

**Exploring the Effects of the Strategic Behaviours of
Family and Non-family Businesses on Regional
Development: Evidence from Kenya**

MURITHI WILIAM KARANI (MSc, BCom)

Thesis submitted to the
Faculty of Business and Law
In partial fulfilment of the requirements for the
Degree of Doctor of Philosophy

De Montfort University

APRIL 2019

DEDICATION

In the memory of my loving

Grandmothers:

Rebecca M'Ithinyai (Taata) and Evangeline M'Marete

You lived long enough to see me start this stage of my education journey but were not able to see the culmination of many years of your prayers and sacrifices. I know you are smiling from heaven and that made it worth the struggle and sacrifices so far.

To my friends and PhD candidates

Your Journey is Yours.

What levels you climb, what success you achieve, is unique to you. Where others are in their journey should never distract you; focus on your steps. Do not let the perception of where you need to dictate the pace of your progress. Personal growth is a manifestation of your walk, not theirs. Travel your road as you see it.

Anonymous

ACKNOWLEDGEMENTS

First of all, I'm grateful to the Most High God for His guidance throughout the PhD journey.

“For the Lord gives wisdom....” (Proverbs 2:6).

I extend my gratitude to my first supervisor Dr Kassa Woldesenbet Beta for the consistent support and invaluable guidance provided throughout the process. Also, I acknowledge Prof Christos Kalantaridis for stepping into the team and providing insightful suggestions that strengthen the thesis. Further, special gratitude to Dr Natalia Vershinina for her believe in my abilities to undertake the research degree and nurturing my ideas during the initial phases. I'm forever indebted to you all for your professionalism, which has enabled me to push myself beyond my limitations to be a better researcher.

I also acknowledge De Montfort University, which funded this research through the High-flyer Scholarship Scheme. Without this, it would not have been possible. In addition, I appreciate the staff at the Doctoral College and Faculty of Business and Law for their support and understanding through the period. I recognise that this research would not have been possible if it was not for the many respondents who gave their time to fill in the questionnaires and endure many reminders from me.

Special thanks to my parents, Samuel Murithi and Mary Naitore. Your decision and sacrifices over the years paid off; you planted the greated seed for my education. I'm grateful to my best friend, Dr Mercy Ngunjiri, for being my greatest supporter, choosing to share her love, kindness and encouragement through the journey, we made it! To Mama, your prayers did touch the heart of God. To my brother, Felix, and sisters, Gatwiri, Kanyua, Caroline and Karimi, thank you for your understanding, prayers and support. Many thanks to my colleagues; Dr Ed, Dr Giwa, Dr Mumbi, Dr Adekunle, Dr Mfon, Dr Warda, Dr English, Dr Evans, privileged to know you. To Mohamed Yahya, Evans Kariuki, Jasron Akoyi, Moses Kihumba, Kevin Muriithi, Jane Karuoya, Eunice Wangare and DevSmartians (9), your encouragement, friendship and prayers strengthened my resolve to complete the journey. A big thank you to my uncle and aunt Mr and Mrs Kinyua Mburia for your support. I now pass the baton to your son Kelvin Mugambi; you can do it!

Additionally, I thank the editors and reviewers of Journal of Small Business and Entrepreneurship Development (JSBED) and International Journal of Entrepreneurship

Behaviour (IJEER) for facilitating the publication of two spin-off papers from this research. Also, for providing an opportunity to review several research articles that have shaped my research skills and critical analysis. Also, to editors and reviewers of the British Academy of Management (BAM), Institute of Small Business and Enterprise (ISBE), European Academy of Management (Euram), Global Economic Geography Conference (GEGC) and Africa Academy of Management (AFAM) for accepting and facilitating presentations of research the papers stemming from this study. In addition, the Family Business Review (FBR), Centre for Family Business, Lancaster, and DMU Doctoral College for facilitating several posters presented that shaped my thoughts during my study.

Finally, I extend my appreciation to everyone who, in one way or another, had an impact on my education journey. God bless you all.

