participants that it is often non-business-related factors that cause mergers or acquisitions to fail. Shareholder control is also a factor which often prevents merger and acquisitions from taking place or being successful. The participants do, however, acknowledge that mergers can make a contribution to scale benefits because of the bigger agribusiness following the merger or acquisition. A merger is only properly regarded as a merger when the two businesses have the same magnitude regarding volume of grain handled, diversification, turnover and NPAT. If these criteria are not met, it is seen as a takeover. Acquisitions do have a place in the expansion of businesses, but mergers are usually difficult to structure. When the different brands of agribusiness in the market remain intact after a merger, it is regarded as proof that the merger was successful and the merged agribusiness achieved its objectives.

Forming a partnership is an approach that could assist in terms of achieving cost leadership. These normally entail partnerships between the agribusinesses and key suppliers, service providers, or even multinational companies that are entering new markets with the aim of building on established businesses to ensure and/or maintain competitive advantage. Partnerships can also be implemented in different business formats as a specific strategy. These might include other agribusinesses in the grain segment, different countries, business units or departments of agribusinesses, private entrepreneurs, or similar value chains in an attempt to achieve economy of scale or to increase market share. Various participants were of the view that joint ventures between business units and different departments provide an agribusiness with the opportunity to become a more significant role player in the market. Moreover, joint ventures with local companies in African countries lower the risk of investments, while joint ventures with private entrepreneurs can add pressure on management, though they have the ability to be highly profitable. Reference was also made to value chain mergers instead of the merging of agribusinesses in their entirety. Critical mass in terms of the size of the operations following the

merger was highlighted as being one of the most important factors in terms of the successful implementation of the specific strategy.

The 'first mover' strategy is a well-known strategy amongst business. Although it provides the advantage to establish control over the market, it is utilised to a lesser extent within the agricultural sector. The reason is most probably because of the risk within the agricultural sector. The agricultural sector is exposed to a number of uncontrollable risk factors which, in general, contribute towards a slightly higher risk profile when compared with, for example, the electronics and information technology industry where first mover strategies are most important for financial survival.

Forward and backward integration is another strategy that used to be a focus of agribusinesses by the turn of the millennium. This strategy is utilised in expanding the business by means of acquiring suppliers or customers of the business to capture more of the value chain. This has, however, clearly changed and it is currently not a strategic focus of agribusinesses in South Africa. It should be noted, though, that many of the agribusiness are, to some extent, integrated either forward or backward, or both, in terms of their business models. Forward and backward integration may be achieved through the acquisition of suppliers or customers of the business, and in this way, a larger slice of the value chain is captured. This should, however, be utilised with caution due to risk and to avoid competition. Moreover, respondents alluded to the fact that forward or backward integration were seldom proved as being a profitable opportunity. This is mainly attributable to the fact that most agribusinesses are positioned in the middle of the supply chain, with a focus on supplying farm requisites to the farmers, with relationships with the suppliers of requisites on the one side, and on the other side, providing grain handling, storage, marketing and/or processing services. Forward or backward integration strategies often bring agribusinesses into direct competition with global suppliers of requisites and their value adding clients.

In practice, the various strategies are implemented simultaneously in the quest for sustainable profitability and growth. Some valuable general remarks learned from experience are: "to see the bigger picture in the agricultural sector and in the grain segment", "an agribusiness is to a great extent a mirror image of the environment it operates in", "a balance between risk opportunities and core business are very important", "a wrong strategy can be implemented 100 %", "culture differences prevent mergers" and "culture eats strategy". The last mentioned occurs when a company's culture is so strong that the success of implementing a new strategy is limited.

2.2 Market performance following strategies

The successful implementation of these strategies or a combination of these strategies will be described and evaluated in the following sections according to the actual profitability and growth achieved by the agribusinesses. The success or failure of the strategies followed by management is reflected in the financial statements of those agribusinesses during that specific time. The effect of the implemented strategies on profitability will be illustrated by the NPAT for the period 2003 to 2013. The compounded average growth rate (CAGR) will be calculated over this period to illustrate the growth, as illustrated in Figure 7.2.

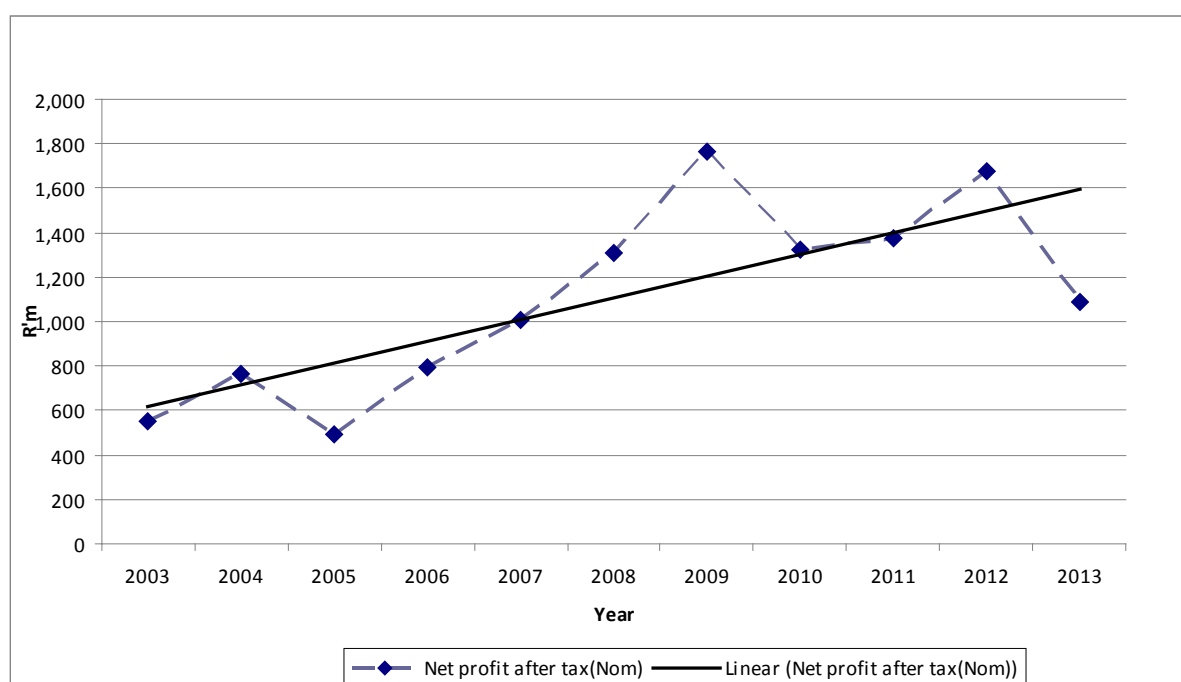


Figure 7.2: Net profit after tax of all the included agribusinesses: 2003 – 2013

Source: Author's own analysis

The combined NPAT for the participating agribusiness has a general ascending trend. A decline was, however, reported in terms of NPAT from 2004 to 2005, 2009 to 2010 and 2012 to 2013. Caution should, however, be taken when interpreting the negative movement of NPAT for the specific periods. The decline in 2004/2005 and 2009/2010 was mainly due to adverse climatic circumstances, while the 2012/2013 decline could be ascribed to the specific losses incurred by one of the larger agribusiness in South Africa. Moreover, the implementation of loyalty programmes and the way in which these were reported in the financial statements also had an impact on the NPAT. The CAGR of all the included agribusinesses over the period was 6.84 %.

No significant conclusion can thus be drawn in terms of the success of the strategic approach of agribusinesses in its totality.

To gain a better understanding of the success of the various strategic approaches, selected agribusinesses will be analysed in the following section. This section provides more detail in terms of the strategic approach and associated financial successes that these strategies led to in the selected agribusiness.

3. Strategies of individual agribusiness

Strategies of the different individual agribusinesses are important, however the successfulness and confidentiality of any strategy is in the effective implementation thereof (Strydom, 2016). A part of the annual reports of the different agribusinesses is often dedicated towards a brief description of the strategic approach that's being followed by the respective agribusiness. Similarly, the achieved financial result of the included agribusinesses was published in the Annual Report of all the individual agribusinesses and serve as an important indicator of the successfulness of the strategy that was followed.

Strategies implemented by a selected number of individual agribusinesses will be described in this section, based on the Agricultural Profitability and Growth Survey that was conducted among agribusiness. Two agribusinesses did, however, not participate in terms of the survey and as a result are excluded from this discussion. The details of their performance data were, however, studied in previous chapters. Similarly, agribusinesses with data limitations and unavailable financial results were also excluded from this comparison. A further two agribusiness were excluded, given that their focus was on payments through loyalty schemes and not dividends. Their financial results were not comparable with the remaining agribusinesses included in the study. The agribusinesses that still operate as co-operatives were also excluded. The agricultural groups that were pooled and studied in previous chapters were too diverse to study sensibly in this chapter. The focus of the next sub-sections will be on comparing the results from the profitability and growth analysis in relation to the strategic approaches of the various remaining agribusinesses.

3.1 Strategies and its success of Agribusiness A

The success of the strategic approach will be assessed according to NPAT and the CAGR (profits and growth rate) for the specific agribusiness over the research period. Figure 7.3 provides an overview of the strategic approach that is being followed by Agribusiness A. It is evident from Figure 7.3 that the main strategic focus is centred on a customer-centric strategy. This is closely followed by a strong balance sheet approach, constant re-investment, risk management, people, partnerships, market intelligence, fitness, distribution, alignment and incentives, and acquisitions.

Strategic approaches such as having adjacent space, cost leadership, differentiation, product development and forward and backward integration are amongst the least focused upon.

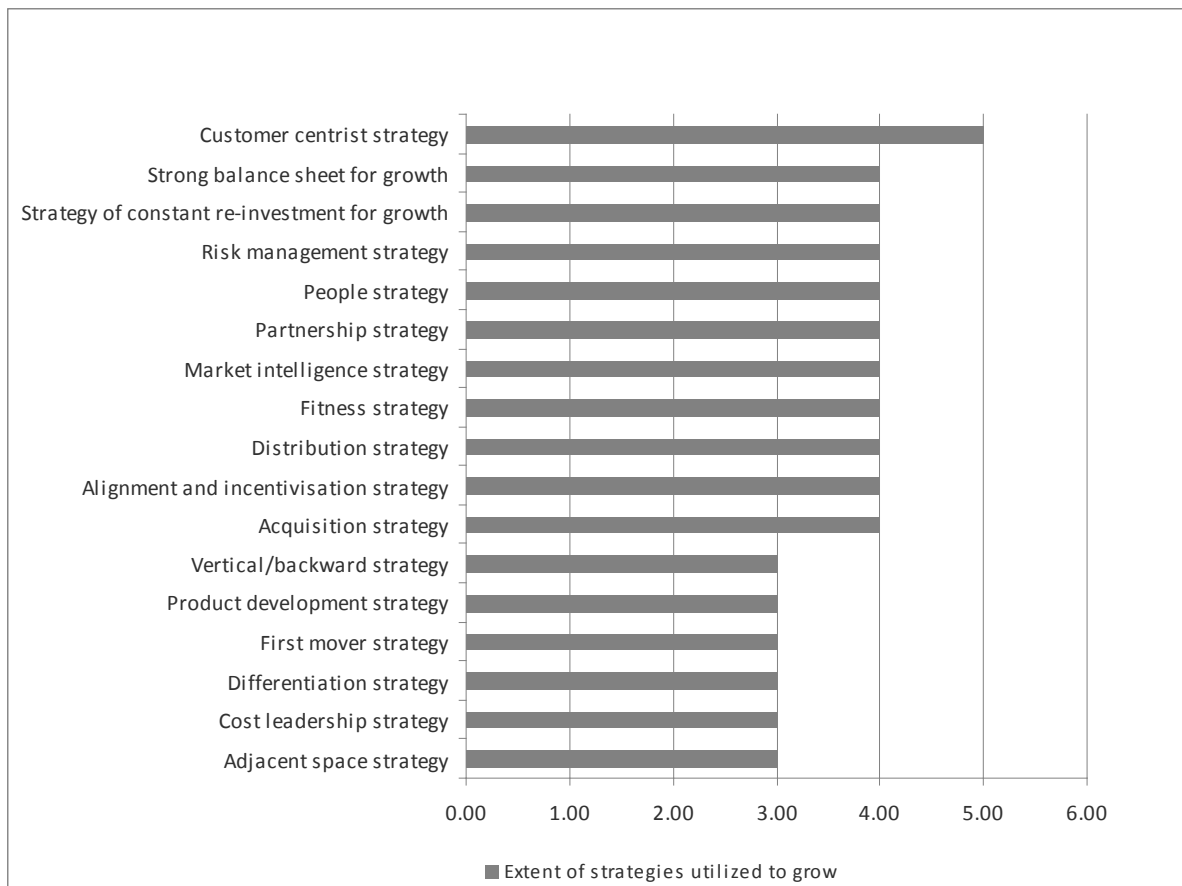


Figure 7.3: Strategies utilised to grow agribusiness A

Source: Author's own analysis

The trend in terms of NPAT for the specific agribusiness is depicted in Figure 7.4. In general, when considering the positive trend in terms of NPAT from 2004 to 2012, it could be argued that the specific strategic approach of the company was yielding the desired outcome. However, caution should be taken when interpreting the results as far as NPAT is concerned for the period 2012 to 2013. The decline was not necessarily the result of the strategic approach, but rather a mistake in terms of hedging decisions taken as far as grain marketing is concerned.

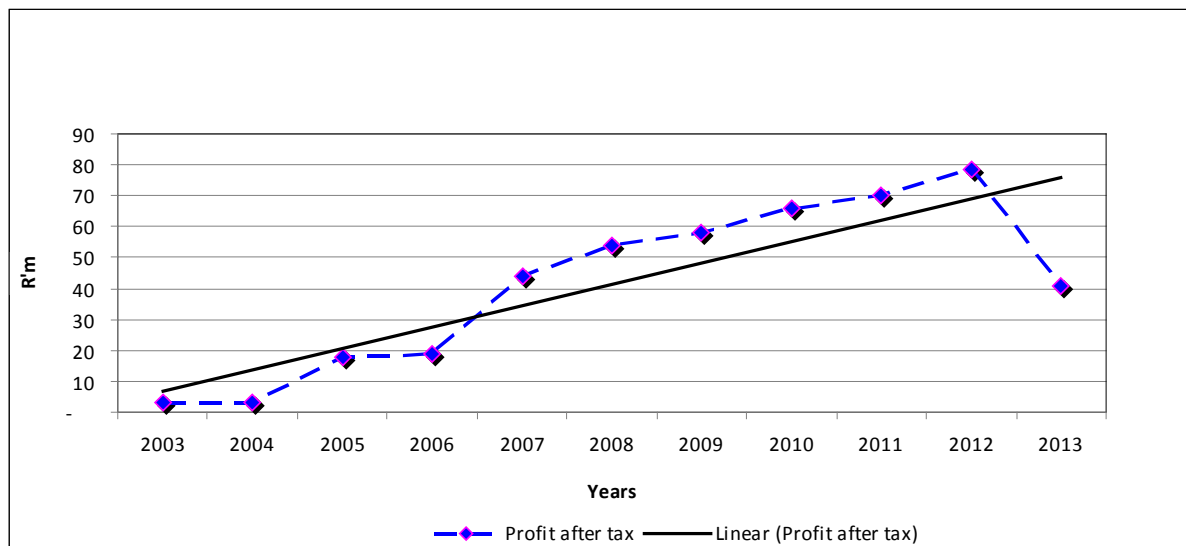


Figure 7.4: NPAT of Agribusiness A, 2003–2013

Source: Author's own analysis

The CAGR growth of Agribusiness A was 29.26 % over the period 2003 to 2013. Although starting from a very low base, revenue was increased to R4 538 million, with earnings attributable to shareholders reaching R22 million in 2013. Specific activities that relate closely to the strategic focus (customer-centric strategy) of the agribusiness in question include services, and training of employees, as well as the upgrading of the trading network supplying farming requisites. A unique financing service with a prominent commercial bank was launched, with mixed success. Auction facilities and services were also expanded. However, an exit strategy in terms of the latter was followed because of low or no profitability in certain areas. Endeavours relating to a strong balance sheet and re-investment strategies include grain processing and diversification to include the processing and distribution of other commodities, such as sugar cane.

This strategic approach delivered the desired results, to a large extent. It should be noted that the regional circumstances, such as climate, will differ for each of these agribusiness. This has an important impact on the financial results of the different agribusinesses and highlights the importance of the strategies followed. It is difficult to compare or to argue that the strategic approach of one agribusiness is superior to the other on the basis of the financial results purely because of the different regional factors at play. In other words, different agribusinesses are faced with different challenges, and different strategies are employed accordingly. The following sub-section provides an indication in terms of the success as far as the strategic approach of the second agribusiness is concerned.

3.2 Strategies and its outcomes of Agribusiness B

An overview of the strategic approach that Agribusiness B followed is illustrated in Figure 7.5. According to the results from the survey and semi-structured interview, the strategic perspective of this businesses is primarily on people and diversification. This is notably different from the previous agribusiness where the main focus was on customers. Other strategies that are also strongly focused on are a strong balance sheet, re-investment, risk management, fitness, a customer-centric approach, cost leadership, alignment and incentives, and acquisition. This provides direction in terms of the strategic modus operandi of Agribusiness B for ensuring sustainable profit and growth. Economy of scale are central to their strategic objectives. This is in line with the finding that one of the advantages of mergers and acquisitions is the enhancing of economy of scale. Agribusiness B was also the only agribusiness that did not use forward or backward integration strategies.

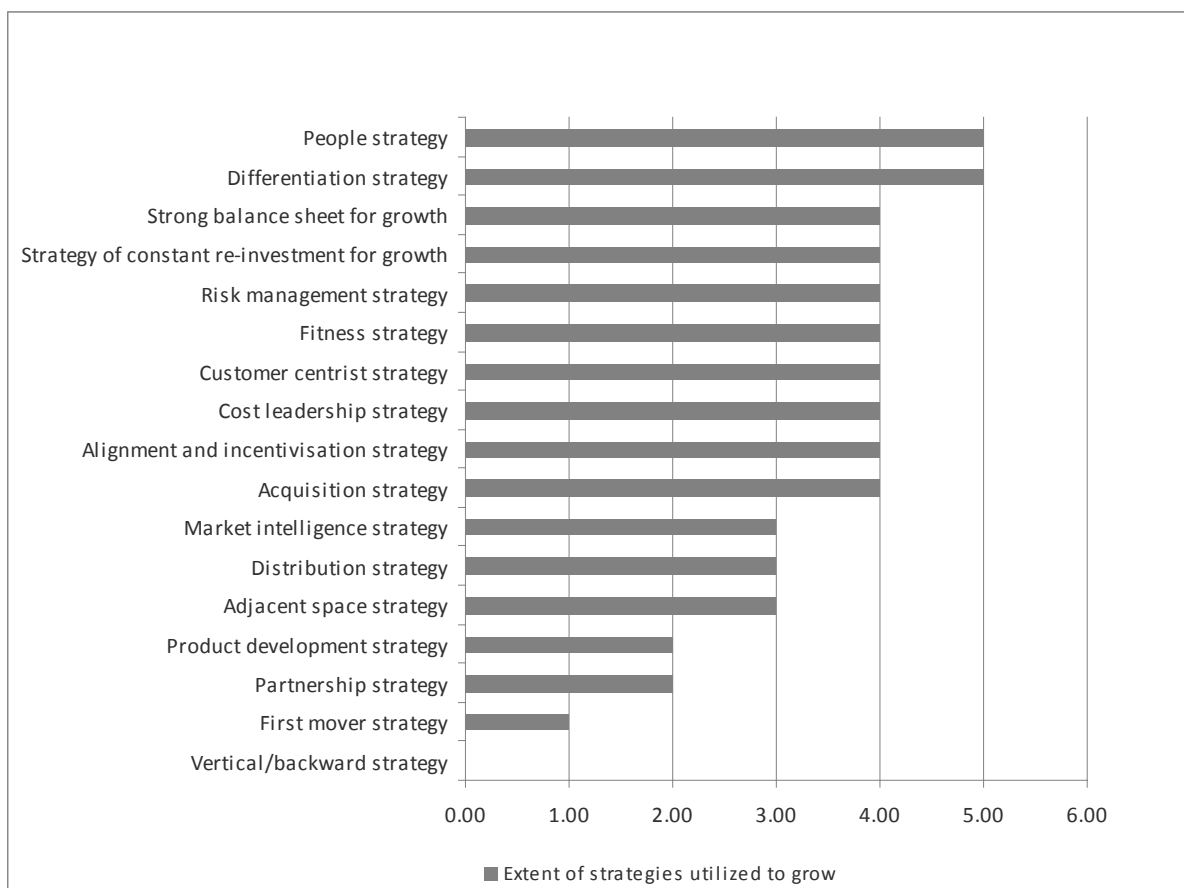


Figure 7.5: Strategies utilised to grow Agribusiness B

Source: Author's own analysis

According to the executive of Agribusiness B, an acquisition strategy was strongly followed from 2005 to 2011 with the aim to grow. During this period, some successful mergers took place. Increasing market share was an important focus for increasing business with existing customers and expanding business with new customers. The approach was to emphasise value and a unique service, instead of price. A customer-centric strategy became very important. Growth was achieved through introducing new product ranges and the addition of several operation locations, while driving differentiation. In the meantime, the amount of cash business with farmers and consumers increased substantially.

Currently, the “Good to Great Period” with an objective of the CAGR growth rate of 15 % for the next ten years is being implemented. This entails the re-focusing of the agribusiness, optimisation of its retail business, aggressive service station growth, and a focus on service centre merchandising. Incentives given to people to motivate growth initiatives were implemented, with favourable positive outcomes.