ABSTRACT

Family business theories describe the differences between family and nonfamily businesses, but do not fully explain the firm-level strategic behaviours that contribute to their differences, particularly on their regional impact. Scholars acknowledge that family businesses are a unique set of economic actors because of the intersection between family and business logics thus they can alter regional development dimensions differently compared to their counterparts. Drawing on a multidimensional approach regarding perspectives of firm-level entrepreneurship, this study examined how the strategic behaviours differed between family and non-family businesses and to what extent they predict their differentiated contribution to regional development.

The study employed a quantitative survey approach using structural equation modelling to analyse data collected from 307 privately held businesses operating in Kenya, which is an under-researched context. The analysis established significant relationships between firm-level strategic behaviours and regional development dimensions. Therefore, the findings confirmed that a multidimensional approach is best suited to explain how the two types of firms differ in their strategic behaviours and contribution to regional development.

The study contributions to theory is threefold: First, the study extends our understanding of the effects of entrepreneurial behaviours within family and nonfamily firms. Despite nonfamily businesses exhibiting statistically stronger relationships between firm entrepreneurial orientation, firm performance and involvement in industrial clusters, family businesses are likely to contribute more to regional development. Secondly, contrary to the suggestions that family participation in decision-making would positively enhance firms contribution to regional development, the study established that they inhibited firm contribution to regional development as the effects was pronounced compared to nonfamily businesses. Thirdly, the study established that although both firms established strong bridging social capital that positively enhanced their regional impact, family firms tended to focus more on developing their internal social capital. Thus, the level of family involvement in the firm moderates the relationship between firm level strategic behaviours and regional development outcomes.

Further, the study contributes to the family business theory by developing and testing a multi-dimensional approach in exploring firm level strategic behavioural influences on regional development. Empirically, it was the first multi-level study to provide quantitative evidence demonstrating the extent and limits of strategic behaviours on regional development, focused on a developing economy. Finally, the study offers a few practical and policy implications for consideration.

Keywords: Family Business, Non-Family Business, Strategic Behaviours, Regional Development, Developing Economies, Kenya

LIST OF PUBLICATIONS AND DECLARATION

I hereby declare that the following journal articles, conference and posters were developed either directly or indirectly as a result of the research conducted and writing of the thesis. Copies of the abstracts have been attached in the **Appendix 19**.

Journal Publications	Title of Paper
International Journal of Entrepreneurial Behavior & Research (IJEBR)	Murithi, W., Vershinina, N., Rodgers, P. (2019) "Where less is more: institutional voids and business families in Sub-Saharan Africa", <i>International Journal of Entrepreneurial Behavior & Research</i> , https://doi.org/10.1108/IJEBR-07-2017-0239 Permanent link to this document: https://doi.org/10.1108/IJEBR-07-2017-0239
Journal of Small Business and Enterprise Development (JSBED)	Vershinina, N., Woldesenbet Beta, K., & Murithi, W. (2018). How does national culture enable or constrain entrepreneurship? Exploring the role of Harambee in Kenya. <i>Journal of Small Business and Enterprise Development</i> , 25(4), 687-704.
Conferences	
British Academy of Management (BAM)	Murithi, W. and Woldesenbet, K (2018) Firm Entrepreneurship and Regional Economic Development: The Role of Family Involvement in the Firm, submitted to the British Academy of Management (BAM) to be held in Sept 3-5 in Bristol 2018
Global Conference on Economic Geography (GCEG)	Murithi, W. (2018) Family firms and regional Economic Development: What is the role of Industrial Clusters and firm growth in emerging economies, presented at the 5 th Global Conference on Economic Geography held in Cologne, Germany 24-28 th July 2018.
Africa Academy of Management (AFAM)	Murithi, W. Vershinina, N. and Rodgers, P. (2018) Understanding the Institutional Environment influence on Family Businesses: A Focus on Sub-

Saharan Africa, submitted to the 4th Biennial Conference of the Africa Academy of Management (AFAM) held on the 3-6 January at the Addis Ababa University in Ethiopia

European Academy of Management (EURAM)

Murithi, W., Woldeesenbet, K., and Vershinina, N. (2017) Do 'Harambee Spirit' and 'Familianness' share their meanings in the context of ICT Sector Family Businesses in Kenya? Paper presented at 17th European Academy of Management Annual Conference, 21- 24th June, Glasgow, UK.