An overview of the NPAT outcomes between 2003 and 2013 for Agribusiness B is shown in Figure 7.6. During this period an unbundling took place in 2003. This returned the main focus to the profitability and growth of the agribusiness, separate from investments, with a focus on good returns in the food businesses. Although realising a strong positive trend in NPAT for the entire period under review, NPAT declined between 2009 and 2010. Although a customer-centric strategy is one of the supporting strategies, the main strategies implemented were on people and differentiation strategies. It could be argued that the specific strategic approach of this company, although different from the strategic approach of Agribusiness A, nevertheless yields the desired outcomes.

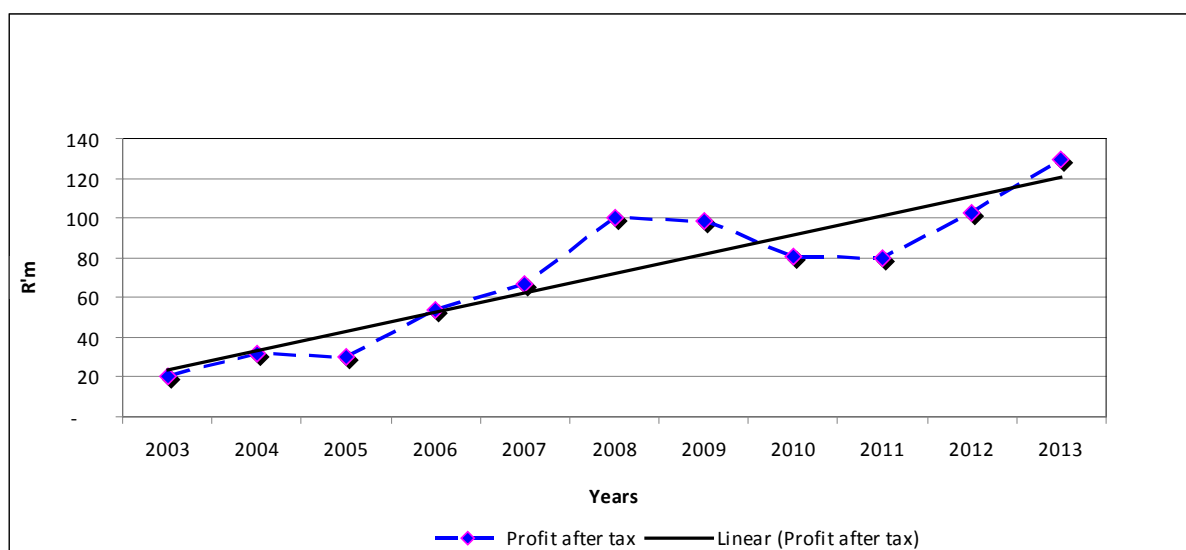


Figure 7.6: NPAT of Agribusiness B, 2003–2013

Source: Author's own analysis

The CAGR growth of Agribusiness B was 14.41 % over the research period. Although this is substantially lower compared with Agribusiness A, it does not necessarily imply a less effective strategic approach. Various factors could have had an influence on the difference in CAGR between the two agribusinesses. Nevertheless, revenue increased to R4 008 million, with earnings attributable to shareholders reaching R35 million in 2013.

3.3 Strategies implemented by Agribusiness C and its outcomes

Agribusiness C is an agribusiness operating in the summer rainfall areas. Although the focus is mainly on grain handling, storage and marketing, the company also has a strong foothold in processing facilities or allied industries. The various strategies employed by this agribusiness are presented in Figure 7.7.

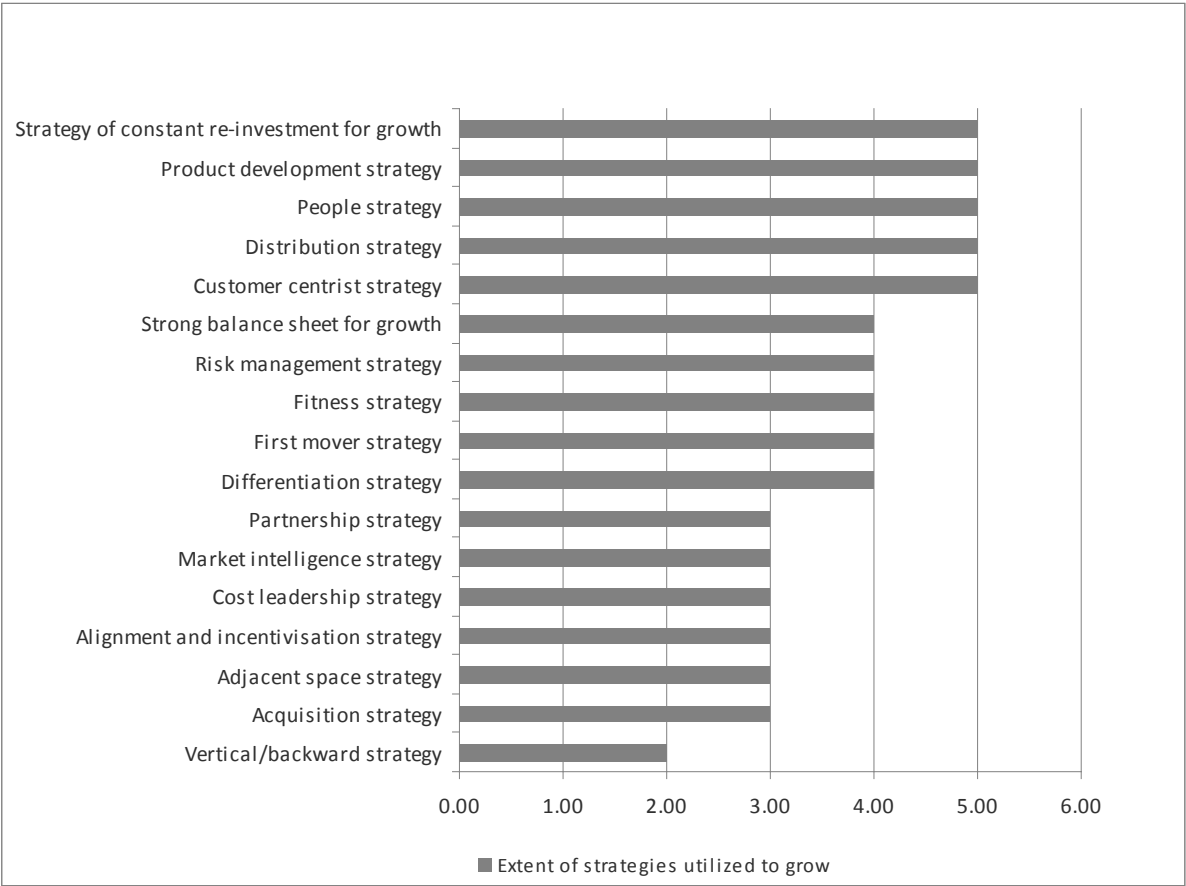


Figure 7.7: Strategies utilised to grow Agribusiness C

Source: Author's own analysis

The strategies most utilised by Agribusiness C are the constant re-investment, product development, people, distribution, and customer-centric strategies (see Figure 7.7). This is also slightly different, compared with the previous agribusinesses analysed. It should be noted that its approach is not entirely different from a strategic perspective, but rather differs in terms of the importance or focus assigned to the different strategies. Other strategic approaches that also feature among the most important are the strong balance sheet for growth strategy, risk management, fitness, first mover, and differentiation strategies. Noteworthy is that agribusiness C is the only agribusiness that rated the first mover strategy as being important in their strategic approach. The NPAT profit of Agribusiness C is portrayed in Figure 7.8.

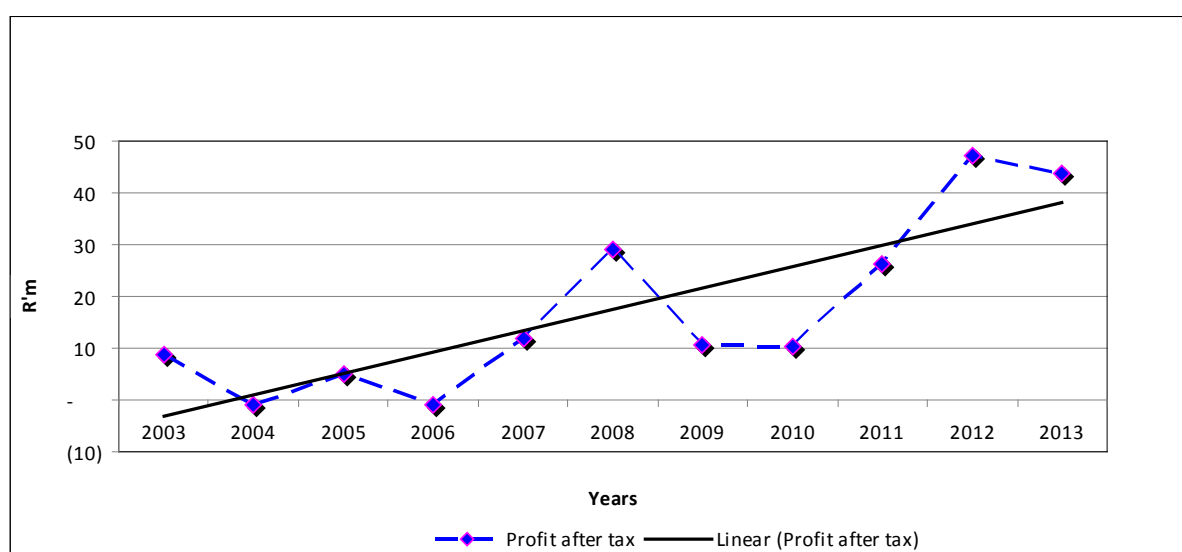


Figure 7.8: NPAT of Agribusiness C, 2003–2013

Source: Author's own analysis

The expectation was that this agribusiness would be one of the top performers because of the lower risk associated with grain and other commodities that is produced in the summer rainfall areas. Although NPAT have an increasing trend with peaks in 2008 and 2012, the period from 2003 to 2006 experienced low growth. It could be argued that this agribusiness was successful in terms of their strategic approach from 2010 onwards. Much of the strategic focus in the early-to-middle parts of the 2000s was mainly on grain storage, handling and marketing. The profitability hereof is closely linked to the levels of primary production and/or grain procurement. Although it is challenging and often costly to procure grain if and when primary or farm-level productions are low. In such instances, margins are normally much smaller, which directly impact on profits. It also makes it difficult to compete with other agribusiness for the same grain when other businesses are in a cost leadership position because of their superior diversification. The strong

strategic focus on grain handling, storage, and marketing, to a large extent, did not yield the desired result. As a result, the strategic focus on grain handling, storage and marketing was downscaled.

In terms of growth, Agribusiness C reported a CAGR of 26.8 % over the period under review. This is higher compared with Agribusiness B, but slightly lower compared with Agribusiness A. Revenue increased to R2 031 million in 2013 and earnings attributable to shareholders to R40 million. Similar to Agribusiness A, the earnings attributable to shareholders grew from a very low base of R2 million in 2003 to R40 million in 2013.

Much of this growth can be attributed to a couple of acquisitions and the purchasing of several trading outlets from another agribusiness. The focus of these acquisitions and outlets was, among other things, on irrigation equipment, seed sales, value adding and financial services. Moreover, the strong branding of divisions and products played an important role in creating the necessary awareness. A scheme where employees were able to buy shares in the agribusiness was also introduced. The latter provided much impetus in terms of motivation and allowed employees to become co-owners, which had a significant impact in terms of cost sensitivity and the growth orientation of the agribusiness. It is important that an array of different strategies were implemented as highlighted in Figure 7.7 and reiterates the strategic direction of Agribusiness C.

3.4 Implemented strategies of Agribusiness D and its results

Similar to the previous agribusiness, Agribusiness D also operates in the summer rainfall area. The difference, however, is that most of their production practices are dry-land in nature. Besides the grain component, their business model also includes several industries, adding value and processing facilities, and a strong alliances and partnerships with other business on the African continent. Figure 7.9 provides an overview of the specific strategic approach followed by Agribusiness D.

Similar to other agribusinesses, the main strategic focus of Agribusiness D is centred on a customer-centric strategy (see Figure 7.9). This is followed by the strategy of forward and backward integration, a strong balance sheet strategy, product development strategy, people strategy, market intelligence strategy, distribution strategy, cost leadership strategy, and adjacent space strategies. Although similar in terms of customer-centric strategy, it differs significantly in terms of strategies such as partnership, market intelligence, forward and backward integration, and adjacent space strategies that are amongst the main strategies. Agribusiness D places a strong focus on forward and backward integration. Many of the other responding agribusinesses were of the view that they did not have any success with this specific strategy in the past. This is despite all agribusiness being integrated to some extent. Another important observation is the

fact that the adjacent space strategy is deemed to be amongst the most important strategies in the strategic approach of the specific agribusiness.

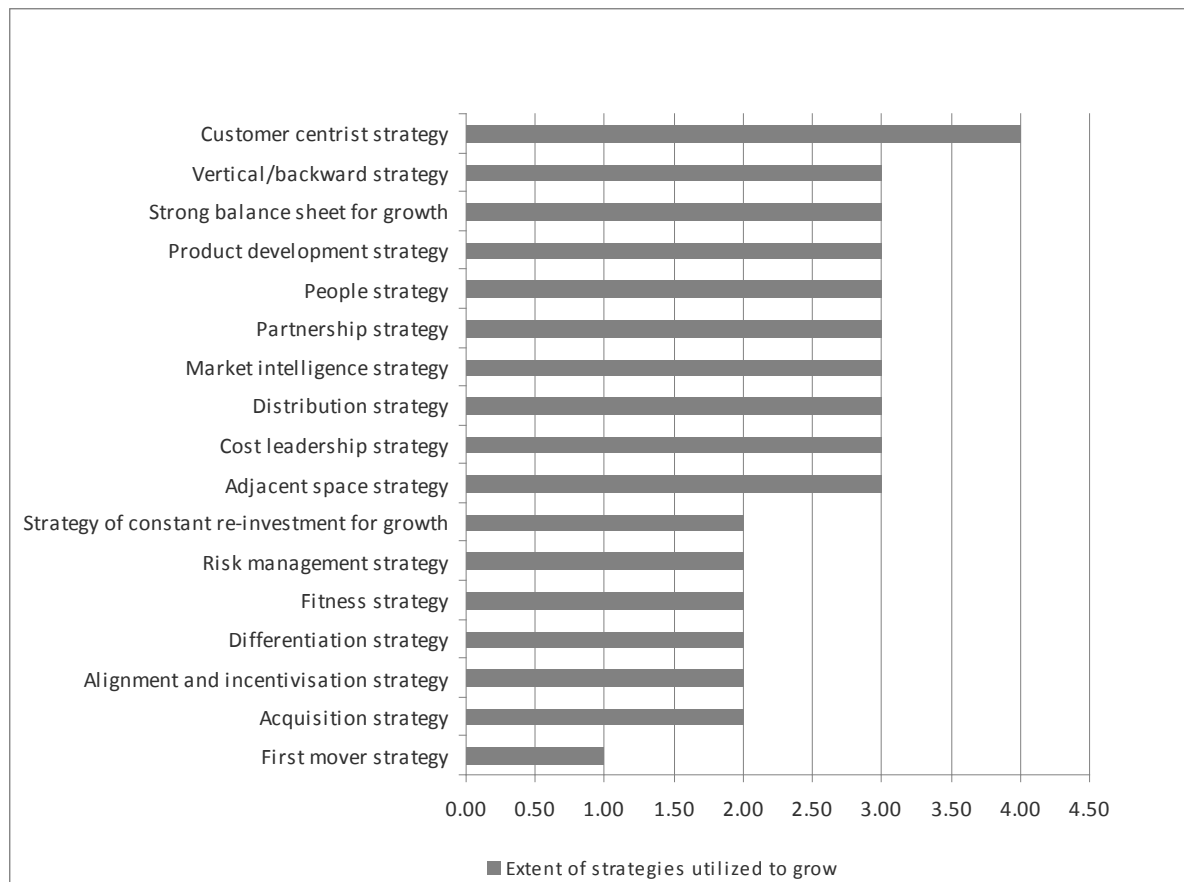


Figure 7.9: Strategies utilised to grow agribusiness D

Source: Author's own analysis

According to the results of the survey and the semi-structured interviews with this specific agribusiness, a maintaining strategy was the main strategic approach. The result was basically a co-operative approach in a company business format. A strong focus was placed on shareholders' viability with the traditional grain, trading, and financing departments, together with small, fully owned regional value adding industries. An autocratic management style was followed, with limited new management talent and with old processes and systems. Over many years, Agribusiness D managed to build a strong balance sheet. Following 2008, a more dynamic strategic approach was implemented to grow this agribusiness. One of the changes was to re-position the industries because of fluctuating profits and lack of scale. Partnerships with global businesses to mitigate risk and achieve economy of scale were implemented. Other investments were in geographical expansion into Africa with local and global partners that mitigated the cultural

differences and who had knowledge of the local markets. Investigations were done regarding mergers with local agribusiness, but restrictions in the memorandum of incorporation made these impossible. Joint ventures with divisions of other agribusinesses in other industries and operations were successful. Another profitable investment was made in production for a niche market, taking advantage of synergies with the sub-sector group. A logistics department was expanded further, utilising synergies and technological developments, with training of employees as a priority. A vision of putting value chains of different agribusiness together, such as grain, trading, mechanisation and supporting services, did exist but no progress materialised. It was a mistake to engage in a farming enterprise business model, which attracted the bulk of the risk to the agribusiness. New investigations into the stock exchange for smaller businesses and agri-banking, to be operated as joint ventures, are also being considered now. Risk analyses are always important and positive cash flow has to be achieved with any growth strategy.

Although a positive trend is visible for certain periods, the NPAT profit for 2013 was lower, when compared with what was realised in 2003 (see Figure 7.10). In general, with the exception of one or two reasonable years, no significant growth in terms of NPAT was reported for the period under review. It should, however, be noted that this agribusiness is more exposed to environmental risk factors, given that it operates mainly in a dry-land area. Compared with the financial results of the previous agribusiness, the success of this strategic approach might be questionable.

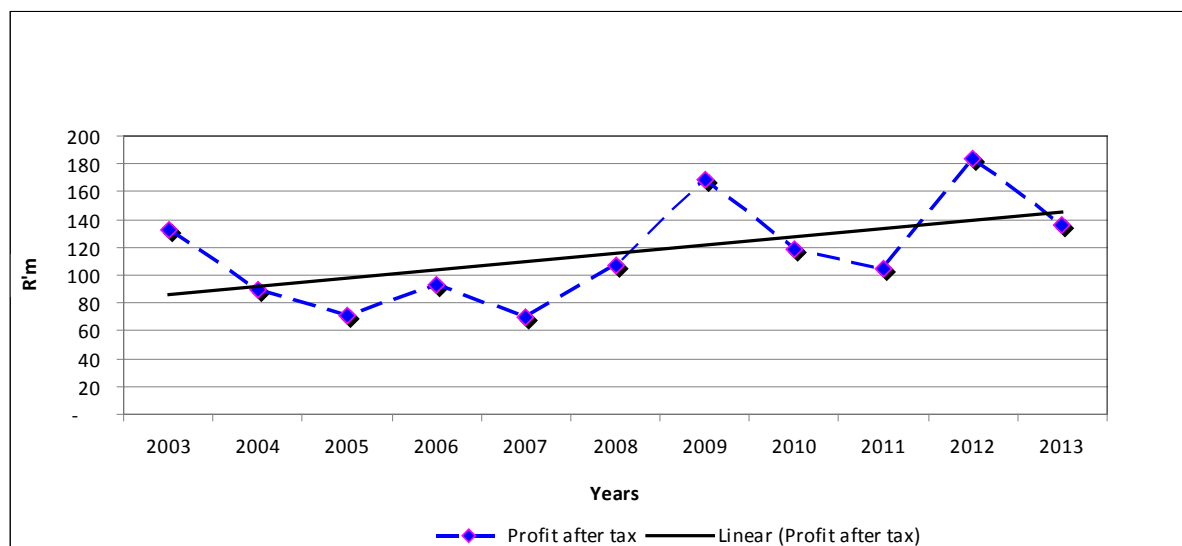


Figure 7.10: NPAT of Agribusiness D, 2003–2013

Source: Author's own analysis

The CAGR growth rate for Agribusiness D was 4.90 % over the period under review. This is substantially lower, compared with Agribusiness A, C and E, and again underlines the suspicion that this strategic approach might be questionable.

3.5 Strategies of Agribusiness E and its resulting performance

An overview of the strategic approaches followed by Agribusiness E is illustrated in Figure 7.11. Notable in this case is that most of these strategies followed are deemed to be of equal importance within the bigger strategic approach. This differs from the previous analysed agribusinesses which are clearly differentiated in terms of the importance of the various strategies in their overall strategic approaches. Much of the strategic approach of Agribusiness E is focused towards investment or re-investment as a means of ensuring profitability and growth. Similar to most of the other agribusiness, first mover and forward and backward integration strategies were deemed to be of less importance, because of the general lack of success associated with forward and backward integration in the past. Associated risk is probably the main reason why the first mover strategy is among the least-used strategies of most agribusinesses. Farmers tend to be slow adopters of new ideas and strategies, which also presents a risk in terms of being a first mover.