Research Poster Presentation

DMU Annual Research Poster Competition

Murithi, W. (2018). When does family involvement in the business make a difference to regional economic development? Presented at the De Montfort University Annual research poster competition in 11th April 2018.

De Montfort University Poster Competition

Murithi, W. (2018). When does family involvement in a business make a difference in regional economic development? De Montfort University Poster Competition 20th March 2018.

British Academy of Management (BAM) Portsmouth, England, September 2015

Murithi, W (2015), Egg or Chicken: Do family-ownership influence firm's involvement in industrial/regional clusters, research poster presented at the British Academy of Management (BAM) annual conference, Portsmouth, England, September 2015

TABLE OF COTENTS

DEDICATION.....	3
Acknowledgements.....	i
ABSTRACT	iii
LIST OF PUBLICATIONS AND DECLARATION	iv
TABLE OF COTENTS	6
List of Abbreviations	16
List of Figures.....	19
List of Tables	20
CHAPTER 1: INTRODUCTION OF THE THESIS	22
1.0: Introduction	22
1.1: Background of the Study	23
1.2: Motivation for the Study	28
1.3: Research Problem	30
1.4: Research Objectives.....	30
1.5: Research Methods.....	31
1.7: Significance of the Study	32
1.8: The Layout of the Chapters.....	34
1.9: Summary of the Chapter	36
CHAPTER 2: LITERATURE REVIEW: THE ROLE OF FAMILY BUSINESSES ON REGIONAL DEVELOPMENT.....	37
2.0 Introduction.....	37
2.1: Systematic Literature Review.....	37
2.2: Defining Family Firms.....	39
2.3: Typologies of Family Firms.....	43
2.3.1 The Two-circle and Three-circle Models of the Family Business	43
2.3.2: The Bull’s Eye Model (BEM) (Shanker and Astrachan, 1996)	45
2.3.3: The Sustainable Family Business Model (SFB) (Stafford, Duncan, Dane and Winter, 1999).....	46
2.4: Review of Family and Non-family Firms Performance.....	48
2.5: Does Family Firms’ Prevalence or Embeddedness have any Impact on Regional Development? 54	

2.6: The Involvement of Family Firms in Industrial Clusters	57
2.7: Conceptual Perspectives Linking Family Firms and Regional Development.....	63
2.8: Conceptual Models Exploring the link between Family Businesses and Regional Development	65
2.8.1: A Networked Model of Sustainable Industrial District Networks	65
2.8.2 A Framework for Entrepreneurship and FFs	66
2.8.3: A Multilevel Model Explaining Strategic Entrepreneurship Impact on Regional Development	67
2.8.4: A Model of Regional Development.....	68
2.8.5: Linking Family Firms and Regional Development.....	69
2.8.6 Theoretical Framework for the Study: Family Firms’ Regional Development Impact	71
2.9: Research Gap and Questions for the Study	73
2.10: Chapter summary	75
CHAPTER 3: FAMILY BUSINESS PERSPECTIVES AND HYPOTHESIS DEVELOPMENT	76
3.0 Introduction.....	76
3.1 Strategic Behaviour in Family Businesses	76
3.2: Family Involvement in the Family Business	78
3.3.1: Family Involvement and Family-Centred Goals	80
3.3.2: Family Involvement and the Preservation of Socioemotional Wealth (SEW)	82
3.3.3: Family Involvement and ‘Familianness’	84
3.4: Family Influence on Firm Entrepreneurial Behaviour and Performance	88
3.4.1: Family Involvement and Innovativeness	91
3.4.2: Family Involvement and Risk-taking	92
3.4.3: Family Involvement and Proactiveness	93
3.4.4: Family Involvement and Competitive Aggressiveness	95
3.4.5: Family Involvement and Autonomy	96
3.5: Evaluating Theories Used in Studying Family Businesses and Hypothesis Development.	99
3.5.3 Social Capital Theory (SCT).....	111

3.6: Dimensions of the Theoretical Framework	117
3.6.1: Firm Entrepreneurial Orientation	117
3.6.2: Firm Decision-Making Strategy	118
3.6.3: Firm Bridging Social Capital.....	118
3.6.4: Firm Involvement in Industrial Clusters	119
3.6.5: Firm Performance	120
3.6.6: Regional Development.....	120
3.6.7: Family Involvement	121
3.7.1: The Effects of FEO on Regional Development	123
3.7.2: The Effects of FDMS and Regional Development	124
3.7.3: The Effects of FBSC and Regional Development	125
3.7.4: The Mediating Role of FIIC on the Relationship between Firm Strategic Behaviours and RD	126
3.7.5: The Mediating effects of Firm Performance on the Relationship between Firm Strategic Behaviours and RD	126
3.7.6: The Role of Family Involvement in the Firm on the Relationship between Firm Strategic Behaviours and RD	127
3.8: Summary of the Chapter	128
Chapter 4: Empirical Research Context	129
4.0: Introduction.....	129
4.1: An Overview of Developing Economies with a Focus on Africa	129
4.2: An Overview of the Kenyan Economic Environment	132
4.3: An Overview of the Role of Industrial Clusters in Developing Economies (Kenya).....	134
4.4: Constraints Facing Business Growth in Developing Economies, with a Specific Focus on Kenya.....	137
4.5: A Justification for the focus on Family Businesses in Developing Economies	138
4.6: A Rationale for Empirical Research in Developing Economies, especially Kenya	141
4.7: Chapter Summary	143
CHAPTER 5: RESEARCH METHODOLOGY	144

5.0: Introduction	144
5.1: Philosophical Underpinning of the Study	144
5.2: Philosophical Perspectives	147
5.2.1: Positivism.....	148
5.2.2: Post-positivism.....	148
5.2.3: Interpretivism	149
5.2.4: Pragmatism	150
5.2.5: Philosophical choice for the study	150
5.3: Research Approach.....	151
5.3.1 Justification for the Choice of the Research Approach for the Study	152
5.3.2: Research Design.....	152
5.4: Research Methods and Techniques	156
5.4.1: The Link between the Research Objectives and Research Methods	158
5.5: Data Collection and Analysis Techniques.....	158
5.5.1: Population of the Study	158
5.5.2 Sampling Frame and Sample Selection	163
5.5.3: Sampling and Sampling Techniques	164
5.6: Sample Description.....	166
5.7: The Research Instrument Development	167
5.8 Pilot Study	170
5.8.1: Validity of the Pilot Instrument.....	171
5.8.2: Reliability of the Pilot Instrument	172
5.9: Justification of the Web-Based Survey	174
5.10: Limitation of the Research Design and Analysis	175
5.11: Ethical Issues Considerations.....	176
5.12: Chapter Summary	177
CHAPTER 6: DATA ANALYSIS PROCESS AND TECHNIQUES	178
6.0: Introduction	178