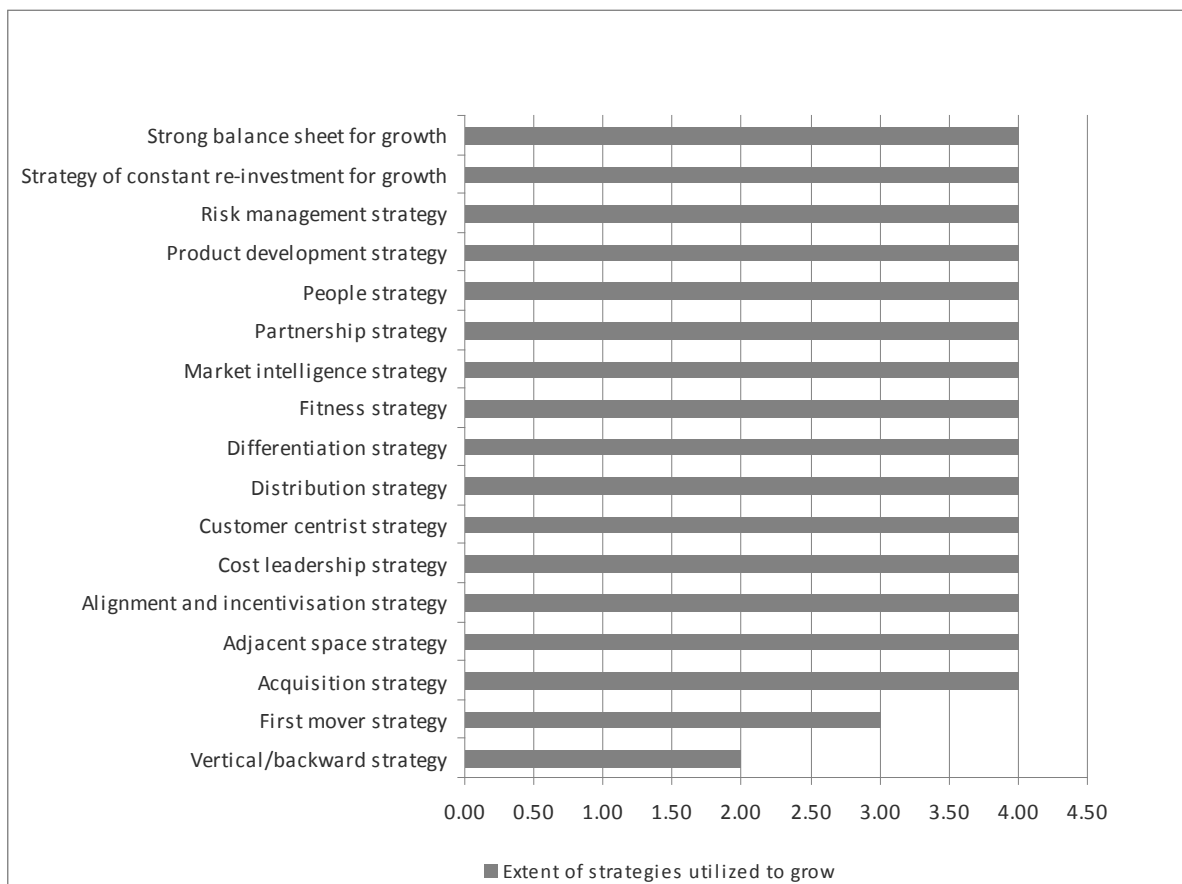


Figure 7.11: Strategies utilised to grow Agribusiness E

Source: Author's own analysis

Following serious financial problems all existing operations and new opportunities were filtered utilising a strategic filter during 2003, all non-core businesses were sold, and only core business

opportunities were invested in. In 2003, a strategic roadmap was compiled envisaging the objective of a fully commercialised agribusiness. Following 2005, the business structure was reorganised and optimised, and since 2010 the focus has been on strategic partnerships. During these years, the position of the agribusiness in the business value chain was clearly defined as being between the farm gate and the agribusiness. In essence, farm requisites are sold by the agribusiness to the grain producers and the produced grain commodities are handled, stored and traded by the agribusiness. Financing and mechanisation are two important enablers for farmers to produce grain commodities. The right people in the right positions, through all the levels of the agribusiness, are always important for achieving sustainable growth.

The NPAT for the specific agribusiness is portrayed in Figure 7.12. With the exception of a decline following the spike in 2008 and 2009, NPAT reveals a continued, positive profitable trend. This is despite the inherent risks associated with dry-land grain production. This in itself is an indication that the strategic approach can be deemed to be adequate and successful.

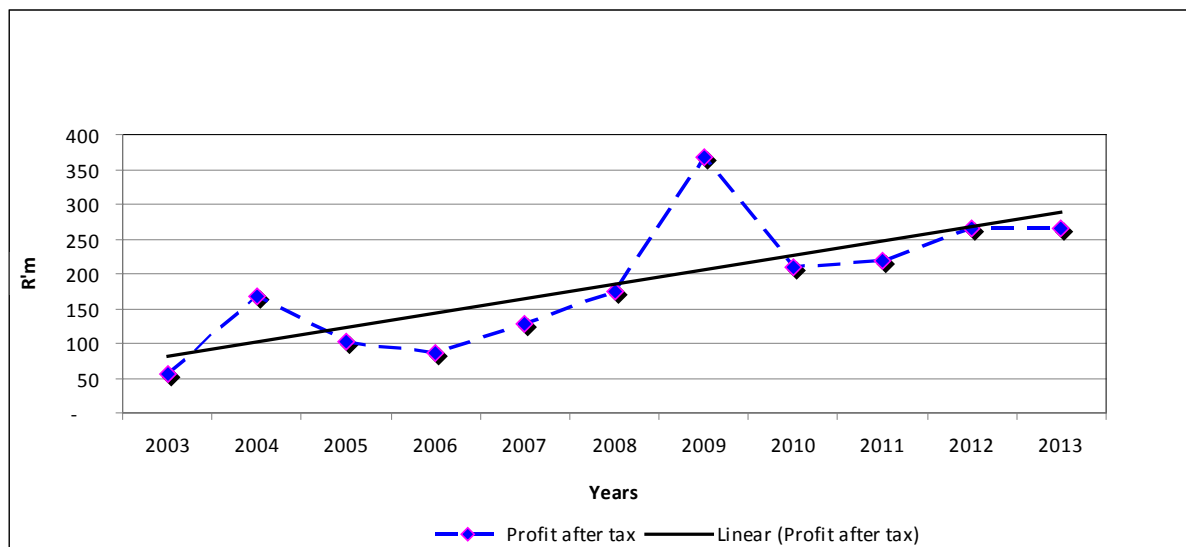


Figure 7.12: NPAT of Agribusiness E, 2003–2013

Source: Author's own analysis

In terms of growth; a CAGR of 33.07 % was reported for the period under review. This is the highest level of growth for all the agribusiness included in the analysis. Revenue increased to R13 886 million, with earnings distributable to shareholders reaching R110 million, in 2013.

4. Comparison between the various strategies of agribusinesses

Although different in terms of the importance rating of different strategies, the strategic approach of the agribusinesses did not differ significantly. The exception is probably Agribusiness D. This was also the agribusiness that experienced the worst financial performance for the period under review. Table 7.1 provides a summary which highlights the differences in terms of the prioritisation of different strategies within the different strategic approaches of the agribusinesses.

Table 7.1: Prioritisation of agribusiness strategies

Strategies	Agribusinesses				
	A	B	C	D	E
Customer-centrist strategy	O	X	O	O	O
Strong balance sheet for growth	X	X	X	X	O
Strategy of constant re-investment for growth	X	X	O	-	O
Risk management strategy	X	O	O	X	O
People strategy	X	-	-	X	O
Partnership strategy	X	-	-	X	O
Market intelligence strategy	X	X	X	-	O
Fitness strategy	X	-	-	X	O
Distribution strategy	X	X	X	-	O
Alignment and incentivisation for growth	X	X	X	-	O
Acquisition strategy		O	X	-	O
Differentiation strategy	-	X	-	X	O
Cost leadership strategy	-	-	O	X	O
Product development strategy	-	-	X	-	O
First mover strategy	-	-	-	X	-
Forward / backward integration strategy	-	-	-	X	-
Adjacent space strategy	-	-	-	-	O

Key: O = Main strategies , X = Supporting strategies

Source: Author's own analysis

As mentioned previously, a consumer-centric strategy is central in terms of the strategic approach of most agribusinesses. This can, to a large degree, be explained by the changes and current dynamics of the industry. Much has changed over the past two decades. Amongst the most important changes that have impacted on the strategic approaches of agribusinesses were the deregulation of markets and trade liberalisation. The latter had a significant impact on the farming community (Makhura & Mokoena, 2003; Van Schalkwyk *et al.*, 2003). In addition, government-funded research institutions are also faced with several challenges, ranging from financial to capacity constraints. It was these institutions that were at the forefront of research and development, equipping farmers with the necessary knowledge and skills to remain competitive within the broader global environment. However, with time, the challenges faced by government agricultural research institutions, among others, became more and more apparent. In the early-to-mid 2000s, private sector business (agribusinesses) started to fill this void in an attempt to ensure that the farmers in their regions remained in production. Farmers have a direct impact on

the financial viability of all agribusiness in South Africa. In other words, the failure of government-funded agricultural research and development institutions provided the impetus for the shift in terms of strategic focus of most agribusinesses. Today, customer services, such as distribution of information, mentorship, and extension, form the backbone for agribusiness in terms of retaining their clients (farmers).

Investment-related strategies, such as strong balance sheet and re-investment strategies, are also amongst the main strategic approaches followed to ensure profitability and growth. Also emerging as important, are people strategies with special reference to employees, the motivation of employees, and benefit schemes. Forward and backward integration is the strategy used the least. This is an indication that what has worked in the past will not necessarily work in the future. This is especially true, considering that at some point in time, all agribusinesses had an integration strategy. The latter is evident from the current business structures of most, if not all, of these agribusinesses, as most still retain some level of business integration.

5. Summary and conclusion

This chapter studied the results from the survey and interviews that were conducted on the strategies that agribusinesses follow and what its effect is on the achieved profits and economic growth of these businesses. All the strategies investigated in this study were, to some degree, employed by the agribusiness in their broader strategic approaches. The purpose of this thesis is to identify the strategies implemented by agribusinesses and determine the level of success achieved in terms of sustainable profitability and growth. The main objective was to determine how efficient the various agribusinesses executed their strategies to achieve the highest obtainable profits and growth (NPAT & CAGR). Although the studied agribusinesses operate in the grain segment of the agricultural sector they are not totally similar and easily comparable.

The establishment, management style and history of agribusinesses differ. Some agribusinesses grew by acquisitions while other was established through the mergers of a number of agribusinesses simultaneously. Different business models were followed with regard to the area of operation and produced commodities. The initial main focus of some of the agribusinesses was fibre compared to a main focus on grain production and marketing of commodities by others. Comparison of agribusinesses is complicated as they operate in different areas, with some in winter rainfall areas and some in summer rainfall areas, while a number focused on grain production under irrigation, others dry, and different commodities are dominant in the various businesses. Value adding vary from a small strategic component to a big extent in the strategic approach across the participating agribusinesses. Furthermore the method entering markets in African countries and investments in some countries differs between the agribusinesses. All these

factors, as well as the limited number of participating agribusinesses, made the identification of superior strategies as agribusinesses a difficult endeavour, but not impossible.

The most important strategies utilised by agribusinesses are: The customer centric strategy, people strategy, strong balance sheet for growth strategy, strategy of constant re-investment for growth, risk management strategy, distribution strategy, fitness strategy. Strategies that are focused on the least are the forward and backward integration strategy and the first mover strategy. In the grain segment, with a high risk environment, the first mover strategy does not play an important role. Strategies that were unsuccessful in a number of cases were the forward and backward integration strategy. Corporate farming by agribusinesses was not viable and reflected all risk directly to the agribusiness. This is basically due to the location of the primary positioning of the agribusinesses between the farm gate and the agribusiness in supplying farm requisites and handling, storage and marketing of the produced commodities. Following a forward and backward strategy creates competition either with suppliers or customers. Investments in value adding industries were often not profitable because of economics of scale and severe competition between the large role players in the value chain. Partnership strategies between local and global agribusinesses in certain value chains and services are promising. Future developments will determine this route because a number of partnerships are achieving desired results.

General comments during the semi-structured interviews with the executives of the participating agribusinesses were that strategy and the implementation of strategy is complex. The bigger picture in the country and agricultural sector has to be kept in mind and a balance has to be found between opportunities with risk and the core business with emphasis on changing culture the of the agribusiness' people.

-oOo-

CHAPTER 8

SUMMARY AND CONCLUSION

1. Introduction

This thesis investigated the determinants of profits and growth of agricultural businesses, or agribusinesses, in the grain industry within South African agriculture. It commenced with an overview of the historic development of the agricultural sector in South Africa, which provided the background for the research that followed. Differences in internal variables of agribusinesses, explaining the net profits after tax during the co-operative era and the company era, were analysed and described using the financial statements and reports of agribusinesses since 1980. Internal variables explaining profits were identified for two different periods. Important external variables that might play a significant role in the profitability and growth of agribusinesses in the grain segment were then studied to determine profitability drivers of agribusinesses in the grain segment. The important profitability drivers were identified and their probability determined. Growth drivers were ranked in importance, as were the strategies implemented by agribusinesses to achieve sustainable profitability and growth.

The data from financial statements and reports of agribusinesses were studied and statistically analysed, followed by an Agricultural Profitability and Growth Survey and structured interviews with managing directors (MDs) and chief executive officers (CEOs). Valuable insights were obtained on the success and failure of the various strategies implemented by management of the agribusinesses studied. It was found that the influence exerted by management determines the degree to which agribusinesses are successful in their endeavour to achieve sustainable long-term profitability and growth.

The study revealed that the most important determinants of profitability that in turn ensure profitability of an agribusiness are the renewal of confidence, economic growth, and a sound evaluation of investment opportunities. All the growth drivers included in this survey were rated as being important for ensuring sustainable growth. The most important growth drivers identified are a direct focus on growth, professional leadership, and knowledge of customers. Executives of agribusinesses utilise all the defined strategies in a strategic approach to achieve sustainable profitability and growth. The most important strategy in the post-co-operative era is the customer-centric strategy. Following after this strategy is the people strategy, strong balance sheet for growth strategy, strategy of constant re-investment for growth, risk management strategy, distribution strategy, and fitness strategy. Any strategic approach is complex, especially in the grain segment of the agricultural sector. Superior execution of the chosen strategy is far more important, compared with the compiled strategy itself.

This final chapter is structured as follows: the following sections will discuss the most important aspects of the literature review, and include some background and a historical overview of the development of agriculture and agricultural businesses in South Africa. The methodology followed to analyse the relevant data will be described. Then, the results of the statistical analysis of objective data, financial statements will be reported, with the focus on profitability and growth. This is followed by a report on the findings concerning the influence of external factors, such as fuel prices, exchange rates and the weather, on these agribusiness' outputs. Following that, a report will be given of the results obtained from the Agricultural Profitability and Growth Survey and semi-structured interviews, which were conducted among the executives of agribusinesses. This chapter will conclude with final conclusions, suggestions and recommendations.

2. Theories and models on economic profitability, growth and competitiveness

The most important models and concepts for this study are highlighted from the literature overview. Sustainability means maintaining, while business sustainability entails a business strategy for achieving sustainable corporate profitability and growth in the long term. In this process, financial, social and environmental risks have to be managed, which comprise the 'profits', 'people' and 'planet' risks (Elkington, 1994).

Agribusiness refers to the business of agricultural production and includes various interdependent sectors, such as input supply, retail, farm machinery, financing, insurance, breeding, crop or livestock production, the collecting, handling and storage of commodities, processing (value adding), distribution, marketing and sales. In this study, the term agribusiness or company or firm have been used interchangeably.

Figge and Hahn (2016) explained that sustainable profitability is the use of economic, natural and social capital in companies in absolute monetary terms. It is important to note that business sustainability is not achievable without sustainable profitability. These aspects were investigated for South African agribusinesses in the research of the current thesis. A number of important identified drivers influence the sustainable profitability of the grain segment of the agricultural sector in South Africa, and these can be separated into internal and external drivers for evaluation in this research. The identified internal drivers include investments, human capital, finance, management, strategy, utilised business model, and market share. External drivers that were identified from the annual reports of agribusinesses were the exchange rate, oil price, inflation, interest rate, and climatic conditions like rainfall.

According to Platt *et al.* (1995), the sustainable growth rate defines the rate at which a company's sales and assets can grow where the company sells no equity and maintains its capital structure. A firms' growth capability needs special attention in order to achieve long-term growth and this

capability includes a firm's infrastructure, growth strategy, and the business plan. Sustainable high growth ensures the difference between an average business and a great one, where 'great' implies sustainable, above-average high growth and profits over a long duration of time. There is consensus that growth is not a random or chance event, but is associated with specific firm attributes and behaviours (Perren, 1999a; Perren, 1999b). This is the most important reason why a business should grow, to remain sustainable and achieve superior brand recognition, to improve the cost position, to attract stronger alliance partners, gain access to capital, attract superior people, raise profits, obtain a superior strategic position, and most importantly, to generate superior value. These growth drivers, described in Chapter 2, include a growth motivation, a focus on growth, and leadership, and creates a basis for the current thesis.

Profitable growth is an important concept and can best be explained by stating that sustainable profitability and growth function together to ensure business success. Important to note is that sustainable growth is dependent on sustainable profit, although sustainable profit is not a guarantee for sustainable growth, and this should always be kept in mind.

Two concepts driving profitable growth are competitive strategy and competitive advantage. Competitive strategy is the focus to determine a profitable and sustainable position against the forces that determine industry competition, while competitive advantage focuses on the creation of value for buyers that exceeds the firm's cost of creating it. Porter (1985) describes three generic strategies for achieving above-average performance in an industry, namely cost leadership, differentiation, and focus, and he positions competitive advantage at the heart of any business strategy. Competitive advantage develops from the way in which a firm organises and performs discrete activities when competing in a particular industry. Gaining competitive advantage requires that a firm's value chain be managed as a value system, with linkages between a firm and its suppliers, distributors and buyer value chains. Porter's (1998) well-known Diamond Model illustrate the competitiveness of a country as a function of factor conditions, demand conditions, related and supporting industries, and firm strategy, structure, and rivalry. Apart from the major determinants, Porter considers chance, or opportunity, and government as also influencing competitive advantage and is illustrated as the complete system.

Sustainable profitability and growth are determined by strategy and the effective implementation of the formulated strategy. Strategy can be defined as deliberately choosing a different set of activities to deliver a unique mix of value with the logical formulation of a strategic plan, including the careful execution of the strategy (Besanko *et al.*, 2012).

3. Development of the Agricultural business in South Africa

The narrative on the development of agribusinesses focused on the most important milestones in the development of the agribusinesses in South Africa. This provides context in terms of the analysis and findings of this study. The literature study first revealed that the development of commercial agriculture in South Africa initially developed slowly, with only a few “Free Burgers” in 1657 who were allowed to farm, to some extent, independently. This era of the slow development of commercial agriculture proceeded until the end of the Anglo-Boer War in 1902. The establishment of agricultural co-operatives and the Land Bank, together with controlled marketing of agricultural commodities, reconstituted commercial agriculture in the country until the 1990s. The discovery of gold and diamonds during this period had an important impact on the total economic growth in South Africa. The new political dispensation and subsequent transformation after 1994 led to South Africa being welcomed back into international markets. This had a noticeable influence on agribusinesses. Numerous agribusinesses were transformed from co-operatives into companies, where sustainable profitability and growth, with returns on investment to shareholders, became the most important objective.

Changes in the country and agricultural sector emphasise the importance of analysing the sustainable profitability and growth of agribusinesses in the grain segment of the agricultural sector, of identifying the important determinants of profitability and growth, of identifying the implemented strategies, and of evaluating the financial performance of the implemented strategies. The agribusinesses that did not succeed in achieving sustainable profitability and growth in the past were consolidated. In future, this will particularly be the case with agribusinesses in the grain segment of the agricultural sector that do not achieve sustainable profitability and growth.

4. Methodological approach

The relevant data for this study were acquired from financial statements and reports of the included agribusinesses and from the questionnaire on the Agricultural Profitability and Growth Survey that was conducted for this study. Semi-structured interviews conducted with the executives of participating agribusinesses provided additional information and contributed towards gaining better insight into the successful outcome of specific implemented strategies.

4.1 Determining the correct methodology

An advanced statistical analysis of the financial statements of the agribusinesses was conducted and the Survey Monkey computer software program was utilised. The descriptive statistics were then first analysed and the results of the survey supplemented with the interviews. The appropriate methodology was then determined.

Financial data available from the financial statements and annual reports of agribusinesses covering the time period from 1980 to 2015 was utilised as input data. Various data sets were compiled from this information and the financial results were transformed from nominal to real values, and the data then statistically analysed.

The financial analysis was only done up until 2013 because of data limitations and to ensure confidentiality. Different data sets, used in the initial statistical analyses, were created for: agribusinesses (co-operatives and companies) for the time period 1980 to 2013; co-operatives from 1980 to 1996; co-operatives from 1988 to 1995; companies from 2003 to 2013 and agribusinesses (some still co-operatives in the period) from 2003 to 2013. External independent variables were also used in addition to determine the impacts thereof on profitability in the endeavour to determine the important profitability and growth drivers.

The statistical analysis was performed using the real values, using the GDP deflator per annum, with 2010 as the reference year. The “Panel Data” procedure analysis was utilised because it fits the data sets perfectly and with a class of linear econometric models that commonly arise when time series and cross-sectional data are combined.

Multiple regression analyses comprised the statistical approach of this study. Firstly, the statistical analyses were executed only with the internal variables as independent variables, followed by adding the external variables as independent variables.

To identify independent variables with NPAT as a dependent variable of profitability, the process started with all the lines in the financial statements as internal variables, together with external variables included. To account for multicollinearity (i.e. high correlations among variables), cluster analyses were performed by using the STATISTICA computer program (Stat Soft, Inc., 2016). A similarity measure was chosen, where 1 implies the absolute value of the correlation between pairs of variables. The Ward Method was used to amalgamate the variables based upon their similarities. A tree diagram (dendrogram) was then designed in order to identify groups of variables with mutually high correlations.

Internal variables that had a significant correlation with NPAT for this data set were: current assets, retained earnings, EBITDA and property, plant and equipment. No significant correlation could be found in the statistical analyses between NPAT and the external variables.

4.2 Variables

The dependent variable in the statistical analyses consistently used was NPAT.

The detail in the financial statements and the availability of the information for the period for the included agribusinesses determined the variables that could be included. These are referred to as the internal variables.