6.1: Process of Data Analysis for the Study	178
6.1.1: Defining Individual Constructs	178
6.1.2: Development of the Overall Measurement Model.....	180
6.1.3: Designing the Study to Produce Empirical Results	181
6.1.4: Measurements Criteria used for Assessing Model Validity	184
6.1.5: Specification and Assessment of the Structural Model Validity.....	186
6.2: Statistical Analysis of the Respondents Demographic Data.....	187
6.2.1: Normality test.....	187
6.3: Description of the Sample.....	187
6.3.1: Distribution (Normality) Tests	188
6.3.2: Statistical test of Normality for Family and Non-family Firms	192
6.4: Validity and Reliability of the Data Set	196
6.4.1: EFA: Assessment of Convergent and Discriminant Validity	197
6.4.2: Reliability Test Using Item-Specific Measures and Cronbach's Alpha Test	200
6.4.3: Results of the Six Factors Latent Variables from the EFA	202
6.5: Summary of the Chapter	204
CHAPTER 7: FINDINGS AND ANALYSIS.....	205
7.0: Introduction	205
7.1: Overview of the Demographic Differences between Family and Non-Family Firms	205
7.1.1: Type of Business Ownership.....	205
7.1.2: Type of Business Ownership and Age of the Firm	206
7.1.3: Comparisons of FFs and NFFs Based on Size of the Firm	207
7.1.4: Comparison between Family and Non-Family Firms' Geographical Distribution of Sales.	209
7.1.5: Family Involvement in the Firm.....	210
7.2: Quantitative Findings of the EFA on the Six Latent Factors Obtained	211
7.2.1: Firm Entrepreneurial Orientation	211
7.2.2: Firm Performance.....	213

7.2.3: Regional Development.....	214
7.2.4: Firm Involvement in Industrial Clusters.....	215
7.2.5: Firm Decision-Making Strategy.....	216
7.2.6: Firm ‘Bridging Social Capital’.....	218
7.3.1: Descriptive Statistics of the Combined Data for Confirmatory Factor Analysis.....	219
7.3.2: Evaluating the Validity of Measurement Models in CFA and SEM.....	220
7.3.2: Testing for Discriminant Validity and Multicollinearity.....	224
7.3.3: Testing for Linearity and Multi-collinearity for the structural Model.....	225
7.3.4: Testing for Common Method Bias and Outliers for CFA Analysis.....	226
7.3.5: Testing for Measurement and Structural Group Invariance across Groups.....	227
7.4: Structural Model Specification.....	228
7.4.1: Testing for Structural Model Invariance across Groups.....	230
7.5: Hypothesis Testing: The Relationship between Firm Level Strategic Behaviours and RD.....	230
7.5.1: Test for Hypothesis H1.....	231
7.5.2: Test for Hypothesis H2.....	231
7.5.3: Test for Hypothesis H3.....	232
7.5.4: Test for Hypothesis H4.....	233
7.5.5: Test for Hypothesis H5.....	234
7.5.6: Test for Hypothesis H6.....	234
7.5.7: Test for Hypothesis H7.....	236
7.5.8: Test for Hypothesis H8.....	236
7.5.9: Test for Hypothesis H9.....	237
7.6 The Mediation Effect of a Firm’s Involvement in Industry Clusters, and Firm Performance.....	239
7.6.1: Measurement of Mediation Model Fit.....	239
7.6.2: Testing Hypotheses H10 and 11.....	240
7.6.2.1: Direct Mediation Effect.....	241

7.6.2.2: Indirect Effects with Bootstrapping.....	241
7.7: The Effect of Family Involvement in the Firm Strategic Behaviors.....	243
7.7.1: Measurement Model Fit Summary for the Family Involvement Effects.....	244
7.8: Summary of the Findings.....	246
7.9: Chapter Summary	248
CHAPTER 8: DISCUSSION OF THE FINDINGS.....	250
8.1: Introduction	250
8.2: Overview of the Findings from Chapter Seven	250
8.3: Strategic Behavioural Differences between Family and Non-family Firms	252
8.3.1 Firm Entrepreneurial Orientation Strengthens Firms' Impact on RD	253
8.3.2: Participation in the FDMS Impedes Firms' effects on RD	256
8.3.3 FBSC with External Entities Facilitates Firms Influence on Regional Development	259
8.3.4: Proposed Theoretical Model: Firm Level Strategic Behaviour Effects on RD	262
8.4: Firm Involvement in Industrial Clusters Enhances Firms' effect on Regional Development.....	265
8.5: Firm Performance Plays a Significant Role on Firms' Regional Impact	267
8.6: There are Significant Differences between FFs and NFFs' effect on RD	269
8.8: Summary of the Chapter	272
CHAPTER 9: CONCLUSIONS AND RECOMMENDATIONS	274
9.1: Introduction.....	274
9.2: Summary of the Findings Based on the Research Questions.....	274
9.3: Contributions and Implications of the Study	276
9.3.1: Contributions to Theory and Implications	277
9.3.1.6: The significance of a Multidimensional Approach When Investigating Business' Strategic Behaviours Effects on RD	281
9.3.2 Contributions to research methodology in family business studies	282
9.3.3 Implications to Policy and Practice	283
9.4: Limitations of the Study.....	286
9.5: Recommendations for Future Studies.....	288

9.6: Chapter Summary	290
10: References	292
11: APPENDICES	334
APPENDIX 1(A): Systematic Review.....	334
Appendix 1 (a) Identification of Key Words and search streams	334
Appendix 1 (b): Inclusion and Exclusion Criteria	335
Appendix 1(c) Databases used and outcomes of the SLR Search.....	336
Appendix 2 (A): Summary of the Questionnaires items and Sources	340
Appendix 2: Research Questionnaire	345
Appendix 3: (a) Introduction Letter	352
Appendix 3: (b) Data collection Clearance from NACOSTI.....	353
Appendices 4: Statistical Test for Normality for the Two Types of firms.....	354
Appendix 4 (a) Examination of the manifest variables using the Kolmogorov-Smirnov test ..	354
Appendix 4(b): Examination of the Means of the two groups Family and nonfamily firms (Levene’s test).....	356
Appendix 5: Initial factors Analysis for identification of latent constructs	358
Appendix 5 (a): Exploratory Factor analysis	358
Appendix 5 (b): Communalities	358
Appendix 5 (c): Total Variance Explained	359
Appendix 5 (d): Pattern Matrix	364
Appendix 5(e): Structure Matrix	365
Appendix 5(f): Component Correlation Matrix	367
Appendix 6: Confirmatory factor Analysis	368
Appendix 6 (a) KMO and Bartlett’s Test	368
Appendix 6 (b): Communalities	368
Appendix 6 (c): Total Variance Explained	369
Appendix 6 (d): Scree Plot with the latent variance	372
Appendix 6(e): Component Matrix	373

Appendix 6(f): Pattern Matrix	374
Appendix 6(g): Structure and Component matrix	376
Appendix 6(h): Component Score Matrix	378
Appendix 6 (i) Simple Obtained Decent Model for the 32 manifest variables for CFA	380
APPENDIX 7: TESTING FOR RELIABILITY FOR THE SIX LATENT FACTORS.....	381
Appendix 7(a): Reliability Test for 32 manifest variables (Cronbasch’s Alpha test).....	381
Appendix 7 (b): Reliability Test for 7 Entrepreneurial orientation factors	381
Appendix 7 (c): Reliability Test for 5 managerial decision making variables	381
Appendix 7 (d): Reliability Test for 3 managerial social capital variables	382
Appendix 7 (e): Reliability Test for 6 firm involvement in industrial clusters variables	382
Appendix 7 (f): Reliability Test for 5 firm performance variables	383
Appendix 7 (f): Reliability Test for 6 Regional development Variables	383
Appendix 8: Testing for collinearity and multi-collinearity for the 32 observed variables in the 6 latent constructs for CFA Structural model	385
Appendix 8 (a) Test for Multicollinearity for the dependent Variables	385
Appendix 8 (b) Linearity test for Independent variables	387
APPENDIX 9: TESTING FOR COMMON METHOD BIASED AND OUTLIERS FOR CFA MODEL.....	389
Appendix 10: Testing for measurement and structural Group invariance test across groups	391
Appendix 10 (a): Structural model with the CLF retained	391
Appendix 10 (b): Standardised Model.....	392
Appendix 10 (c): Standardised correlation matrix for the 32 variables	394
Appendix 11: Path Analysis for the Structural equation Model	395
Measurements for Model Fit Summary	396
Appendix 12: Hypothesis Testing-.....	405
Appendix 12 (a): Effects of firm EO, TMT decision making and TMTSocap on regional economic development between family firms and nonfamily firms.	405
Appendix 12 (b) Standardised Model – After modifications.....	407