A dummy variable was included in the data set for the period 1980 to 2013, being 'co-operative or company'. The purpose was to determine if there is a difference between the co-operative era and company era. The other included variables were: cash, creditors, fixed assets, inventory, loans and investments, net current assets, operational income, retained income, reserves, share capital, short-term loans and total member interest.

The variables used in the analysis for the period 2003 to 2013 for the agribusinesses studied were: basic earnings per share, cash and cash equivalents and cash collateral investments, gross profit, income tax, inventory, net asset value, net cash generated from financing activities, net cash generated from investing activities, net cash generated from operating activities, net cash increase/decrease in cash and cash equivalents, non-current assets to net worth, non-current assets, operational expenses, operational profit, property, plant and equipment, quantity shares issued, retained earnings, share price, total equity, total equity and liabilities, and trade and other payables.

For the period from 1980 to 2013, two variables were identified, namely operational income and net current assets. For the period from 2003 to 2013, four variables were identified, namely current assets, retained earnings, EBITDA and property, and plant and equipment.

The external independent variables that have a possible impact on profitability and growth considered in this analysis for the period 2003 to 2013 were: rainfall, prime rate, consumer inflation rate (CPI), Pound exchange rate, Euro exchange rate, Dollar exchange rate, and oil price in Rand.

4.3 Descriptive statistics of the profitability and growth drivers, strategies and performance of agribusinesses: 2003–2013

Descriptive statistics were first used to provide summaries about the profitability and growth drivers and strategies implemented, as well as trends regarding the calculated profitability and growth indicators.

A model was created using all the income statements, cash flow statement and balance sheet data per annum for each company, and then totals were calculated and summarised from 2003 to 2013 per annum. Financial indicators were calculated for each company per annum and for the total of all the included agribusinesses. This model was also utilised to determine the same results for the homogeneous groups of agribusiness.

The results of the profitability and growth analyses for all the agribusinesses provide valuable insights into the grain segment of the agricultural sector of South Africa. The results for the homogeneous groups of agribusinesses enable the comparison of the results of the different groups, thus providing more strategic insights into the grain segment of the agricultural sector.

4.4 Methodology of the conducted survey

The primary data was captured by means of a questionnaire. The questionnaire was completed by the MDs and CEOs, and this was followed by semi-structured interviews with members of each of the participating agribusiness. The questionnaire consisted of several different sections, with the first section focusing on general information in terms of profitability and growth drivers. Secondly, the focus was on the identification and weighing of key profitability drivers. Thirdly, the focus was on the relative importance of the growth drivers in agribusinesses, including general growth information. The fourth part built on the previous three parts of the questionnaire, but focused specifically on the strategies employed by the different agribusinesses in their endeavours to improve profitability and growth.

5. Results from the statistical analyses and survey

The most important results identified in this study are described in this section. The most important result is that there is no significant difference in the internal variables explaining NPAT that can be linked to the specific business types, whether co-operatives or companies.

During the period 1980 to 2013, it was found that three of the agribusinesses studied differed significantly from the comparing agribusiness, and that two agribusinesses did not differ significantly with regard to NPAT. The main reason is differences in business models, involvement in different segments, and operating in different areas. Despite all the differences between the agribusinesses studied, no agribusiness differed significantly from the comparing agribusiness regarding NPAT during the period 2003 to 2013.

The statistically proven internal variables that explain NPAT significantly between the years 1980 and 2013 are operational profit before interest and net current assets. The internal variables that explain the NPAT significantly during 2003 to 2013 are earnings (EBITDA) and retained earnings. EBITDA is more significant and justified explaining NPAT, and also the most dominant internal variable. Although the effects of current assets and property, and plant and equipment were not found to be statistically significant in generating NPAT, they remain important to ensure sustainable profitability. This might be a limitation of this study, which can be investigated during further research.

It is recognised that external variables, such as rainfall and exchange rates, are important for the profitability and growth of agribusinesses, but could not be statistically proven as determinants of NPAT. The majority of the external variables are the same for all agribusinesses over the period. Significantly, a previous study by Elsayed and Paton (2005) came to exactly the same conclusion. Noteworthy is that all agricultural businesses experience the same external factors, but their achievement in terms of profits, turnover and growth varies. This emphasises the importance of MDs and CEOs in managing their businesses, and of the strategies they implement. A specific focus of the survey conducted was therefore placed on the strategies that agribusinesses follow.

Unanimous responses given by the participating executives were to the effect transforming good agribusinesses into great agribusinesses is a function of conscious choice. The correlation between their responses as to ensuring profitability and growth was strong, especially concerning the following steps: the remuneration of executives has to be linked to profit and growth in a specific form. The best results will be achieved by compiling and implementing a superior strategy. The best chance for being successful is to focus equally on what to do, what not to do, and on what to stop doing. They also noted that mergers and acquisitions form an integral part of their strategies. The majority of executives were of the opinion that top executives must be appointed internally, and that it is important to focus on strategy when it comes to the motivation of employees and the alignment of different business units. Technology is an important enabler of strategy. They were indifferent on the concept that business transformation, in the sense of switching from a good business to a great business by the implementation of a revolutionary process, raises business profitability and growth.

6. Profitability drivers

The most important factors driving profitability were identified as: the renewal of confidence; economic growth; the sound evaluation of investment opportunities; availability of skills; a declining market environment; rainfall (amount and spread); the finance of growth; ensuring high ethical standards; a strategic plan; volume of grain production; servicing large commercial farmers; and an increasing market share.

Political and economic profitability drivers have a constant influence on each other, positively or negatively. When confidence in the country's political system is high and the perception is that government applies good management practices, with high ethical standards, the economy will grow internally and attract global investments that will enhance economic growth. The reversed situation is also true. Furthermore, this will lead to a declining market environment and the availability of skilled personnel will become an even bigger problem. A downward spiral will build momentum, which is detrimental to all businesses. Agribusinesses will not be able to achieve sustainable profitability and growth.

This inability to achieve future sustainable profitability and growth will be amplified during situations of consecutive years of drought and severe climatic changes, resulting in low production volumes of grain. A counter action in such a situation is a conscious choice to out-perform circumstances. With a superior strategy that is executed exceptionally, sound investment opportunities and an affordable financing policy, the management of agribusinesses may still achieve exceptional results, however. With the relevant business model focusing especially on large-scale commercial farmers, while also including all other farmers, agribusinesses may still be able to retain market share and even successfully gain larger market share.

The three factors influencing profitability which managers of agribusinesses feel are most certain to occur are: rising energy costs, economic growth, and return on investments in Africa. Agribusinesses will have to invest in alternative energy sources to counter the rising costs of energy. This is part of the expected economic growth. Opportunities to invest in African countries with acceptable returns on the investments have to be investigated, but should be based on sound investment principles. Linked with investments in Africa is increasing international competitiveness, because many global companies see South Africa as the gateway to the rest of the sub-Saharan African countries.

The three profitability factors that managers of agribusinesses are least certain about are: an inadequacy of basic infrastructure, inflation, and sound evaluation of investment opportunities. An important enabler of political confidence and economic activity is the adequacy of basic infrastructure. It is important that inflation be well managed in the country to ensure economic growth, but this inevitably linked to political and economic occurrences, locally and abroad, and may affect a declining market environment. Note has to be taken of the factors which entail the most uncertainty of occurring in order to protect against risk, and ensure sustainable profitability and growth of agribusinesses in the grain segment. This is often a more difficult task for agribusinesses, compared with the remainder of sectors in the economy.

7. Determinants of agribusiness growth

This section summarise the findings of this thesis regarding the determinants of agribusiness growth, stating with the reasons why agribusinesses do grow and the focussing on the specific drivers of growth.

The most important reasons to grow an agribusiness, according to the respondent executives, are to generate superior value, to obtain a superior strategic position, and to raise profits. These findings of the current study also corresponds with the responses of executives in previous studies by other researchers. In this study, an important result is that it is also necessary to improve the cost position of an agribusiness, while the raising of profits to grow the business was rated as

evenly important. This result differs from the results of previous research because local executives rated the accumulation of capital, to achieve a superior brand position and attract stronger alliance partners, as being more important for growth of an agribusiness than the reasons to grow a business abroad.

The result from the responses by executives of the agribusinesses studied revealed that most of the growth drivers identified in the previous chapters are to some extent important to ensure sustainable growth. According to the ranking, the most important growth drivers are a direct focus on growth, professional leadership, and knowledge of customers. The three growth drivers with the lowest relative importance, according to the weighted response average, are regulations, acquisitions, and industry growth.

Growth drivers are, however, a package of elements in a growth strategy, which should form part of the total strategy of an agribusiness (Robert, 1998). Each agribusiness can decide to put emphasis on some of the elements in their strategy and create a combination package, with different weights being placed on certain growth drivers or for certain periods. Some important growth drivers, which are not in the top three, for example are excellent and careful execution of strategy, repeatable growth processes, a simple business model, a talent incubator and an effective performance management system. Some of these elements, for example acquisitions, can even be discarded while the total package can still be efficient. In the following sub-section, the growth results flowing from the various strategies of agribusinesses will be described.

8. Strategies implemented by agribusinesses in South Africa

The results of the current research revealed that the main focus is on customer-related strategies, with customer-centricity strategy being ranked the most frequently used strategy of agribusinesses. This specific strategy refers to increasing value to selected customers. Increasing value to customers refers to agricultural extension knowledge, which represents the basis for viable farming operations.

Other important strategies that form an integral part of the strategic focus of the agribusiness include a people strategy, a strong balance sheet for growth strategy, a strategy of constant re-investment for growth, an alignment and incentivising for growth strategy, a risk management strategy, a distribution strategy and a fitness strategy. People are the key differentiator providing a competitive advantage, and structuring a business and incentivising key staff to achieve the growth objectives of the business are important. A strong balance sheet for growth ensures that the business has adequate resources to allow it to pursue growth opportunities together with constant re-investment in the business and future growth opportunities to ensure the sustainability of growth. Emphasis on risk management to ensure that excessive risk is avoided when pursuing

growth will ensure that growth is achieved sustainably. When the business is disciplined financially and operationally, it has the flexibility and “fitness” to withstand any adverse conditions, as well as to pursue any opportunities that may arise towards achieving growth.

The first mover strategy provides an advantage to establish control over the market, but is utilised to a lesser extent within the agricultural sector. The reason for this can be prescribed to the risks within which the agricultural sector functions.

Forward and backward integration as a strategy was utilised to a lesser extent. However, it should be noted that many of the agribusiness are to some extent either forwardly or backward integrated, or both, in terms of their business models. Forward or backward integration may be achieved by acquiring suppliers or customers of the business to capture a larger slice of the value chain, but should be utilised with caution due to risk and the avoidance of competition with regard to customers. Often, forward or backward integration strategies bring the agribusinesses into direct competition with global suppliers of requisites and their value adding clients.

The success or failure of the strategies followed by management is reflected in the financial statements of those agribusinesses during that specific time. The effect of the implemented strategies on profitability was illustrated by achieved NPAT for the period 2003 to 2013. The compounded average growth rate (CAGR) was calculated over the period 2003 to 2013 to illustrate the growth.

In general, the combined NPAT for the participating agribusiness has an ascending trend over time. However, from 2004 to 2005, 2009 to 2010 and 2012 to 2013, a decline was reported in terms of NPAT. Caution should, however, be taken when interpreting the negative movement of NPAT for the specific periods. The declines in 2004/2005 and 2009/2010 were mainly caused by adverse climatic circumstances, while the 2012/2013 decline could be ascribed to large losses incurred by one of the larger agribusiness in South Africa. Moreover, the implementation of loyalty programmes and the way in which these were reported in the financial statements also had an impact on the NPAT profits. The CAGR growth rate of all the included agribusinesses over the period was 6.84 % per annum. No significant conclusion can thus be drawn in terms of the success of the strategic approaches of agribusinesses in their totality. Therefore, to gain a better understanding of the success of different strategic approaches, selected agribusinesses were analysed after it was found that the results of the selected homogeneous groups could not summarise rational findings. It should, however, be noted that this was only the case where the groups were studies and not the case for individual businesses.

The strategies implemented by a selected number of individual agribusinesses were investigated. The focus was on comparing the results from the profitability and growth analysis in relation to

the strategic approaches of the various agribusinesses.

As mentioned previously, a consumer-centric strategy is a central strategic approach of most agribusinesses. This can, to a large degree, be explained by the changes and current dynamics of the industry. Amongst the most important changes that have impacted on the strategic approaches of agribusinesses were the deregulation of markets and trade liberalisation. The latter had a significant impact on the farming community (Makhura & Mokoena, 2003; Van Schalkwyk *et al.*, 2003). In addition, government-funded research institutions are also faced with several challenges, ranging from financial to capacity constraints. It was these institutions that were at the forefront of research and development, equipping farmers with the necessary knowledge and skills to remain competitive within the broader global environment (ARC, 2014). The challenges faced by government agricultural research institutions became more apparent over time. In the early-to-mid 2000s, private sector agribusinesses started to fill this gap in an attempt to ensure that farmers in their regions remained in production. The latter have a direct impact on the financial viability of all agribusiness in South Africa. In other words, the failure of government-funded agricultural research and development institutions provided the impetus for the shift in terms of strategic focus of most agribusinesses. Customer services, such as the distribution of information, mentorship and extension, form the current (2016) foundation for agribusiness in terms of retaining their farmer clients (Pienaar, 2016).

Investment-related strategies, such as a strong balance sheet and re-investment strategies, are also amongst the main strategic approaches followed to ensure profitability and growth. A people strategy, which specifically has reference to employees, the motivation of employees and benefit schemes also emerged as important strategies. Forward and backward integration is the least used strategy, which is an indication that past success factors will not necessarily work in the future. This is especially true, considering that at some point in time all agribusinesses had an integration strategy. The latter is evident from the current (2016) business structures of most, if not all, of these agribusinesses, as most still have some level of business integration.

The success of the implementation of these strategies came to the fore in the NPAT profits and CAGR growth rates achieved over the period 2003 to 2013. All of the selected individual agribusinesses reported an increasing trend in NPAT and CAGR. The gradient of the positive NPAT trend was the lowest for Agribusiness D, which also reflected a CAGR growth of 4.9 %. The four agribusinesses compared with Agribusiness A achieved steeper increases in NPAT and higher CAGRs, depending on the level of earnings distributable to shareholders in 2003. The highest CAGR achieved was 33.07 %, for Agribusiness E, compared to a CAGR of 4.9 % for Agribusiness D.

The following comparison, in contrast, describes the outcome of the implementation of different strategies or combinations of strategies that were implemented by the agribusinesses studied: business format varies from co-operatives to public companies and to private companies; employee incentives vary, from no long-term incentives for any employee to long-term share options for senior employees, to share buy options for all employees; diversification varies from only core businesses to limited diversification, to diversified to a great extent; partnerships vary from no formal partnerships to partnerships with local companies, to partnerships with international companies; outside investors vary from no outside investors, to limited outside investors, to majority shareholder outside investors; operational areas vary from totally dependent on rural areas to diversified in rural areas and in cities and investments in Africa, and which vary from no investment in Africa to small investments in Africa, to big investments in Africa.

9. Recommendations

This section makes some recommendations that flows from the current study, starting with recommendations to agribusiness executives, some recommendations for further research, available data in future, the possibility of a profitability index and loyalty programmes.

9.1 Recommendations to agribusiness executives

Based on the findings of this study, some recommendations can be proposed to ensure sustainable profitability and growth of agribusinesses. Management has a choice to transform an agribusiness from good to great and must focus on growth. A clear and directed strategy has to be compiled and followed. A suitable combination of the different strategies to obtain certain results, for specific periods, is essential for sustainable profitability and growth. The strategy and the excellent execution of the strategy have to be communicated to all employees, irrespective of the business form and differences between similar agribusinesses.

The importance of employing motivated people with the right skills in the right positions is essential for ensuring the desired earnings before interest, tax, depreciation and amortisation (EBITDA) that determine NPAT. Strategic objectives that focus on profitability and growth have to be communicated and progress measured.

Having value options for customers and knowing their requirements are essential for developing a simple business model to create a competitive advantage. The profitability and growth drivers have to be managed and utilised to adjust the strategic plan and objectives timeously.

Profitability and growth are the two sides of the same coin. Growth opportunities cannot be implemented without retaining earnings to finance growth. In the high risk environment that

agribusinesses in the grain segment operate, the evaluation of risk, a strong balance sheet, and the capability to survive adverse circumstances are essential.

9.2 Recommendations for further research

This thesis studied the determinants of profits and growth of agribusinesses, and specifically the strategies that could promote them, but there are still several areas of research that should be examined in future studies. Some important further research topics are the sustainable profitability and growth in other agricultural segments, the positioning of agribusinesses in the grain segment, the effect of carry-over debtors on the cash flow of agribusinesses in the grain segment, the trend and levels of return on assets and return on equity in the agricultural sector, value creating in the post co-operative era for shareholders in the agricultural sector, the effect of limited trading of shares on share value for shareholders in agribusiness, and whether multinationals represent an opportunity or a threat to local agribusiness. More specific aspects flowing from the current research are the following:

As more and better data becomes available in future, it may be possible to develop an explanatory profitability index for agribusinesses in the grain segment. Such an index would be useful in the estimation of future profitability projections, and to make comparisons of the levels of sustainable profitability of various agribusinesses in South Africa.

The loyalty programmes recently implemented by agribusinesses are similar to the co-operative bonus on turnover practices. These programmes have certain advantages, depending on the specific programme, but part of these programmes negatively impact on NPAT and retained earnings. The programmes with repayment obligations after a number of years will put pressure on the cash flow of agribusinesses in future, and this is, in essence, the same as for member funds during the co-operative era. The time value of money will soften the impact on the participating agribusinesses' cash flow at the end, but may not be as attractive as the impression shareholders may currently have.

9.3 Research limitations

The available data series in this study rendered statistical analysis a challenge to carry out, and rendered the research of some aspects, which should have been researched, impossible. Better results will be obtainable with another 20 years of reported financial results from agribusinesses in the grain segment. After an adequate timespan, sufficient time-series data may be available to repeat and assess this study, and also to investigate other relevant aspects and challenges of agribusinesses.

-o0o-

BIBLIOGRAPHY

- Abbott, P.C., Hurt, C., & Tyner, W.E. 2008. What's driving food prices? Issue Report. Oak Brook, IL: Farm Foundation. Available at <http://www.farmfoundation.org/> Date of access: 5 Oct. 2016.
- ABC (Agricultural Business Chamber). 2014. Evolution of Agbiz. Pretoria: Agbiz. <http://www.agbiz.co.za/about-us/history> Date of access: 4 Oct. 2016.
- Achor, S. 2012. Positive intelligence. Harvard Business Review, January – February, 100 – 102.
- AFGRI Operations Limited. 2014. AgriGroupe completes acquisition of AFGRI: AFGRI to delist and go private. <http://www.afgri/joint-press-statement-from-afgri-and-agrigroupe/> Date of access: 14 July 2015. Pretoria.
- AFGRI. 1989 – 1995. Limited: annual report. OTK ,Cooperative, (Various reports), Bethal.
- AFGRI. 1996 – 2002. OTK Limited: annual report, (Various reports), Bethal.
- AFGRI. 2003 – 2009. AFGRI Limited: annual report, (Various reports), Pretoria.
- AFGRI. 2010 – 2013. AFGRI: integrated report, (Various reports), Pretoria.
- AFGRI. 2014. AgriGroupe completes acquisition of AFGRI. AFGRI to delist and go private. Centurion: AFGRI, <https://www.afgri.co.za/joint-press-statement-from-afgri-and-agrigroupe/> Date of access: 12 Oct. 2016.
- African Farming and Food Processing. 2014. South African government to create new job opportunities in agricultural sector. *African Farming and Food Processing*, 22 Jul. 2014. <http://www.africanfarming.net/crops/agriculture/south-african-minister-zokwana-set-to-employ-one-million-people> Date of access: 5 Oct. 2016.
- Agbiz, 2016. Agbiz/IDC Agribusiness Confidence Index. Lynnwood Ridge: Agbiz. www.agbiz.co.za/economic-intelligence-1/agribusiness-confidence Date of access: 5 Oct. 2016.
- Agbiz, 2016. AgriBEE Charter Council. Lynnwood Ridge: Agbiz. <http://agbiz.co.za/transformation/agribee-charter-council> Date of access: 5 Oct. 2016.
- Agbiz, 2016. Agribusiness competitiveness. Lynnwood Ridge: Agbiz. www.agbiz.co.za/economic-intelligence-1/competitiveness Date of access: 5 Oct. 2016.
- Agbiz. 2014. About us, History. Lynnwood Ridge: Agbiz. <http://www.agbiz.co.za/about-us/history> Date of access: 12 Oct. 2016.
- Agency Staff. 2013. Cheap chicken imports put 20 000 jobs at risk, says poultry group. Business Day, BDlive. 7 Jun.