Appendix 13: Hypothesis testing based on firm identity (family and nonfamily firms)..... 413

Appendix 14: Interaction Effects Model 416

Appendix 15: Mediation Effect of Industry Cluster Involvement and Firm performance 421

 Appendix 15 (a) Structural mediation model 421

 Appendix 15 (b): Direct mediation Model 422

Appendix 16: All Mediation Items included effect of Industry cluster involvement and Firm Growth modified Model 428

 Appendix 16 (a) Standardised Mediation Model with coefficients..... 428

Appendix 17: effects of Family Involvement on the relationship between firm-level strategic behaviours and regional development dimensions 435

 Appendix 17 (a): Measurement Model..... 435

 Appendix 17 (b): Structural Model 441

 Appendix 17 (c): Hypothesis testing when family involvement is high and low 451

Appendix 18: Interaction effectS 453

 Appendix 18 (a) Interation model 453

 Appendix 18 (b): Path Analysis 454

Regression Weights: (All - Default model)..... 456

APPENDIX 19: RESEARCH PAPER ABSTRACTS 457

LIST OF ABBREVIATIONS

ADF: Asymptotically Distribution Free

AFBE: Association of Family Business Enterprises

AMOS: Analysis of a Moment Structures

AVE: Average Error Variance

BPO: Business Process Outsourcing

BSC: Bridging Social Capital

CEO: Chief Executive Officer

CFI: Comparative Fit Index

EFA: Exploratory Factor Analysis

EO: Entrepreneurial Orientation

FBs: Family Businesses

FCE: Family-Centred Economic Goals

FCNEGs: Family-Centred Noneconomic Goals

FDI: Foreign Direct Investments

FFS: Family Firms

FHFI: Firms with Higher Family Involvement

FLFI: Firms with Low or No Family Involvement

GDP: Gross Domestic Product

GLS: Generalised Least Squares

GOF: Goodness-Of-Fit

ICT: Information, Communication and Technology

IFI: Increment Fit Index

KAM: Kenya Association of Manufacturers

KEPSA: Kenya Private Sector Association

KMO: Kaiser-Meyer-Olkin

KNCCI: Kenya National Chambers of Commerce and

KPMG: Klynveld Peat Marwick Goerdeler

MEO: Managerial Entrepreneurial Orientation

MLE: Maximum Likelihood Estimation

MLE: Maximum Likelihood Estimation

NFBs: Non-family Businesses

NFFs: Non-Family Firms

OLS: Ordinary Least Squares

PAF: Principal Axis factoring

PCA: Principal Component Analysis

PWC: Pricewaterhouse Coopers

RBV: Resource Based View

RD: Regional Development

RMR: Reliability Must-Run

RMSEA: Root Mean Square Error of Approximation

SCT: Social Capital Theory

SDM: Firm Strategic Decision-Making

SEM: Structural Equation Modelling

SEW: Socio-Emotional Wealth

SGR: Standard Gauge Railway

SMEs: Small Medium-Sized Enterprises

SPSS: Statistical Package for the Social Sciences

SRMR: Standardised Root Mean Residual

SSA: Sub-Saharan Africa

SD: Standard Deviation

TLI: Tucker-Lewis index

TLM: Top-Level Managers

TMT: Top Management Teams

US: United States

WLS: Weighted Least Squares

LIST OF FIGURES

<u>Figure 1. 1: Estimates of family firm proportion</u>	24
<u>Figure 1. 2: Conceptual Framework</u>	32
Figure 2. 1: Two-circle family firm model	44
Figure 2. 2: Three-circle family firm model.....	44
Figure 2. 3: The Bull’s Eye Model.....	46
Figure 2. 4: A networked model of the sustainable industrial districts.....	66
Figure 2. 5: A framework for entrepreneurship and FFs.....	67
Figure 2. 6: An Input-Process-Output model of strategic entrepreneurship.....	68
Figure 2. 7: Dimensions of regional development.....	69