- Agribusiness, 2016. Agribusiness Growing Solutions.
www.iagribusiness.com/page/WhyAgribusiness Date of access: 5 Oct. 2016.
- Ansoff, H.I. 1968. Corporate strategy, Middlesex, England: Penguin Books.
- ARC (Agricultural Research Council). 2014. Annual Report, 2013/2014. Pretoria, South Africa: ARC.
- Arnade, C. & Trueblood, M.A. 2002. Estimating a profit function in the presence of inefficiency: An application to Russian agriculture. *Journal of Agricultural and Resource Economics*, 27(1): 94-113.
- Asiedu, E. 2000. Foreign Direct Investment in Africa: The role of natural resources, market size, government policy, institutions and political instability. United Nations Millennium Declaration, 8 September, 2000.
- Ask, 2016. Why are natural resources important? <http://www.ask.com/science/natural-resources-important-4e609d235798cc6> Date of access: 15 Feb. 2016.
- Asteriou, D. & Hall, S.G. 2011. Applied Econometrics. Houndsmill, Basingstoke: Palgrave.
- Balcombe, K., Bailey, A. & Brooks, J. 2007. Threshold effects in price transmission: the case of Brazilian wheat, maize and soya prices. *American Journal of Agricultural Economics*, 89(2):308-323.
- Barney, J.B. 1995. Gaining and sustaining competitive advantage. 2nd ed. Upper Saddle River: Prentice Hall.
- Barringer, B.R. & Jones, F.F. 2004. Achieving rapid growth: revisiting the managerial capacity problem. *Journal of Developmental Entrepreneurship*, Vol 9(1):72 – 86.
- Barringer, B.R., Jones, F.F. & Lewis, P.S. 1998. A qualitative study of the management practices of rapid-growth firms and how rapid growth firms mitigate the managerial capacity problem. *Journal of Developmental Entrepreneurship*, Vol 3(2):97-121.
- Belasco, E.J. 2008. The role of price risk management in mitigating fed cattle profit exposure. *Journal of Agricultural and Resource Economics*, 33(3):332-348.
- Beranek, M. 2015. Alberta Agriculture and Forestry. Agricultural marketing guide. Edmonton, Alberta: Department of Agriculture and Forestry.
[http://www1.agric.gov.ab.ca/\\$department/debtdocs.nsf/all/sis1016](http://www1.agric.gov.ab.ca/$department/debtdocs.nsf/all/sis1016) Date of access: 5 Oct. 2016.
- Berenson. A 2016. Market share quotes. Brainy Quote.
http://www.brainyquote.com/quotes/keywords/market_share.html Date of access: 5 Oct. 2016.

- Besanko, D., Dranove, D., Schaefer, M. & Shanley, M. 2012. *Economics of Strategy*. 6th ed. Hoboken, New Jersey: Wiley.
- BKB. 1980 – 1991. BKB (Cooperative) Limited: financial statements, (Various statements), Port Elizabeth.
- BKB. 1993 – 1997. BKB (Cooperative) Limited and its Subsidiaries: financial statements, (Various statements), Port Elizabeth.
- BKB. 1998 – 2007. BKB Limited and its Subsidiaries: financial statements, (Various statements), Port Elizabeth.
- BKB. 2008 – 2012. BKB Limited and its Subsidiaries: annual report, (Various reports), Port Elizabeth.
- BKB. 2013. BKB Limited: annual report. Port Elizabeth.
- Blank, S.C., Erickson, K.W. & Moss, C.B. 2005. Profit patterns across American agriculture. *Journal of Agricultural and Resource Economics*, 30(2):205-230.
- Blignaut, J., Ueckermann, L. & Aronson, J. 2009. Agriculture production's sensitivity to changes in climate in South Africa. *South African Journal of Science*, 105(1-2):61-68.
- Bluman, A. 2012. *Probability demystified*. New York: McGraw-Hill.
- Boelje, M. 1999. Structural changes in the agriculture industries: How do we measure, analyse and understand them? *American Journal for Agricultural Economics*, 81(5):1028-1041.
- Brandon, H. 2013. 10-year outlook: Rising crop prices, but higher input costs. Delta Farm Press, 28 Jun. <http://deltafarmpress.com/blog/10-year-outlook-rising-crop-prices-higher-input-costs> Date of access: 5 Oct. 2016.
- Breuch, T.S. & Pagan, A.R., 1980. The Lagrange multiplier test and its applications to model specification in econometrics. *The Review of Economic Studies*. Vol. 47, No 1, Econometrics Issue, 230-253. Oxford University Press.
- Bronkorst, N. 2016. Sustainable profitability and growth – strategies implemented [personal interview]. 30 May, Brits, South Africa.
- Brown, T.E., Davidsson, P. & Wiklund, J. 2001. An operationalisation of Stevenson's conceptualisation of entrepreneurship as opportunity-based firm behaviour. *Strategic Management Journal*, 22(10):953-968.
- Bruner, R.F., 2001. Does M&A Pay? A Survey of Evidence for the Decision-Maker. Batten Institute, Darden Graduate School of Business, University of Virginia.

- Buffet W, 2016. 101 “Hand-picked” Warren Buffet quotes on investing. Minterest. <http://www.minterest.org/best-warren-buffet-quotes-on-investing>. Date of access: 24 Jan. 2016.
- Bureau for Economic Research. 2000. Measuring Business and Consumer Confidence in South Africa. Stellenbosch University, South Africa.
- Business Case studies. 2016. Strategy theory. <http://www.businesscasestudies.co.uk/business-theory/strategy/economic-growth.html#axzz3znFBPOB6> Date of access: 6 Oct. 2016.
- Buzzell, R.D., Gale, B.T. and Sultan, R.G.M. 1975. Market share – A key to profitability. Harvard Business Review, January – February, 1975: 97 – 106.
- Carpenter, S. 2016. Design the right compensation plan for your business. Kansas City: Ewing Marion <http://www.entrepreneurship.org/resource-centre/design-the-right-compensation-plan-for-your-business.aspx> Date of access: 6 Oct. 2016.
- Cassman Achim K.G., Walters D.T. & Yang H, 2003. Meeting cereal demand while protecting natural resources and improving environmental quality. Annual Review of Environment and Resources, Vol. 28, Issue 1, 315 – 358. Department of Agronomy and Horticulture, University of Nebraska, Lincoln, Nebraska 68583.
- Cha Group. 2016. Employment Equity Services. Krugersdorp: Cha Group. <http://www.chagroup.co.za/OurService/HRConsulting/EmploymentEquity.aspx> Date of access: 6 Oct. 2016.
- Chenault K, 2016. Business model quotes. Brainy Quote. http://www.brainyquote.com/quotes/keywords/business_model.html Date of access: 6 Oct. 2016.
- Cho, D. & Moon, H. 2013. From Adam Smith to Michael Porter, Evolution of competitiveness theory. New Jersey: World Scientific, Singapore, New Jersey, London, Hong Kong.
- Cho, D. 1994. A Dynamic approach to international competitiveness: The case of Korea. Journal of Far Eastern Business. 1 (1): 17-36.
- Coetzee, C.E. & Kleynhans, E.P.J. 2017. Public Capital Stock and Economic Growth– A KwaZulu-Natal Case Study. *South African Journal of Economic and Managerial Sciences*. 20(1).
- Coetzee, G., Meyser F. & Adam H., 2002. The financial position of South African agriculture. Working paper 2002-01, Department of Agriculture Economics, Extension and Rural Development, University of Pretoria, 002.
- Cofco Agri. 2016, Cofco International Ltd acquires full ownership of Noble Agri Ltd. Geneva: Business Wire. <http://www.businesswire.com/news/home/20151222005781/en/COFCO-International-Ltd.-Acquires-Full-Ownership-Noble> Date of access: 12 Oct. 2016.

- Cohn, J.M., Khurana, R. & Reeves, L. 2005. Growing talent as if your business dependent on it. *Harvard Business Review*, 83(10):62.
- Collins, J. 2001. Good to great: why some companies make the leap ... and others don't. London: Random House Business Books.
- Confino, J. 2014. Embedding sustainability drives greater profitability. *The Guardian*, 31 May. <https://www.theguardian.com/sustainable-business/embedding-sustainability-drives-profitability-unilever-polman> Date of access: 6 Oct.
- Canyon, M.J. 2006. Executive compensation and incentives. *Academy of Management Perspectives*, Feb., 25 – 44.
- Cook, M L. 1994. The future of U.S. agricultural cooperatives: A neo-institutional approach. *American Journal of Agricultural Economics*, 77(1994):1153-1159.
- Covin, J.C., Slevin, D.P. & Covin, T.J. 1990. Content and performance of growth seeking strategies: A comparison of small firms in high- and low-technology industries, *Journal of Business Venturing*, 5(6):391-412.
- Department of Agriculture, Forestry and Fisheries (DAFF). 2015. DAFF – Abstract of agricultural statistics 2015. Pretoria: Department of Agriculture, Forestry and Fisheries. http://www.abstract_2015-1.pdf Date of access: 5 Oct. 2016.
2008. Economic Review of the South African Agriculture. Director: Statistics and Economic Analysis. Pretoria, South Africa: DAFF.
- Department of Agriculture, Forestry and Fisheries (DAFF). 2014. Economic Review of the South African Agriculture. Director: Statistics and Economic Analysis. Pretoria, South Africa: DAFF.
- Daft, R.L. & Marcic, D. 2013. Building management skills: An action-first approach. Mason: Cengage Learning.
- Damant, G. 2015. A review of Labour Law in 2014 – No good news for employers. *HR Future*. <http://www.hrfuture.net/news-list/a-review-of-labour-law-in-2014-no-good-news-for-employers> Date of access: 12 Oct. 2016.
- Day, G.S. 1994. The capabilities of market-driven organisation. *Journal of Marketing*, Vol. 58, Oct.: 37 – 52.
- Department of Rural Development and Land Reform (DRDLR) **see** South Africa. Department of Rural Development and Land Reform.
- Department of The Presidency **see** South Africa. Department of The Presidency.

- De Vivo, G. 2001. On Torrens's theory of profits. *Cambridge Journal of Economics*, 25(5):697-703.
- Dewbre, J., Giner, C., Thompson, W. & Von Lampe, M. 2008. High food commodity prices: will they stay? Who will pay? *Agricultural Economics*, 39(s1):393-403.
- Dictionary, 2016. Dictionary.cambridge.org/dictionary/english/job-creation. Date of access: 15 Oct. 2016.
- DiLallo, M. 2015. What is a "strong" balance sheet? Investment planning. London: Motley Fool 9 Jan. 2015. www.fool.com/investing/beginning/2015/01/09/what-isa-strong-balance-sheet.aspx Date of access: 6 Oct. 2016
- Diong, A. & Choo, D. 2008. Transformative innovation for growth. *Industrial Management*. May/June, 2008: 8 – 11.
- DIY Committee Guide. 2016. What is risk management strategy. Antrim: Developing Governance Group. <http://www.diycommitteeguide.org/article/what-risk-management-strategy> Date of access: 6 Oct. 2016.
- Do Well Do Good. 2014. Definition: Sustainability. <http://dowelldogood.net/?p=500> Date of access: 6 Oct. 2014.
- Drucker, P.F. 1967. The effective executive. Jordan Hill, Oxford: Butterworth-Heinemann.
- Drucker, P.F. 2001. The essential Drucker. The best of sixty years of Peter Drucker's essential writings on management. New York: Harper Collins.
- Du Plessis, L. 2014. Maize marketing from 1935 to present [personal interview]. 13 Jun, Pretoria, South Africa.
- Economist, 2015. Foreign investment in Africa. A sub-Saharan scramble. 24 Jan. <http://www.economist.com/news/business/21640327-private-equity-investors-are-getting-hot-africa-businesses-there-need-all-capital> Date of access: 6 Oct. 2016.
- Edmayer, W. 2016. Sustainable profitability and growth – strategies implemented [personal interview]. 11 May, Paarl, South Africa.
- Eitzen, C. & Sartorius, K. 2012. Strategies for sustainable growth in JSE-listed companies. *South African Journal of Business Management*, 43(3):79-94.
- Elkington, J. 1994. Towards the sustainable corporation: Win-win-win business strategies for sustainable development. *California Management Review*, 36(2):90-100.
- Elsayed, K. & Paton, D. 2005. The impact on environmental performance on firm performance: Static and dynamic panel data evidence. *Structural Change and Economic Dynamics*, 16(3):395-412.

- Esterhuizen, D. 2006. An evaluation of the competitiveness of the South African agribusiness sector. Pretoria, University of Pretoria. (Ph.D. Thesis).
- Farmsecure. 2016. About us. Bethlehem, South Africa: Farmsecure <http://www.farmsecure.co.za>
Date of access: 12 Oct. 2016.
- Figge, F. & Hahn, T. 2016. Reconciling Sustainability and Corporate Profitability. Marseille: KEDGE Business School, Sustainable Value. <http://www.sustainablevalue.com/downloads/postersustainableprofit.pdf> Date access: 6 Oct. 2016.
- Financial Times Lexicon. 2016. Business Sustainability Definition from Financial Times Lexicon. <http://lexicon.ft.com/term?term=business-sustainability> Date access: 6 Oct. 2016.
- Fogel K., Morck R. & Yeung B. 2008. Big business stability and economic growth: Is what's good for General Motors good for America? *Journal of Financial Economics*, 89(1):83-108.
- Freaser, H.R. & Willard, G.E. 1990. Founding strategy and performance: A comparison of high and low growth high tech firms. *Strategic Management*, Vol. 11(2):87-98.
- Frost, R. 2016. Inspirational quotes and poems.net. <http://www.inspirational-quotes-and-poems.net/financial-quotes.html> Date of access: 6 Oct. 2016.
- FS Maize (Free State Maize). 2015. Boerdery. Potchefstroom: Free State Maize <http://www.fsmaize.co.za/category/boerdery/> Date of access: 17 July 2015.
- FS Maize, Free State Maize. 2016. Boerdery. Vroegbegin boerdery. Tierkop boerdery. Free Potchefstroom: State Maize. <http://www.fsmaize.co.za> Date of access: 12 Oct. 2016.
- Galeotti A. & Goyal, S. 2009. Influencing the influencers: A theory of strategic diffusion. *RAND Journal of Economics*, 40(3):509-532.
- Garrison, S. 2016. Sustainable Growth Measures. Study Finance. <http://www.studyfinance.com/lessons/sustainingrowth/?page=01> Date of access: 6 Oct. 2016.
- Gerstner, E. & Libai, B. 2006. Why Does Poor Service Prevail? *Marketing Science*, 25th Anniversary issue, 25(6):601-603.
- Gertz, D.L. & Baptista, J.P.A. 1995. Grow to be great: Breaking the downsizing cycle. New York, Free Press.
- Gilbert, C. 1989. The impact of exchange rate changes and developing country debt on commodity prices. *Economic Journal*, 99(397):773-784.
- Gilbert, C.L., 2010. How to understand high food prices. *Journal of Agricultural Economics*, Vol 61, Issue 2, June 2010, 398 – 425.

- Gozgor, G. & Kablamaci, B. 2014. The linkage between oil and agricultural commodity prices in the light of the perceived global risk. *Agricultural Economics – Czech*, 60(7): 332–342.
- Grant, R.M., 1991. The resource-based theory of competitive advantage: Implications for strategy formulation. *California Management Review*, Vol. 33(3): 113-135.
- Grobler, M.J. 2006. Landboumaatskappye as onderneming in die lig van die nuwe koöperasiewet. Potchefstroom: North-West University. (Dissertation – M.Com).
- Groenewald, J.A. 2003. Conditions for successful land reform. Paper presented at Pre-IAAE Conference on African Agricultural Economics, Bloemfontein, South Africa, 13-14 Aug.
- GWK. 1998 – 2013. GWK Limited: annual report, (Various reports), Douglas.
- GWK. 1980 – 1993. Douglas (Cooperative) Limited: annual report, (Various reports), Douglas.
- GWK. 1994 – 1997. Griekwaland West Cooperative Limited: annual report, (Various reports), Douglas.
- Hamel, G. 2000. Leading the revolution. Boston: Harvard Business Press.
- Hasenfuss, M. 2013. Zeder's offer to Kaap Agri's minority shareholders. *Financial Mail*, 1 Mar. <http://www.financialmail.co.za/business/money/2013/03/01/zeder-s-offer-to-kaap-agri-s-minority-shareholders> Date of access: 4 Oct. 2016
- Hauser, J.R. & Shugan, S.M. 2008. Defensive Marketing Strategies. *Marketing Science*, 27(1):88-110.
- Hay, D.A. & Liu, G.S. 1998. When do firms go in for growth acquisitions? *Oxford Bulletin of Economics and Statistics*, 60(2):143-164.
- Headey, D. & Fan, S. 2008. Anatomy of a crisis: the causes and consequences of surging food prices. *Agricultural Economics*, 39(s1):375-391, Nov.
- Hedin, H., Vaarnas, M & Vanhala, V. 2014. Blast from the past: Market intelligence for strategy and planning process. *Competitive Intelligence Magazine*. <http://www.strategiccompetitiveintelligence.blogspot.co.za/2014/06/blast-from-past-market-intelligence-for.html>. Date of access: 6 Oct. 2016.
- Hess, E.D. 2007. The road to organic growth. How great companies consistently grow market share from within. New York, McGraw-Hill.
- Hinge. 2016. The high growth professional service firm: How some firms are able to grow in any market. Reston, VA: Hinge. http://www.hingemarketing.com/library/article/high_growth_professional_services_firm_howsome_firms_grow_in_any_market Date of access: 6 Oct. 2016.

- Houghton, C.A. & Sorensen, H.R. 2005. Business cooperatives and agriculture. *Tax Lawyer*, 58(4):1009-1012.
- Hrebiniak, L.G. 2013. Making strategy work: Leading effective execution and change. Second edition. Upper Saddle River, New Jersey, 07458.
- Huyett, W.I. & Viguerie, S.P. 2005. Extreme competition. McKinsey, Quarterly, Issue1: 46- 57.
- International Labour Organisation, 2011. A skilled workforce for strong, sustainable and balanced growth: A G20 training strategy. International Labour Office, Geneva, 2010. ISBN 978-92-2-124278-9 (Web pdf).
- Investopedia, 2016. www.investopedia.com/terms/e/economicgrowth.asp Date of access: 15 Oct. 2016.
- Jacobs, H.E.D. 1998. Political and economic stability in South Africa: An Overview. A Journal of Foreign Policy Issues. <http://www.hri.org/MFA/thesis/summer98/stability.html> Date of access: 6 Oct. 2016.
- Janovsky, E. 2013. Demand shift, a financial perspective on trade. Paper presented at Agbiz Council meeting, Pretoria, South Africa. 14 Nov. (Unpublished).
- Jarillo, J.C. 1989. Entrepreneurship and growth: The strategic use of external resources. *Journal of Business Venturing*, 4(2):133-147.
- Joachimsthaler, E. 2007. Room to Grow – The new ecosystem-of-demand paradigm formulates and executes a company's next big innovation and growth strategy by examining the 1 440 minutes in a consumer's day. *Marketing Management*, 16(6):39-44.
- Johnson M.W., Christensen C.M. & Kagermann H. 2008. Reinventing your business model. *Harvard Business Review*, 86(12):57-68.
- Jonash, R.S. 2005. Driving sustainable growth and innovation: Pathways to high performance leadership, *Handbook of Business Strategy*, 6(1):197-202.
- KAAP AGRI. 2011 – 2013. KAAP AGRI: integrated report, (Various reports), Malmesbury.
- KAAP AGRI. WPK. 1984 – 1994. WP (Cooperative) Limited: annual report, (Various reports), Malmesbury.
- KAAP AGRI. WPK. 2000 & 2002. WPK Limited: annual report, (Various reports), Malmesbury.
- KAAP AGRI. WPK. 2003 – 2010. WPK: annual report, (Various reports), Malmesbury.
- Kalmi, P. 2007. The disappearance of cooperatives from economics textbooks. *Cambridge Journal of Economics*, 31(4):625-647.
- Kanter, R.M. 2006. Innovation: The classic traps. *Harvard Business Review*, 84(11):72-83.

- Kanyane, M.H. & Ilorah, R. 2015. Cooperative landscape in South Africa: Analysing critical issues. *Africa Today*, 61(3):3-14.
- Kaplan, R.S. & Norton, D.P. 1992. The balanced scorecard – measures that drive performance. *Harvard Business Review*, 83(7), p.172.
- Kaplan, R.S. & Norton, D.P. 2007. Using the balanced scorecard as a strategic weapon. *Harvard Business Review*, 85(7/8):150-161.
- Karagiannis, G. & Mergos, G.J. 2000. Total factor productivity growth and technical change in a profit function framework. *Journal of Productivity Analysis*, 14(1):31-51.
- Kargbo, J.M. 2007. The effects of macroeconomic factors on South African agriculture. *Applied Economics*, 39(17): 2211- 2230.
- Kelley, T. & Littman, J. 2001. The art of innovation. New York: Harper Collins.
- Kelley, T. & Littman, J. 2006. The ten faces of innovation. Strategies for heightening creativity. London: Profile Books.
- King, R.P., Boehlje, M., Cook, M.L. & Sonka, S.T. 2010. Agribusiness economics and management. *American Journal of Agricultural Economics*, Commemorating the Centennial of the AAEA (Apr. 2010), 92(2):554-570.
- Klein, D.P. & Belt, B.1993. Sustainable growth and choice of financing: A test of the pecking order hypothesis. *Review of Financial Economics*, 3(1):141.
- Kleynhans, E.P.J. 2016. Determinates of Industrial Competitiveness and the Role of Spillovers. *Journal of Applied Business Research*. 32(2):527-540.
- Kleynhans, E.P.J. & Kruger, M.C. 2014, Effect of Black Economic Empowerment on profit and competitiveness of firms in South Africa, *Acta Commercii*, 14(1).
- Kline, S.J. & Rosenberg, N. 1986. An overview of innovation. The positive sum strategy: harnessing technology for economic growth. Washington D.C.: National Academic Press.
- Knight, D.J. 2005. Three tips around the innovation track: an interview with Clayton Christensen. *Strategy & Leadership*, 33(4):13-19.
- Kotler, P., (2003). *Marketing Management*, 11th ed., Prentice-Hall/Pearson Education, Englewood Cliff, New Jersey.
- Koys, D.J. 2000. Describing the Elements of business and human resource strategy statements. *Journal of Business and Psychology*, 15(2):265-276.
- Kroeger, F., Traem M. & Rockenhaeuser, J. 2000. The value growers: Achieving competitive advantage through long-term growth and profits. <http://www.atkearny.com/main.taf?5,1,1110,2>.

- Kumbhakar, S.C. 2001. [Estimation of profit functions when profit is not maximum.](#) *American Journal of Agricultural Economics*, 83(1):1-19.
- Kutaula, S.S. 2001. A rational econometric approach for Punjab agriculture associated with UOP profit function model. *Indian Economic Review*, New Series, 36(2):393-410.
- Laaksonen-Craig, S. & Toppinen, A. 2008. [Profit persistence in globalising forest industry companies.](#) *International Forestry Review*, 10(4):608-618.
- Lafley, A.G. & Martin, R.L., 2013. Playing to win: How strategy really works. Harvard Business Review Press, Boston, Massachusetts.
- Land Bank. 2013. History of the Land Bank. Financing agriculture for 100 years. Centurion, South Africa: Land Bank.
- Laurie, D.L., Doz, Y.L. & Sheer, C.P. 2006. Creating new growth platforms. *Harvard Business Review*, 84(5):80-90.
- Leathers, J.D. 2006. Are cooperatives efficient when membership is voluntary? *Journal of Agricultural and Resource Economics*, 31(3):667-676.
- Le Cordeur, G. 2015. IRMSA Risk Report, South Africa Risks. 1st ed. Sandton: Institute of Risk Management.
https://c.ymcdn.com>2015_Risk_ReportLow_Res_IRMSA_South_Africa_R.pdf Date of access: 6 Oct. 2016.
- Lessonly. 2016. www.lessonly.com/the-importance-of-traning/ Date of access: 15 Oct. 2016.
- Louw-Potgieter, J. 2012. Evaluating human resource interventions. *South African Journal of Human Resource Management*, 10(3):1-6.
- Magretta, J. 1997. Growth through global sustainability. *Harvard Business Review*: Jan./Feb:79-88.
- Magretta, J. 2002. Why business models matter. *Harvard Business Review*. (2002):86-92.
- Management Study Guide. 2016. Financial Management – Meaning, Objectives and Functions. www.managementstudyguide.com Date of access: 25 October 2016.
- Makhura, M.T., & Mokoena, M.R. 2003. Market access for small-scale farmers in South Africa: In: Nieuwoudt and Groenewald (Eds). The challenge of change, agriculture, land and the South African Economy.
- Mankiw, N.G. 2014. Principles of Economics. Hampshire: Cengage Learning.
- Marais, D. 2016. Sustainable profitability and growth – strategies implemented [personal interview]. 12 May, Paarl, South Africa.

- Maritz, J. 2012. A really big opportunity: Inside PSG's \$46 m Zambian farming deal. Cape Town: *How we made it in Africa*. [HTTP://WWW.HOWWEMADEITINAFRICA.COM/A-REALY-BIG-OPPORTUNITY-INSIDE-PSGS-46M-ZAMBIAN-FARMING-DEAL/](http://www.howwemadeitinafrica.com/a-really-big-opportunity-inside-psgs-46m-zambian-farming-deal/) Date of access: 12 Oct. 2016.
- Martin, P.G. 2011. Sustainable Profitability. Plano, TX: Invensys Systems.
- Mascarenhas, B., Kumaraswamy, D.D. & Baveja, A. 2002. Five strategies for rapid firm growth and how to implement them. *Managerial and Decision Economics*, 23:317-330.
- Matthee, J. 2015. Growth path of Kaap Agri. (Document provided). Malmesbury, South Africa: Kaap Agri.
- Mazero, J. & Loonam, S. 2010. Purchasing cooperatives: Leveraging a supply chain for competitive advantage. *Franchise Law Journal*, 29(3):148-163.
- McClave, J.T., Benson, P.G. & Sincich, T. 2001. Statistics for business and economics. 8th ed., Upper Saddle River: Prentice Hall.
- McDonald, J.H. 2014. Handbook of Biological Statistics, 3rd ed. Baltimore, Maryland: Sparky House Publishing, <http://www.biostathandbook.com/fishers.html> Date of access: 20 Sept. 2016.
- McGrath, J., Kroeger, F., Traem, M. & Rockenhaeuser, J. 2000. The value growers: achieving competitive advantage through long-term growth and profits. New York: McGraw-Hill.
- McGrath, R.G. & MacMillan, I.C. 2005. Market-busting: Strategies for exertional business growth, *Harvard Business Review*, 83(3):83-89.
- Mendenhall W., Beaver R.J. & Beaver B.M. 2013. Introduction to probability and statistics. 14th ed., Boston: Brooks/Cole.
- Mercer newsroom, 2014. Few organisations' total rewards and business strategies fully align according to Mercer survey, 19 May 2014. United States, New York City: Mercer. <http://www.mercer.com/newsroom/few-reward-and-business-strategies-align-say-merc-survey.html> Date of access: 6 Oct. 2016.
- MGK. 1989 – 1997. MGK (Cooperative) Limited: annual report, (Various reports), Brits.
- MGK. 2001 – 2007. MGK Business Investments Limited: annual report, (Various reports), Brits.
- MGK. 2008. MGK Group: annual report. Brits.
- MGK. 2009, 2010, 2012 & 2013. MGK Group, MKG Business Investments: annual financial statements, (Various statements), Brits.
- MGK. 2011. MGK Group, MGK Business Investments: integrated report. Brits.

- Miller, D. & Friesen, P.H. 1976. Archetypes of strategy formulation. *Management Science*, Vol. 24(9):921–933.
- Mintzberg, H. 1987. The strategy Concept I: Five Ps for Strategy. *California Management Review*, Fall, 11–24.
- Mitchell, D. 2008. A Note on Rising Food Prices. Policy Research Working Paper no 4682. Washington, DC.: World Bank.
- Mohr, P. & Fourie, L. 2004. Economics: for South African Students, Third Edition, Pretoria: Van Schaik Publishers, 95–101.
- Moon, H.C., Rugman, A.M. & Verbeke, A. 1995. The Generalised Double Diamond approach to international competitiveness. In: Rugman A.M. (ed), *Research in Global Strategic Management: A research Manual*, 5: 97 – 114.
- Moreno, A.M. & Casillas, J.C. 2008. Entrepreneurial orientation and growth of SME's: A causal model. *Entrepreneurship Theory and Practice*, 32(3):507-528, May.
- National Chamber of Milling (NCM). 1999. Section 7 committee evaluating the deregulation process. The wheat to bread value chain. Pretoria, South Africa: NCA.
- National Planning Commission (NPC). 2012. National Development Plan 2030. Our future – make it work. Pretoria, South Africa: NPC.
- Neely, A. 2005. The evolution of performance based research in the last decade and a research agenda for the next. *International Journal of Operations and Production Management*, 20(12):1264-1277.
- Nel, C.J. 2000. Die OVK-storie: Welvaart geskep oor grense heen. Ladybrand, South Africa.
- Nepple, J.A. & Heller, M.L. 2004. Business cooperatives and agriculture. *Tax Lawyer*, 57(4):991-993.
- Nepple, J.A. & Jung, J. 2003. Business cooperatives and agriculture. *Tax Lawyer*, 56(4):983-986.
- Newton, K. & Norris, P. 1999. Confidence in public institutions: Faith, Culture or performance? Annual meeting of the American Political Science Association, Atlanta, September.
- Ng, D. & Siebert, J.W. 2009. Toward Better Defining the Field of Agribusiness Management. *International Food and Agribusiness Management Review*, 12(4):123-142.
- NWK. 1980 – 1998. NWK Cooperative Limited: annual report, (Various reports), Lichtenburg.
- NWK. 1999 – 2013. NWK Limited: annual report, (Various reports), Lichtenburg.

- NWK. 2009. NWK 1909 – 2009. 'n Pionier in die ontwikkeling van die landboubedryf. Infoworks Media Publishing, Klerksdorp: NWK.
- NWK. 2013. NWK Limited, Annual Report. Lichtenburg: NWK.
- Nti, K.O. 2000. Potential competition and coordination in a market-entry game. *Journal of Economics*, 71(2):149-165.
- O'Farrell, R. 2016. The impact of finance on business growth. *Houston Chronicle*. <http://smallbusiness.chron.com/impact-finance-business-growth-4506.html> Date of access: 6 Oct. 2016.
- Oberholster, C. 2016. The founding of BKB Limited. (Document provided). Port Elizabeth, South Africa.
- OECD see Organisation of Economic and Cooperation and Development
- OECD (Organisation of Economic Cooperation and Development). 2015. Glossary of statistical terms. Paris: OECD. <https://stats.oecd.org/glossary/detail.asp?ID=2150> Date of access: 4 Oct. 2016.
- OECD (Organisation of Economic and Cooperation and Development). 2016. Glossary of Statistical Terms. Paris: OECD. <https://stats.oecd.org/glossary/detail.asp?ID=2150>. Date of access: 12 Oct. 2016.
- OECD & FAO. 2008. Agricultural Outlook 2008-2017: Highlights. <http://www.oecd.org/trade/agricultural-trade/40715381.pdf> Date of access: 15 March 2017.
- Osterwalder, A. & Pigneur, Y. 2010. Business model generation. ISBN: 978-2-8399-0580-0.
- Overberg Agri. 2004 – 2013. Overberg Agri: annual report, (Various reports), Caledon.
- OVK, 2013. Oos-Vrystaat Kaap Operations Limited: annual report, Ladybrand.
- OVK. 2004 – 2007. Oos-Vrystaat Kaap Holdings Limited/ Operations Limited: annual report, (Various reports), Ladybrand.
- OVK. 2008 – 2013. Oos-Vrystaat Kaap Operations Limited: annual report, (Various reports), Ladybrand.
- PAARLY. 2016. Pricing Intelligence & Competitor Monitoring. Toulouse: Paarly. http://paarly.com/?gclid=CjwKEAiAuea1BRCbn-2n7PbLqEMSJAABQvTT5qBNWURic0PwOkscvnm_XHbe6PfnDJVgdl9CVIZhoCAq3w_wcb Date of access: 6 Oct. 2016.
- Palmatier, R.W., Gopalakrishna, S. & Houston, M.B. 2006. Returns on business-to-business relationship marketing investments: Strategies for leveraging profits. *Marketing Science*, 25(5):477-493.

- Pallidus Capital, 2015. Ondersoekverslag: Aansporingskemas. Johannesburg South Africa: Pallidus Capital.
- Park, C. 2003. Prior performance characteristics of related and unrelated acquirers. *Strategic Management Journal*, 24(5):471-480.
- Parsons, R., Kruger, W. & Keeton, G. 2015. Joint written submission to NERSA, 7 Jun. 2015. Potchefstroom: North-West University, Potchefstroom Business School.
- Payne, C.A. & Talbott, P. 2007. Financial perspective of the balanced scorecard: Strategies for profitability. *Rangelands*, 29(2):33-36.
- PCA, 2016. Principal Component Analysis. Cary, NC: Statistical Analysis Systems. <http://support.SAS.com/publishing/pubcat/chaps/55129.pdf> Date of access: 4 Oct. 2016.
- Peavler, R. 2016. What is the Sustainable Growth for a Business? *Business Finance*. 14 Jun. <http://bizfinance.about.com/od/financialratios/qt/what-is-the-sustainable-growth-for-business.htm> Date of access: 6 Oct. 2016.
- Pelser, E. 2015. History of Tuinroete Agri (Personal interview). Swellendam, South Africa: SSK
- Pelser, E. 2016. Sustainable profitability and growth – strategies implemented [personal interview]. 11 May, Paarl, South Africa.
- Penny, J.C. 2016. Pakwired. 20 Quotes to inspire your business growth. Lahore, Pakistan: Pakwired. <http://pakwired.com/20-quotes-inspire-business-growth/> Date of access: 30 January 2016.
- Penrose, E.T. 1959. The theory of the growth of the firm. New York: Oxford University Press.
- Perren, L. 1999a. Factors in the growth of micro-enterprises (Part 1): Developing a framework, *Journal of Small Business and Enterprise Development*, 6(4):367-385.
- Perren, L. 1999a. Factors in the growth of micro-enterprises (Part 2): Exploring the implications, *Journal of Small Business and Enterprise Development*, 7(1):59-68.
- Pesaran, M.H., 2004. General diagnostic tests for cross section dependence in panels. USC Dornsife Institute for New Economic Thinking, University of South California; Trinity College, Cambridge.
- Peshawaria, R. 2012. The three most important questions for profitable growth. Forbes. <http://www.forbes.com/sites/rajeevpeshawaria/2012/01/28/the-three-most-important-questions-for-profitable-growth/#650fb52c18f7> Date of access: 6 Oct. 2016.
- Pienaar, S. 2016. Sustainable profitability and growth – strategies implemented [personal interview]. 5 May, Pretoria, South Africa.

- Platt, H.D., Platt, M.B. & Chen, G. 1995. Sustainable growth rate of firms in financial distress. *Journal of Economics and Finance*, 19(2):147-151.
- Pope, R.D. & Just, R.E. 2002. Random profits and duality. *American Journal of Agricultural Economics*, 84(1):1-7.
- Porter, M., 1996. What is Strategy? *Harvard Business Review*; November – December 1996: 61–78.
- Porter, M.E., 1985. Competitive advantage: creating and sustaining superior performance. New York: Free Press.
- Porter, M. 2001. Strategy and the internet. *Harvard Business Review*, Vol. 79(3): 62 – 78.
- Porter, M.E. 1990. The competitive advantage of nations. *Harvard Business Review*, March – April: 73 – 93.
- Porter, M.E. 1998. The competitive advantage of nations. Houndsmill, Basingstoke: Palgrave.
- Porter, M.E. 2016. Porter's generic strategies. Quick MBA. Strategic Management. www.quickmba.com/strategy/generic.shtml Date of access: 31 Jan. 2016.
- Pottas, A. 2016. Addressing Africa's infrastructure challenges. Sandton: Deloitte. <https://www2.deloitte.com>fpc>finance> Date of access: 4 Oct. 2016.
- PricewaterhouseCooper (PwC). 2008 – 2012. Agribusiness benchmark survey. Johannesburg: PwC. (Five annual surveys).
- PricewaterhouseCooper (PwC). 2013. Are you still in the race: Agribusiness insights survey. Johannesburg: PwC.
- PricewaterhouseCooper (PwC). 2014. How confident are you: Agribusiness insights survey. Johannesburg: PwC.
- PricewaterhouseCooper (PwC). 2015. Africa – are you in or the ride?: Agribusiness insights survey. Johannesburg: PwC.
- PricewaterhouseCooper (PwC). 2016. Global CEO Survey. Johannesburg: PwC. <http://www.pwc.com/gx/en/ceo-agenda/ceosurvey/2015/overview.html> Date of access: 6 Oct. 2016.
- PricewaterhouseCooper (PwC). 2011/2012. Agribusiness Insights Survey. Are you still in the race? Johannesburg: PwC.
- PricewaterhouseCooper (PwC). 2013/2014. Agribusiness Insights Survey. How confident are you? Johannesburg: PwC.

- Profert, 2016. ProGro – Unique approach to farming. Potchefstroom: Profert. <http://www.profert.co.za/> Date of access: 12 Oct. 2016.
- Profert. 2015. ProGro. Potchefstroom: Profert. <http://www.profert.co.za/businesses/71/progro> Date of access: 4 Oct. 2016.
- Pugh, S.D., Dietz, J., Wiley, J.W. & Brooks, S.M. 2002. Driving effectiveness through employee-customer linkages. *The Academy of Management Executive*, 16(4):73-84.
- Purchase, J. 2015. Land reform: time to take the initiative in South Africa. Agbiz newsletter, 1 Jul. 2015. Lynnwood Ridge: Agbiz. http://agbiz.co.za/news/369/110/Land-reform-time-to-take-the-initiative-in-South-Africa#.V_aCBEvr3zA Date of access: 6 Oct. 2016.
- Queensland Government. 2016. Strategies to improve profit. Brisbane: Business and Industry Portal. <https://www.business.qld.gov.au/business/running/making-and-managing-money/making-your-business-more-profitable/strategies-to-improve-profit> Date of access: 6 Oct. 2016.
- Remund, D.L. 2010. Financial literacy explicated: The case for a clearer definition in an increasingly complex economy. *The Journal of Consumer Affairs*, 44 (2): 276-295.
- Reichheld, F.F. 2003. The one number you need to grow. *Harvard Business Review*, 81(12):46-54.
- Richards T.J. & Hamilton, S.F. 2006. Rivalry in price and variety among supermarket retailers. *American Journal of Agricultural Economics*, 88(3):710-726.
- Richards, T.J & Patterson, P.M. 2005. Sales Promotion and Cooperative Retail Pricing Strategies. *Review of Industrial Organisation*, 26(4):391-413.
- Richards, T.J. & Manfredo, M.R. 2003. Cooperative mergers and acquisitions: The Role of capital constraints. *Journal of Agricultural and Resource Economics*, 28(1):152-168.
- Robert, M. 1998. *Strategy, How winning companies dominate their competitors*. New York: McGraw-Hill.
- Rodrik, D. 2008. The real exchange rate and economic growth. *Broking papers on economic activity*, Fall 2008, 365-12, 10.1353, eca.0.0020.
- Roure, J. 2013. Ten key questions when evaluating an investment opportunity: the business angel approach. New York: University of Navarra: IESE Business School. <http://blog.iese.edu/entrepreneurship/2013/12/03/ten-key-questions-when-evaluating-an-investment-opportunity-the-business-angel-approach/> Date of access: 6 Oct. 2016.

- Rugman, A.M. & D'Cruz, J.R. 1993. The "Double Diamond" Model of international competitiveness: The Canadian experience. *Management International Review*, Vol. 33, Extension of the Porter Diamond Framework, 1993: 17 – 39.
- Rumelt, R. 1984. Toward a strategic theory of the firm. In: Lamb, R. (ed.). *Competitive Strategic Management*, Upper Saddle River: Prentice Hall.
- SAGIS. 2016. Information/Data Historic Information. Historic summary: Pretoria: South African Grain Information Service. <http://www.sagis.org.za/presentations.html> Date of access: 6 Oct. 2016.
- SAS. 2016. Principal Component Analysis. Cary, NC: Statistical Analysis Systems. <http://support.SAS.com/publishing/pubcat/chaps/55129.pdf> Date of access: 4 Oct. 2016.
- Savory, A. 2016. BrainyQuote.com. <http://www.brainyquote.com/quotes/quotes/a/allansavor603601.html> Date of access: 4 Oct. 2016.
- Schwab, C. 2016. 30 Inspirational employee engagement quotes. Elavon, Georgia: Front Stream <http://www.frontstream.com/30-inspirational-employee-engagement-quotes/> Date of access: 6 Oct. 2016.
- Schwab, K. 2014. The Global Competitiveness Report 2014 – 2015. Geneva: World Economic Forum (WEF). http://www3.weforum.org/docs/WEF_GlobalCompetitivenessReport_2014-15.pdf Date of access: 6 Oct. 2016.
- Schwarz, G., Barber, F. & Villis, U. 2006. Opportunities for action. When people strategy drives business strategy. Boston, Massachusetts: The Boston Consulting Group. <http://bizshifts-trends.com/> Date of access: 6 Oct. 2016.
- Schwenke, M.J. 2011. Growth drivers and strategies of sustainable growth: a study of JSE-listed companies. Johannesburg: University of the Witwatersrand. (Dissertation – M.Com).
- Senwes. 2013. Senwes Limited: integrated report. Klerksdorp.
- Senwes. 1980 – 1996. Senwes Cooperative Limited: annual report, (Various reports), Klerksdorp.
- Senwes. 1997- 2012. Senwes Limited: annual report, (Various reports), Klerksdorp.
- Seog, S.H. & Hyun, Y.J. 2009. Financing as a marketing strategy. *Marketing Science*, 28(3):526-540.
- Seok Kim, H., Brorsen, B.W. & Anderson, K.B. 2010. Profit margin hedging. *American Journal of Agricultural Economics*, 92(3):638-653.

- Shah, A. 2016. Why is biodiversity important? Who cares? Global Issues. <http://www.globalissues.org/article/170/why-is-biodiversity-important-who-cares> Date of access: 15 February 2016.
- Simpson P., Gable R.K. & Kite S.L. 2008. Connecting resources to student achievement: assessment of the indeterminacy of district. North Eastern Educational Research Association, 23 Oct., Rocky Hill, CT.
- Slater, M. 1980. The managerial limitation to the growth of firms. *Economic Journal*, 90(359):520-528.
- Smit, S., Thompson, C. & Viguerie, P. 2005. The do-or-die struggle for growth, *McKinsey Quarterly*, 3:34-45.
- Smith, N. 2013. Grindrod buys 20 % stake in agri co-op. *Business Day*, 23 Sep. <http://www.bdlive.co.za/business/industrials/2013/09/23/grindrod-buys-20-stake-in-agri-co-op> Date of access: 4 Oct. 2016.
- South Africa. Department of Agriculture Economics and Marketing. 1989. Summarised statistics of cooperatives in the RSA, 1985 to 1988. Pretoria, South Africa. ISBN 0-621-12404-4, Aug. 1989.
- South Africa. Department of Agriculture Economics and Marketing. 1991. Statistics of cooperatives in the RSA, 1987 to 1990, volume 4. Pretoria, South Africa. ISBN 0-621-15511-X. Aug. 1991.
- South Africa. Department of Agriculture, Forestry and Fisheries (DAFF). 2010. Agricultural Marketing Strategy. Pretoria, South Africa: DAFF, Jul.
- South Africa. Department of Agriculture, Forestry and Fisheries (DAFF). 2014. Agricultural Policy Action Plan (APAP). Pretoria, South Africa: DAFF.
- South Africa. Department of Agriculture. 1993. Statistics of cooperatives in the RSA, 1989 to 1992. vol. 6. Pretoria, South Africa. ISBN 0-621-14210-7, Aug. 1993.
- South Africa. Department of Rural Development and Land Reform (DRDLR). 2009. Comprehensive Rural Development Programme (CRDP) background. Pretoria: DRDLR.
- South Africa. Department of Rural Development and Land Reform (DRDLR). 2015. Budget Policy Speech, Budget Vote 39, Minister G.E. Nkwinti, 23 June, Pretoria: DRDLR.
- South Africa. Department of Rural Development and Land Reform (DRDLR). 2015. Framework for the Rural Economic Transformation Model: One District, One Agripark/Every Municipality a CRDP Site. Pretoria: DRDLR.

- South Africa. Department of the Presidency. National Development Plan 2030. Our future – make it work. Executive summary. 2012. Pretoria, South Africa: NPC.
- South Africa. National Planning Commission. 2012. National development plan 2030: our future – make it work. Executive summary. Pretoria, South Africa: NPC.
- Spies, P. 2016. Sustainable profitability and growth – strategies implemented [personal interview]. 3 May, Kimberley, South Africa.
- SSK. 1981 – 2013. Sentraal-Suid, Cooperative Limited, (Various reports), Swellendam.
- Staff Writer. 2015. Eskom's shocking annual price hike since 2007. *BusinessTech*. 22 Jun. <http://businesstech.co.za/news/energy/91216/eskoms-shocking-annual-price-hike-since-2007/> Date of access: 6 Oct. 2016.
- STATISTICA. 2017. Statistical software. Oklahoma: STATISTICA. <http://statistica.io/> Date of access: 13 March 2017.
- Statistics of cooperatives in the RSA. 1985-1988;1987-1990;1988-1992. Registrar of Cooperatives. Department of Agricultural Economics and Marketing, Private Bag X237, Pretoria, South Africa.
- Stevenson, H.H. & Jarillo, J.C. 1990. A paradigm of entrepreneurship: Entrepreneurial management. In: *Entrepreneurship* (pp. 155-170). Springer Berlin Heidelberg.
- Stewart, T.A. 2006. Growth as a process, *Harvard Business Review*, 84(6):60-70.
- Stopford, J.M. & Baden-Fuller C.W.F. 1994. Creating corporate entrepreneurship. *Strategic Management Journal*. 15(7):521-536.
- Strydom, F. 2016. Sustainable profitability and growth – strategies implemented [personal interview]. 3 May, Klerksdorp, South Africa.
- Stubbs, W. & Cook, J. 2008. Conceptualising a "Sustainability Business Model". *Organisation Environment*, 21(2)103-127, Jun.
- Successfactors, 2016. Talent Management Strategy to Create a Higher-Performing Workforce. Boston: SAP SuccessFactors. https://www.successfactors.com/en_us/lp/articles/strategic-talent-management-training.html Date of access: 6 Oct. 2016.
- Suidwes Group. 2012 & 2013. Suidwes: integrated report, (Various reports), Leeudoringstad.
- Suidwes Group. 1997 – 2007. Suidwes Group: annual report, (Various reports), Leeudoringstad.
- Suidwes Group. 2008 – 2011. Suidwes: annual report, (Various reports), Leeudoringstad.
- Suidwes. 1980 – 1996. Suidwes Cooperative Limited: annual report, (Various reports, 1994 Financial results not included), Leeudoringstad.

- Swamidass, D. 2013. What are the importance and benefits of succession planning? San Jose, CA: Synergita. 19 Jul. <https://blog.synergita.com/2013/07/succession-planning-importance/> Date of access: 6 Oct. 2016.
- Tangri, R. & Southall, R. 2008. The politics of black economic empowerment in South Africa. *Journal of Southern African Studies*, Aug., 699 – 716.
- The Economist. 2002. Thanksgiving for innovation. *The Economist: Technology Quarterly*: Q3:2002, 19 Sept. 2002.
- Tucker, K. 2011. File:Nested sustainability-v2.svg. https://en.wiki2.org/wiki/File:Nested_sustainability-v2_svg Date of access: 6 Oct. 2016.
- Uys, A. 2015. History of Overberg Agri Limited. (Personal interview). Caledon, South Africa.
- Uys, A. 2016. Sustainable profitability and growth – strategies implemented [personal interview]. 12 May, Paarl, South Africa.
- Van der Merwe, H. 2013. The agricultural sector against the backdrop of global and domestic challenges. Presentation as part of the outreach programme of the Governor of the Reserve Bank. Pretoria, South Africa: SARB. Date of access: 19 Jul. 2013.
- Van der Merwe, J.D.; Cloete; P.C.; Van Schalkwyk, H.D. & Kleynhans, E.P.J. 2016. The Competitive Status of the South African Wheat Industry. *Journal of Economic and Financial Sciences*. 9(3):651-666.
- Van Eeden, E.S. 2009. Tyd kweek wenners. Senwes – 'n Eeu van landbou. Pretoria: Seriti Printing.
- Van Niekerk, J.A.S. 1988. Cooperative theory and practice. Pretoria, South Africa: SAAU.
- Van Niekerk, J.A.S. 1994. Cooperative theory and practice – Addendum 1. SAAU. Pretoria, South Africa: SAAU.
- Van Rensburg, K. 2016. Sustainable profitability and growth – strategies implemented [personal interview]. 4 May, Pretoria, South Africa.
- Van Schalkwyk, H., Groenewald, J. & Jooste, A. 2003. Agricultural marketing in South Africa. The challenges of change: agriculture, land and the South African economy. University of Natal Press, Natal, South Africa: 119-136.
- Van Vuuren, S. 2012. Marketing Surveys and Statistical Analysis (MSSA). 2012. Kommersieële boere studie – Not published. Executed on behalf of Veeplaas, South Africa.
- Van Zyl, G. 2010. Does employee remuneration dispersion in the South African economy enhance labour productivity? The Gauteng manufacturing industry as a case study, *South African Journal of Human Resource Management*; 8(1):1-5.

- Visser, K. 2014a. 'n Hele 110. *Agri boer/farmer*. Aug/Sep. [110 years celebration issue, AGRI SA 1904 – 2014]. *Graan Suid-Afrika Amptelike Tydskrif*. 17(4):3-4.
- Visser, K. 2014b. Georganiseerde landbou in diens van die Suid-Afrikaanse boer van 1904 – 2014. *Agri boer/farmer*: Aug/Sep. [110 years celebration issue, AGRI SA 1904 – 2014]: 5-19.
- VKB, 2012. VKB Agriculture Limited: annual report, Reitz.
- VKB. 1980 – 2007. Vrystaat Cooperative Limited: financial report of the cooperative, (Various reports), Reitz.
- VKB. 2008 – 2011. Vrystaat Cooperative Limited: annual report, (Various reports), Reitz.
- VKB. 2012 & 2013. VKB Agriculture Limited: annual report, (Various reports), Reitz.
- Walker N.J. & Schulze R.E. 2008. Climate change impacts on agro-ecosystem sustainability across three climate regions in the maize belt of South Africa. *Agriculture, Ecosystems & Environment*. 124(1):114-124.
- Walsh, S. 2016. Sustainable profitability and growth – strategies implemented [personal interview]. 11 May, Malmesbury, South Africa.
- Weathersa, 2015. Weather SA databases. Pretoria: Weather SA. www.weathersa.co.za Date of access: 11 Nov. 2015
- WhatIs, 2016. What is business sustainability? TechTarget: Definitions from WhatIs.com. <http://whatIs.techtarget.com/definition/business-sustainability> Date access: 6 Oct. 2016.
- Willemse, J. 2014. SA landbou suig aan die agterspeen. *Landbouweekblad*, 34, 14 Nov.
- Wiltshire. 2016. What are key skills? www.wiltshire.ac.uk/learning/key_intro.asp. Date of access: 19 Jan. 2016.
- Windeed. 2015. Windeed – information is our business. www.windeed.co.za. <https://windeedsearch.co.za> Date of access: 19 Nov. 2015.
- Wooldridge, W. 2010. *Econometric Analysis of Cross Section and Panel Data*. Cambridge, Massachusetts: MIT Press.
- World Bank. 2016. Doing Business – measuring business regulations. Ease in doing business in South Africa. World Bank Report 2016. Washington, DC.: World Bank. <http://www.doingbusiness.org/data/exploreeconomies/south-africa> Date of access: 6 Oct. 2016.
- World Economic Forum (WEF). 2004. *Global Competitiveness Report*. Cambridge, Mass.: Harvard University.

- World Trade Organisation (WTO). 2015. Introduction to agricultural trade in the WTO. Geneva: WTO. https://wto.org/english/tratop_e/agric_e/agric_e.htm Date of access: 12 Oct. 2016.
- World Trade Organisation (WTO). 2016. Introduction to agricultural trade in the WTO. Geneva: WTO. https://www.wto.org/english/tratop_e/agric_e/agric_e.htm Date of access: 6 Oct. 2016.
- WTO (World Trade Organisation). 2015. Introduction to agricultural trade in the WTO. Geneva: WTO. https://wto.org/english/tratop_e/agric_e/agric_e.htm Date of access: 4 Oct. 2016.
- Wright B.D. 2011. The economics of grain price volatility. *Applied Economic Perspectives and Policy*, 33(1):32-58, Spring.
- Yates, T. 2009. Enhanced indexing strategies. Utilising futures and options to achieve higher performance. New Jersey: John Wiley.
- Zamagni, S. & Zamagni, V. 2010. Cooperative enterprise: facing the challenge of globalisation. Cheltenham, UK: Edward Elgar.
- Zook, C. & Allen, J. 2003. Growth outside the core. *Harvard Business Review*, 81(12):66-73.
- Zulauf, C.R., Schnitkey, G., Norden, C.T & Davidson, E. 2008. Price and profit: Investigating a conundrum. *Review of Agricultural Economics*, 30(2):352-359.

-oOo-

APPENDIX 1: Questionnaire: Sustainable Profitability and Growth of Agricultural Businesses in South Africa

An Agricultural Study in the Grain Sector

Company: _____ Date: _____

MD/CEO: _____ Signature: _____

Name

Questionnaire

Part 1

General information on Profitability and Growth.

- A. Why should an agricultural business grow?
- B. What are the appropriate steps to create an excellent agricultural business?

Part 2

Identification and weighing of Profitability drivers.

Part 3

Identification of growth drivers.

- A. Definition of growth drivers.
- B. Identification of key growth drivers.
- C. Other growth related questions.

Part 4

Strategies for growth.

- A. Definition of possible growth strategies.

B. Strategies used to grow over the period 2003 – 2013.

Part 1

General information on Profitability and Growth

A. “Why should your agricultural business grow?”

Objective: To determine the reason **your** agricultural business should grow.

Method: Allocate a percentage to one or more of the reasons provided below (should add up to 100 %).

1.	To achieve super brand recognition?	%
2.	To improve your cost position?	%
3.	To attract strong alliance partners?	%
4.	To gain better access to capital?	%
5.	To attract superior people?	%
6.	To raise profits?	%
7.	To obtain a superior strategic position?	%
8.	To generate superior value?	%
Total		100 %

- B.** “What, according to you, are the appropriate steps to create an excellent agricultural business?”(An excellent agricultural business is a highly profitable and high growth business).

Objective: To determine the appropriate steps that, according to you, will ensure an excellent agricultural business.

Method: Mark your answer with X. Reasons or explanations are optional.

1. Must the next MD/CEO be appointed internally or externally?

(a) Internally	
(b) Externally	
Reasons/Explanations:	

2. The remuneration of the MD/CEO has to be linked to the profit and growth of the agricultural business in a specific form or in no specific form?

(a) Specific form	
(b) No specific form	
Reasons/Explanations:	

3. The best results in creating an excellent agricultural business will be achieved by compiling and implementing a superior or no formal strategy?

(a) Superior strategy	
(b) No formal strategy	
Reasons/Explanations:	

4. The best chance to be successful in creating an excellent agricultural business is to focus primarily on what to do or equally on what not to do and on what to stop doing?

(a) Focus only on what to do	
(b) Focus on what to do and what not to do	
Reasons/Explanations:	

5. To create an excellent agribusiness, a technological (IT) strategical approach should be followed or technology (IT) should only be part of the larger strategy followed?

1.

(a) Technology based strategic approach	
(b) Technology only part of the larger strategic approach	
Reasons/Explanations:	

6. Do mergers and acquisitions form an integral part for the establishment of an excellent agricultural business?

(a) Yes	
(b) No	
Reasons/Explanations:	

7. In terms of creating and excellent agricultural business; should the focus be on 'managing change' or 'strategy' when it comes to the motivation of employees and the alignment of different business units?

(a) Change Management	
(b) An excellent strategy	
Reasons/Explanations:	

8. Part of creating an excellent agricultural business entails that the process has to have a name, timeline, launch event or programme to signify the business transformation process or propose a leap in business profitability and growth but not making use of a revolutionary process?

(a) Use a revolutionary process	
(b) Do not use a revolutionary process	

Reasons/Explanations:

9. Creating an excellent agricultural business is a function of circumstances or a matter of conscious choice?

(a) Function of circumstances	
(b) A matter of choice	
Reasons/Explanations:	

Part 2

Identification and Weighing of key Profitability Drivers

Objective: To weigh the profitability drivers regarding importance and probability for scenario building.

Method: Give a score between 1 and 6 separately for importance and probability in the table next to each driver with X under “Identification and Weighing of Drivers”.

Importance: 1 = Un-important, 6 = Very important. **(Importance on profitability)**

Probability: 1 = Very certain, 6 = Very uncertain. **(Probability to occur)**

		Identification and Weighing of Drivers											
		Importance						Probability					
Profitability Drivers		1	2	3	4	5	6	1	2	3	4	5	6
1.	POLITICS/GOVERNMENT												
1.1	Government Regulations.												
1.2	Rising energy costs.												
1.3	Inadequacy of basic infrastructure.												
1.4	Land reform successful.												
1.5	Compliance with BBBEE requirements.												
1.6	Compliance with EE (employment equity) requirements.												
1.7	Reduced regulatory burden on companies.												
1.8	Renewal of confidence.												
1.9	Political stability.												

1.10	Government support.													
		Identification and Weighing of Drivers												
		Importance						Probability						
Profitability Drivers		1	2	3	4	5	6	1	2	3	4	5	6	
2.	ECONOMICS													
2.1	Exchange rate volatility.													
2.2	Inflation.													
2.3	Economic growth.													
2.4	Creating jobs.													
3.	INVESTMENT													
3.1	Expected returns on capital investment.													
3.2	Returns on investments in Africa.													
3.3	Sound evaluation of investment opportunities.													
4.	HUMAN CAPITAL													
4.1	Availability of key skills.													
4.2	Succession planning for leadership positions.													
4.3	Stimulation of executive management through compensation initiatives to achieve long-term growth.													
4.4	Staff Training and Development.													
4.5	Talent Management.													
5.	COMPETITIVENESS													
5.1	Declining market environment.													
5.2	Security of the supply chain to producers.													
5.3	Prize competition.													
5.4	International competitiveness.													
5.5	Increasing exports.													

		Identification and Weighing of Drivers											
		Importance						Probability					
Profitability Drivers		1	2	3	4	5	6	1	2	3	4	5	6
6.	NATURE/ENVIRONMENT												
6.1	Climate change.												
6.2	Scarcity of natural resources.												
6.3	Consistent long-term environmental policies.												
6.4	Protection of the ecosystem and biodiversity.												
6.5	Rainfall – amount and distribution.												
7.	FINANCE												
7.1	Inability to finance growth.												
7.2	Producers (farmers) under financial pressure.												
7.3	Industry clients under financial pressure												
8.	MANAGEMENT												
8.1	Management of financial risks.												
8.2	Sound financial position of the company.												
8.3	Focus on the key long-term performance indicators.												
8.4	Ensuring compliance with laws and regulations.												
8.5	Ensuring high ethical standards.												
8.6	Effective cost management.												
8.7	Outsourcing of business processes or functions.												
8.8	Organisational structure.												
8.9	Focus on corporate reputation.												
8.10	Capital Structure.												
8.11	Income growth.												
8.12	Increasing gross profit.												
8.13	Improving asset turnover rate.												
8.14	Increasing operating profit.												
8.15	Increasing net finance income.												
8.16	Increasing dividends received.												

		Identification and Weighing of Drivers											
		Importance						Probability					
Profitability Drivers		1	2	3	4	5	6	1	2	3	4	5	6
8.17	Increasing net profit percentage.												
8.18	Increasing productivity.												
8.19	IT.												
8.20	Working capital ratio.												
8.21	Acid test.												
8.22	Stock turnover rate increased.												
8.23	Lowering stock shrinkage as a % of cost of sales and turnover.												
8.24	Lowering carry-over debt as a % of debtors.												
8.25	Positive cash flow.												
9.	STRATEGY												
9.1	Strategic plan (road-map).												
9.2	Medium term goals according to strategic plan.												
9.3	Adjusting business plans according to strategic plan.												
9.4	Annual adjusting of strategic plan on performance of achieving goals.												
9.5	Strategic alliances.												
9.6	Joint ventures.												
9.7	Mergers.												
9.8	Acquisitions.												
9.9	Utilising synergies.												
9.10	Geographic (generic) expansion												

		Identification and Weighing of Drivers											
		Importance						Probability					
Profitability Drivers		1	2	3	4	5	6	1	2	3	4	5	6
10.	GRAIN STOCK AND PRICES												
10.1	Volume of grain production.												
10.2	Local carry out grain stock.												
10.3	International carries out grain stock.												
10.4	Local input prices.												
10.5	International crude oil prices. (Brent).												
11.	BUSINESS MODEL												
11.1	Area under irrigation.												
11.2	Involvement in low risk sectors (livestock).												
11.3	Simple business models.												
11.4	Value adding industries.												
11.5	Extent of diversification.												
11.6	Servicing emerging farmers.												
11.7	Corporate farming.												
11.8	Large commercial farmers.												
11.9	Small Commercial Farmers												
12.	MARKET SHARE												
12.1	Retention of market share.												
12.2	Increasing market share.												

Part 3

A. Definition of growth drivers

Outline of key growth drivers identified in the literature:

Growth driver	Explanation
Access to capital	Access to capital ensures that a business can finance growth opportunities
Acquisitions	Acquisitions provide key resources which are integral to growth and result in an instant increase in size
Customer enthusiasm	Enthusiastic customers are likely to spread the story of the business's experience. This will win new customers for the business.
Discipline	Discipline entails defining the outcomes needed to meet the business's objectives; and then relentlessly focusing on the achievement of those outcomes.
Effective networks/key strategic relationships	A feature of the new economy is highly-configured value/supply chains. These relationships can improve the quality and cost profile of a business or provide access to new technology, processed or products which can drive new sales opportunities.
Effective performance measurement systems	What gets measured, get managed. An effective Performance Measurement System aligns staff focus with the goals and growth objectives of the business.
Excellent execution	Excellent execution involves effectively implementing the business's strategy.
Focus on growth	The importance of growth to the organisation must be clearly communicated to all staff in order for the growth to be realised.
GDP growth	Growth in the economy is posited to positively influence a business's growth rate.
Geographical expansion	An expansion of the business's operations into new geographic locations opens new markets to the business and allows existing products to be sold to new customers.
Happy people	A happy workforce is posited to be a more effective workforce who will contribute to higher growth.
Industry growth	Growth in the industry in which a business operates is posited to positively influence a business's growth rate.
Innovation	Innovation encompasses advancements or new developments in resources, processes or business modes. Thus innovation allows improved execution and market penetration; growth as a result of new product development; or growth as a result of pursuing a new and more lucrative business model.
Knowledge of customers	An in-depth understanding of customers will allow customers to be better serviced and will suggest new product opportunities for future growth.

Leadership	Leaders who possess professional will and personal humility are posited to contribute to higher levels of growth.
------------	---

Growth driver	Explanation
Level of competition	If there is a reduction in competition, it is expected that the reduction in supply will place the business in a favourable competitive position and contribute to higher growth.
Managerial talent	It is posited that management talent is essential for growth. Managerial talent and experience allows people to identify and pursue opportunities and to make sound strategic decisions.
Regulation	Favourable or unfavourable regulation can provide a competitive advantage/disadvantage, which may enable the company to achieve higher growth rates.
Repeatable growth processes	To be effective, businesses must understand the processes they need to follow in order to grow. Businesses that have identified processes they can repeat in order to grow will be more adept at and more likely to achieve growth.
Simple, captivating business model	A simple business model ensures that the business's objectives are understood and serves as a rallying cry for the business's employees.
Strategy	A strategy which effectively links the goals, values, capabilities, resources and systems of the firm with the competitive environment should result in superior growth for the business.
Talent incubator	Managerial talent is scarce and valuable. In order to ensure the business has adequate future management skills it is necessary to incubate and develop talent.

B. Identification of key growth drivers

Objective: To determine the relative importance of the drivers on the growth achieved in the period 2003 – 2013.

Question/ Method: Please rank each of the identified growth drivers in the Table below by marking the relative importance of each with an X.

1 = Not important, 6 = Very important

Growth driver	Relative importance						Growth driver	Relative importance					
	1	2	3	4	5	6		1	2	3	4	5	6
Access to capital							Industry growth						
Acquisitions							Innovation						
Customer enthusiasm							Knowledge of customers						
Discipline							Leadership						
Effective networks/key strategic relationships							Level of competition						
Effective performance measurement systems							Managerial talent						
Entrepreneurship							Regulation						
Excellent execution							Repeatable growth processes						
Focus on growth							Simple, captivating business Mode.						
GDP growth							Strategy						
Geographical expansion							Talent incubator						
Happy people							Other						

C. General growth related questions

Objective: To get insight in other growth related aspects.

Method: Please give your answer next to the question.

1. What percentage of your 2013 revenue and earnings comes from acquisitions made since 2003?

	2013	2003
Revenue	%	%
Earnings	%	%

2. What portion of revenues are from new investments in your business since 2003?

	%
--	---

3. What percentage of management staff know, understand and could explain simply to a stranger the Business model?

2013	2003
%	%

4. Are there specific forums to incubate new ideas/opportunities/growth within the business?

YES	NO
-----	----

5. Does the business formalise growth into repeatable processes?

YES	NO
-----	----

6. On a scale of 1-6 to what extent does your Project Management System drive a growth focus? (1 being not at all; 6 being to 'n great extent)

1	2	3	4	5	6

7. How many levels of management are there in the organisation?

	Levels
--	--------

8. Did you achieve your budget expectations in each of the years 2003 to 2013?

	Number out of 11 years
--	------------------------

9. What is the average staff turnover rate in 2003? 2013?

2013	2003
%	%

Appendix 1 continued

10. Is there a formal talent development programme?

YES	NO

11. If yes, on a scale of 1-6, how would you rank the effectiveness?

1	2	3	4	5	6

12. Is discussion around future growth of the business part of the current agenda on executive meetings?

YES	NO

13. If so, what proportion of the meeting is allocated to the discussion?

	%
--	---

14. On a scale of 1-6, how dependent are you on your strategic partners? (1 being not at all dependent; 6 being very dependent)

(b) Suppliers

1	2	3	4	5	6

(c) Financial Institutions

1	2	3	4	5	6

(d) Investors

1	2	3	4	5	6

(e) Partners in JV's

1	2	3	4	5	6

Appendix 1 continued

(f) Value adding partner (Operational Partner)

1	2	3	4	5	6

15. (a) On a scale of 1 – 6, how well do you understand your key producer (farmer)?
(1 being not at all; 6 being very well)

1	2	3	4	5	6

(b) On a scale of 1-6, how well do you understand your key industry client?
(1 being not at all; 6 being very well)

1	2	3	4	5	6

16. In how many provinces in SA did you operate in 2003? In 2013?

2003		2013	
	number		number

17. In how many countries did you operate in 2003? In 2013?

2003		2013	
	number		number

18. (a) What proportion of your total revenue is made in Africa (Outside South Africa)?

	%
--	---

(b) What proportion of your net profit is made in Africa (Outside South Africa)?

	%
--	---

19. On a scale of 1 – 6, how easy has it been for you to access capital? (1 being very difficult; 6 being very easy)

1	2	3	4	5	6

18. On a scale of 1 – 6, how easy was it doing business in South Africa in 2003? In 2013?

2003					
1	2	3	4	5	6

(Regulatory requirements) (1 being very difficult; 6 being very easy)

2013					
1	2	3	4	5	6

19. How many employees did the agricultural business employ at the end of each financial year since 2003 to 2013?

Financial Year	Number Permanent Employees	Number Temporary Employees	Number Total Employees
2003			
2004			
2005			
2006			
2007			
2008			
2009			
2010			
2011			
2012			
2013			

Part 4

Strategies for growth

A. Definition of Possible Growth strategies used by businesses

1. Increasing value to select customers (**“customer-centric strategic”**);
2. Rapidly developing new products that offer superior value to customers (**“product development strategy”**);
3. Connecting customers with the business’s products and services in the most effective way (**“distribution strategy”**);
4. Establishing control of a market and then growing as it grows (**“first mover strategy”**);
5. Acquiring and consolidating businesses to achieve significant scale, and to increase market share (**“acquisition strategy”**);
6. Pushing out the boundaries of the business’s core business into an adjacent space (**“adjacent space strategy”**);
7. Understanding the market and how it is likely to change in order to optimally position the business (**“market intelligence strategy”**);
8. Differentiating the business’s products and services in order to become the indispensable provider of choice to its customers (**“differentiation strategy”**);
9. Ensuring the business is disciplined financially and operationally so that it has the flexibility and “fitness” to weather any adverse conditions as well as pursue any opportunities that arise (**“fitness strategy”**);
10. Expanding the business by means of forward or backward integration i.e. acquiring suppliers or customers of the business to capture more of the value chain (**“forward /backward integration strategy”**);
11. Partnering with key suppliers or service providers to establish a difficult to replicate competitive advantage (**“partnership strategy”**);
12. Ensuring that the cost structure of the business is as low as possible to secure a position of cost leadership (**“cost leadership strategy”**);
13. Constant re-investment in the business and future growth opportunities to ensure the sustainability of growth (**“strategy of constant re-investment for growth”**);
14. Emphasis on risk management to ensure that excessive risk is not assumed when pursuing growth. This ensures that the growth achieved is sustainable (**“risk management strategy”**);
15. Ensuring that the business has adequate resources and a strong balance sheet to allow it to pursue growth opportunities (**“strong balance sheet for growth”**);
16. People are the key differentiator providing a competitive advantage (**“people strategy”**); and
17. Structuring the business and incentivising key staff to achieve the growth objectives of the business (**“alignment and incentivisation for growth”**)

B. Growth Strategies used by Agricultural Businesses in the grain sector

Objective: To determine the strategies used to grow over the period 2003 – 2013.

Method: Mark with an X to indicate to what extent the different strategies were used over the period 2003 – 2013.

STRATEGY	0 = Not at all		5 = Constantly			
	0	1	2	3	4	5
1. Customer centrist strategy						
2. Product development strategy						
3. Distribution strategy						
4. First mover strategy						
5. Acquisition strategy						
6. Adjacent space strategy						
7. Market intelligence strategy						
8. Differentiation strategy						
9. Fitness strategy						
10. Forward/backward integration strategy						
11. Partnership strategy						
12. Cost leadership strategy						
13. Strategy of constant re-investment for growth						
14. Risk management strategy						
15. Strong balance sheet for growth						
16. People strategy						
17. Alignment and incentivisation for growth						

Thank you very much for your participation in this research study

APPENDIX 2: STATISTICAL ANALYSES – 1980 TO 2013 AND 2003 TO 2013

Almal 1980_2013 reël met voorspellers: Getransformeerde Bedryfsinkomste_voor_rente,
Netto_Bedryfsbates

Senwes – netto wins na belasting hersien

The PANEL Procedure

Panel Poolability Tests

Model: model vir FDONE

Dependent Variable: T_netto_wins_na_belasting

Poolability Test Results

Restricted Model	F	Pr > F	LR	Pr > LR
FIXONE	3.27	<.0001	49.19	<.0001
POOLED	3.18	<.0001	61.71	<.0001

Almal 1980_2013 reël met voorspellers: Getransformeerde Bedryfsinkomste_voor_rente,
Netto_Bedryfsbates

Senwes – netto wins na belasting hersien

The PANEL Procedure

Panel Cross Sectional Dependence Tests

Model: model vir FDONE

Dependent Variable: T_netto_wins_na_belasting

Cross Sectional Dependence Test Results

BP's LM Test		BP's LM (Normalised)		Pesaran's CD Test	
BP	Pr > BP	BPs	Pr > BPs	CD	Pr > CD
47.40	<.0001	5.91	<.0001	6.07	<.0001

Almal 1980_2013 reël met voorspellers: Getransformeerde Bedryfsinkomste_voor_rente,
Netto_Bedryfsbates

Senwes – netto wins na belasting hersien

The PANEL Procedure

Panel Stationarity Tests

Model: model vir FDone

Dependent Variable: T_netto_wins_na_belasting

Breitung Test Options

ADF Lags	MAIC
Maximum ADF Lags	8

Breitung Test Results

Deterministic Variables	UB Test		Robust t			GLS t		
	UB	Pr < UB	phi	t	Pr < t	GLS phi	t	Pr < t
Zero Mean	1.24	0.8925	0.0097	0.07	0.5267	0.0116	1.52	0.9362
CS Fixed	-0.41	0.3406	-0.0217	-1.74	0.0413	-0.0307	-0.73	0.2330
CS Fixed, Time	1.40	0.9190	0.0468	0.75	0.7736	0.0342	1.05	0.8531
TS Fixed	-2.31	0.0104	-0.1122	-2.54	0.0056	-0.1416	-5.64	<.0001
CS, TS Fixed	-1.13	0.1299	-0.0551	-1.77	0.0384	-0.0717	-2.98	0.0014

Almal 1980_2013 reël met voorspellers: Getransformeerde Bedryfsinkomste_voor_rente,
Netto_Bedryfsbates

Senwes – netto wins na belasting hersien

The PANEL Procedure

First Difference Estimates for One-Way

Model: model vir FDone

Dependent Variable: T_netto_wins_na_belasting

Model Description

Model Statement Label	model vir FDone
Estimation Method	FDOne
Number of Cross Sections	6
Time Series Length	34

Fit Statistics

SSE	8660651.807	DFE	190
MSE	45582.3779	Root MSE	213.5003
R-Square	0.7635		

F Test for No Fixed Effects

Num DF	Den DF	F Value	Pr > F
5	190	10.62	<.0001

Parameter Estimates

Variable	DF	Estimate	Standard Error	t Value	Pr > t	Label
CS1	1	328.9772	113.7	2.89	0.0043	Cross Sectional Effect 1

Variable	Parameter Estimates					Label
	DF	Estimate	Standard Error	t Value	Pr > t	
CS2	1	-70.5936	62.7730	-1.12	0.2622	Cross Sectional Effect 2
CS3	1	76.6796	69.9728	1.10	0.2745	Cross Sectional Effect 3
CS4	1	159.9883	60.5966	2.64	0.0090	Cross Sectional Effect 4
CS5	1	413.212	111.7	3.70	0.0003	Cross Sectional Effect 5
Intercept	1	-2736.09	372.8	-7.34	<.0001	Intercept
Mpy_Koop	1	-126.641	87.6512	-1.44	0.1502	
T_bedryfsinkomste_voor_rente	1	87.39253	6.9577	12.56	<.0001	
T_netto_bedryfsbates	1	0.03204	0.0137	2.34	0.0205	

Almal 1980_2013 reël met voorspellers: Getransformeerde Bedryfsinkomste_voor_rente,
Netto_Bedryfsbates

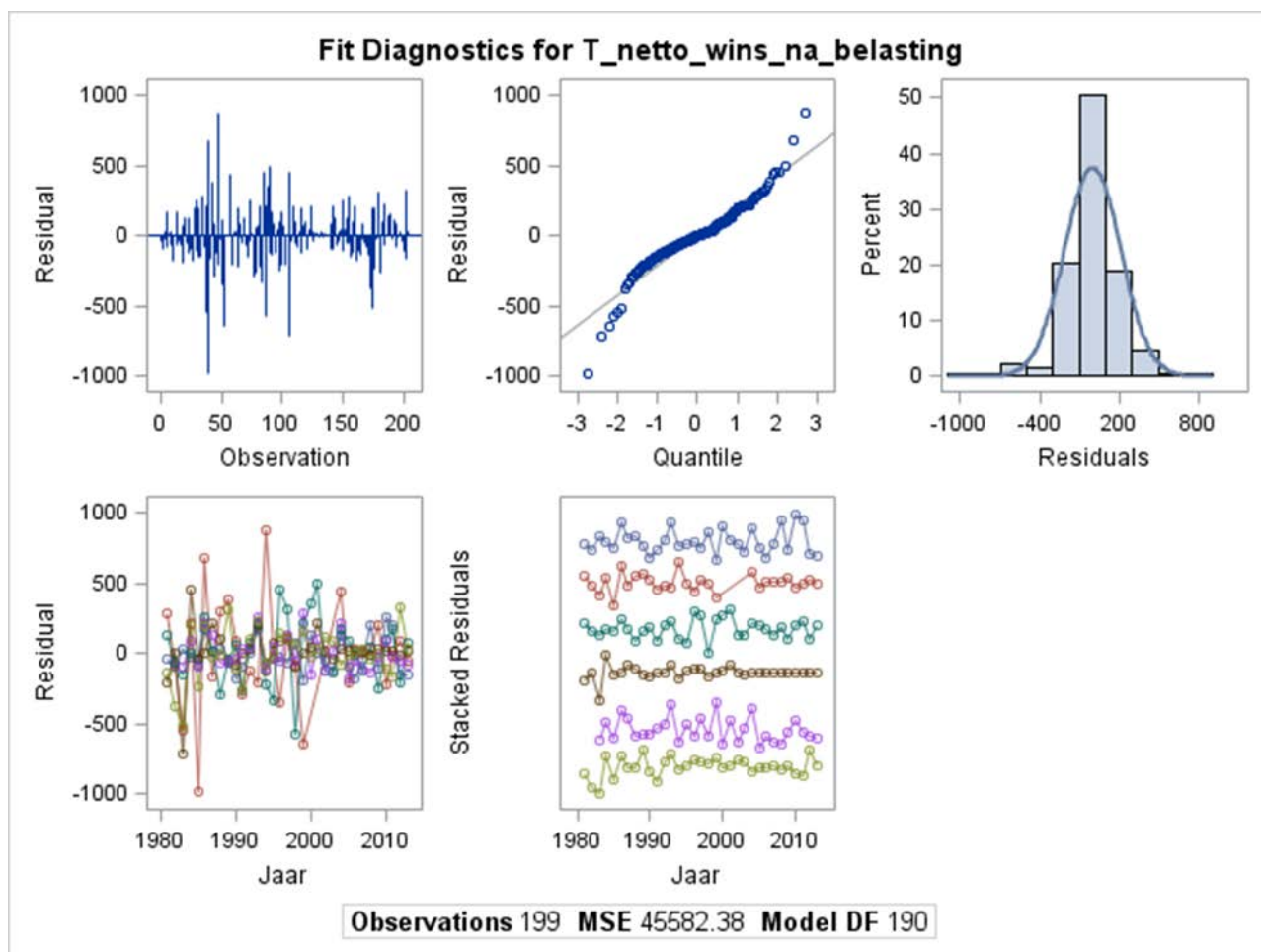
Senwes – netto wins na belasting hersien

The PANEL Procedure

First Difference Estimates for One-Way

Model: model vir FDONE

Dependent Variable: T_netto_wins_na_belasting



Alle Mpy 2003 tot 2013 reël, Transformasies

The PANEL Procedure

Panel Poolability Tests

Model: model vir FDone

Dependent Variable: T_net_profit_after_tax

Poolability Test Results

Restricted Model	F	Pr > F	LR	Pr > LR
FIXONE	4.58	<.0001	176.31	<.0001
POOLED	5.18	<.0001	210.83	<.0001

Alle Mpy 2003 tot 2013 reël, Transformasies

The PANEL Procedure

Panel Cross Sectional Dependence Tests

Model: model vir FDone

Dependent Variable: T_net_profit_after_tax

Cross Sectional Dependence Test Results

BP's LM Test		BP's LM (Normalised)		Pesaran's CD Test	
BP	Pr > BP	BPs	Pr > BPs	CD	Pr > CD
78.65	0.1367	2.06	0.0198	0.63	0.5294

Alle Mpy 2003 tot 2013 reël, Transformasies

The PANEL Procedure

Panel Stationarity Tests

Model: model vir FDone

Dependent Variable: T_net_profit_after_tax

Combination Test Options

Kernel	Quadratic
Bandwidth Method	Andrews(91)
Time Series Unit Root Test	PP Test

Alle Mpy 2003 tot 2013 reël, Transformasies

The PANEL Procedure

Panel Stationarity Tests

Model: model vir FDone

Dependent Variable: T_net_profit_after_tax

Combination Test Results with PP Rho

Deterministic Variables	Fisher Test		Asymptotic Fisher Test		Inverse Normal Test		Logit Test	
	Chi-Square	Pr > ChiSq	FisherI	Pr > FisherI	Z	Pr < Z	L*	Pr < L*
Zero Mean	8.93	0.9977	-2.18	0.9852	1.77	0.9616	1.61	0.9435
CS Fixed	12.81	0.9692	-1.62	0.9469	2.21	0.9864	2.76	0.9962
CS Fixed, Time	23.92	0.4660	-0.01	0.5045	0.87	0.8074	1.64	0.9467
TS Fixed	34.08	0.0833	1.45	0.0729	-1.01	0.1561	-0.78	0.2181
CS, TS Fixed	45.46	0.0051	3.10	0.0010	-2.09	0.0184	-1.44	0.0769

Combination Test Results with PP Tau

Deterministic Variables	Fisher Test		Asymptotic Fisher Test		Inverse Normal Test		Logit Test	
	Chi-Square	Pr > ChiSq	FisherI	Pr > FisherI	Z	Pr < Z	L*	Pr < L*
Zero Mean	7.31	0.9996	-2.41	0.9920	3.73	0.9999	3.83	0.9999
CS Fixed	16.44	0.8717	-1.09	0.8625	2.88	0.9980	6.44	1.0000
CS Fixed, Time	25.45	0.3818	0.21	0.4173	0.82	0.7933	1.30	0.9009
TS Fixed	37.60	0.0381	1.96	0.0249	-1.88	0.0301	-1.84	0.0355
CS, TS Fixed	32.42	0.1169	1.22	0.1121	-0.73	0.2327	-0.41	0.3432

Alle Mpy 2003 tot 2013 reël, Transformasies

The PANEL Procedure

First Difference Estimates for One-Way

Model: model vir FDone

Dependent Variable: T_net_profit_after_tax

Model Description

Model Statement Label	model vir FDone
Estimation Method	FDOne
Number of Cross Sections	12
Time Series Length	11

Fit Statistics

SSE	76.8701	DFE	113
MSE	0.6803	Root MSE	0.8248
R-Square	0.7949		

F Test for No Fixed Effects

Num DF	Den DF	F Value	Pr > F
11	113	8.51	<.0001

Parameter Estimates

Variable	DF	Estimate	Standard Error	t Value	Pr > t 	Label
CS1	1	-0.74248	0.5507	-1.35	0.1802	Cross Sectional Effect 1
CS2	1	0.437879	0.4281	1.02	0.3085	Cross Sectional Effect 2

Variable	Parameter Estimates					Label
	DF	Estimate	Standard Error	t Value	Pr > t	
CS3	1	0.136919	0.4342	0.32	0.7531	Cross Sectional Effect 3
CS4	1	0.668952	0.4922	1.36	0.1768	Cross Sectional Effect 4
CS5	1	0.619927	0.5182	1.20	0.2341	Cross Sectional Effect 5
CS6	1	-0.16277	0.5196	-0.31	0.7546	Cross Sectional Effect 6
CS7	1	0.09823	0.5331	0.18	0.8541	Cross Sectional Effect 7
CS8	1	0.697101	0.5214	1.34	0.1839	Cross Sectional Effect 8
CS9	1	0.679182	0.3732	1.82	0.0714	Cross Sectional Effect 9
CS10	1	-0.06531	0.4354	-0.15	0.8811	Cross Sectional Effect 10
CS11	1	0.401288	0.4553	0.88	0.3800	Cross Sectional Effect 11
Intercept	1	4.978968	1.8127	2.75	0.0070	Intercept
T_current_assets	1	-0.41728	0.2365	-1.76	0.0803	
T_EBITDA	1	0.886932	0.0930	9.54	<.0001	
T_property_plant_en_equipment	1	-0.55351	0.4822	-1.15	0.2534	
T_Retained_earnings	1	0.201133	0.0931	2.16	0.0329	

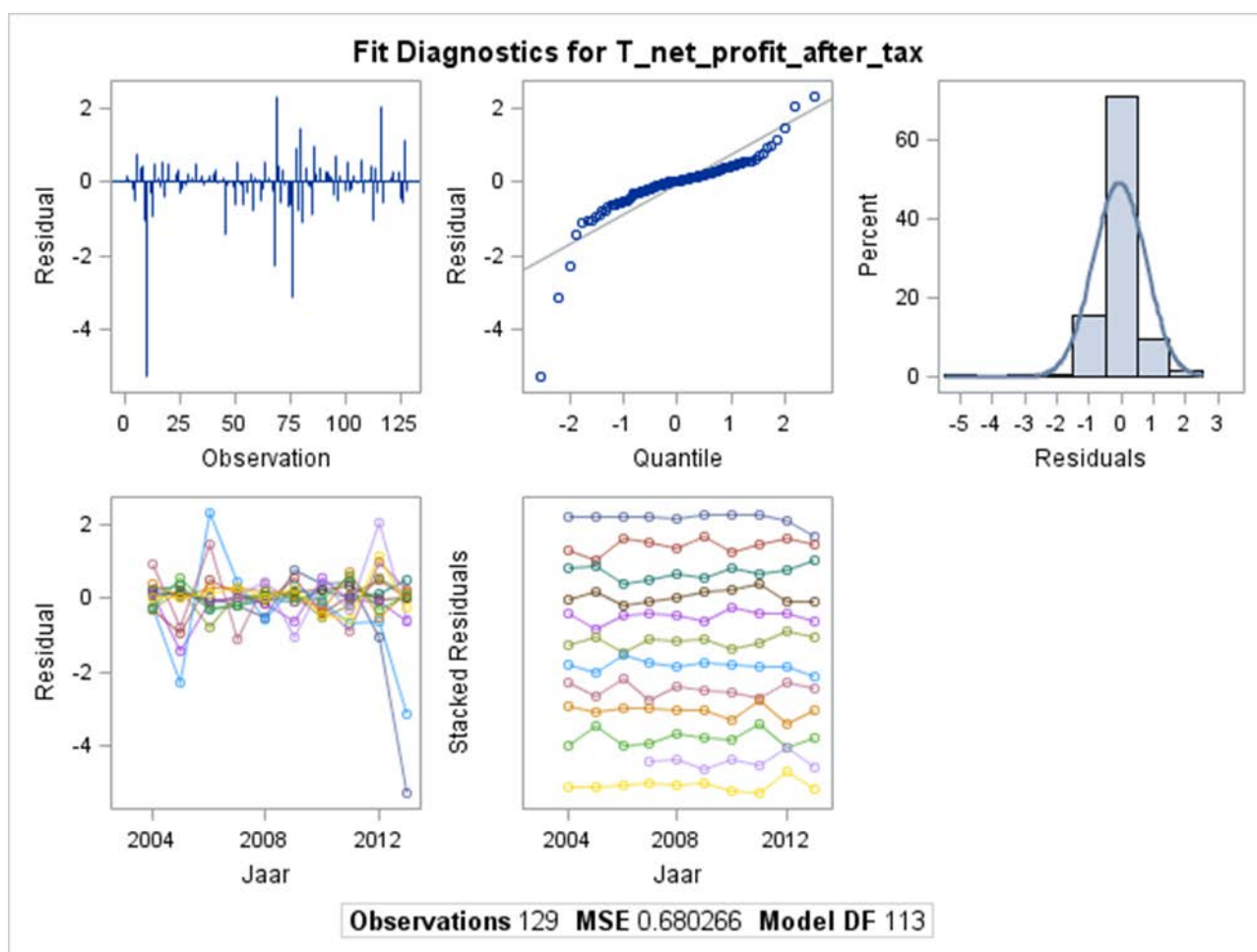
Alle Mpy 2003 tot 2013 reël, Transformasies

The PANEL Procedure

First Difference Estimates for One-Way

Model: model vir FDone

Dependent Variable: T_net_profit_after_tax



-o0o-