Figure 2. 8: A three element model linking FFs and regional economy.....	70
Figure 3. 1: The conceptual model developed to study the effect of strategic behaviours of family (nonfamily) firm impact on regional development.....	122
Figure 4. 1:Fastest Growing Economies in SSA (2012).....	131
Figure 4. 3: Kenya’s GDP Growth (%) compared to Africa (Average) 2000-2017.	131
Figure 4. 4: Average Real GDP growth of SSA’s ten fastest-growing economies (%) 2016f-2017f. (f represents the fiscal year).....	132
Figure 4. 5: FDI In-flows to Kenya, Tanzania and Uganda in US \$m (2010-2015).....	134
Figure 4. 6: The growth prospects of family firms in Kenya compared with global firms.	140
Figure 5. 1: An estimation of the sample size for the study.....	166
Figure 5. 2: Scree Plot for the six latent factors extracted.....	172
Figure 5. 3: Responses rates for the period of June-October.....	175
Figure 6. 1: Measurement Model for the Firm impact on regional development with manifest variables.....	182
Figure 6. 2: A graphical mean distribution of the thirty-four manifest variables.....	190
Figure 6. 3: Scree plot indicating the Eigenvalues of the relevant component factors.....	202
Figure 7. 1: Type of Business Ownership.....	206
Figure 7. 2: Comparison between family and non-family firms, based on age of the firm.....	207
Figure 7. 3: Comparison of the type of firm ownership and size of the firm between family and non-family Business.....	208
Figure 7. 4: Comparison of geographical distribution of sales between family and nonfamily business.....	209
Figure 7. 5: An Analysis of Family Involvement and Size of Firm.....	210
Figure 8. 1: A Multidimensional Firm Regional Impact Model.....	265

LIST OF TABLES

Table 2. 1: Key words used in the SLR.....	38
Table 2. 2: A summary of empirical studies linking family firms and regional development	58
Table 3. 1: Definitions of Entrepreneurial Orientation	101
Table 3. 2: Dimensions of familiness.....	107
Table 5. 1: Factors and alternatives considered under research design	153
Table 5. 2: Summary of the research objectives, questions, methods analysis techniques used	159
Table 5. 3: A summary representing organisations used to generate a sampling frame	163
Table 5. 4: Sampling Frame.....	164
Table 5. 5: Research Instrument Dimensions.....	168
Table 5. 6: Represents the Component Correlation Matrix for the six latent factors extracted from EFA	172
Table 5. 7: The Latent Constructs and their Cronbach Reliability Coefficient after adjustments	173
Table 6. 1: Six Latent constructs identified after EFA	179
Table 6. 2: The exogenous and endogenous constructs presented in the model.	180
Table 6. 3: A Summary of Measures of GOF used in the study.	186
Table 6. 4: Descriptive data on respondents' demographics.	187
Table 6. 5: Initial test results for manifest variables.....	188
Table 6. 6: Levene's test of the means of family and nonfamily firms	193
Table 6. 7: Mann-Whitney test for the dependent variable	195
Table 6. 8: Mann-Whitney test for the six latent constructs used in the study	195
Table 6. 9: A Summary of the Validity tests using KMO and Bartlett's Test	197
Table 6. 10: A Summary of the Exploratory Factor Analysis, Communalities, Factor Loadings, Eugen Values and Variance explained.....	199
Table 6. 11: Reliability for the thirty-four variables.....	201
Table 6. 12: Reliability Test for the six constructs.....	201
Table 6. 13: Rotated factor matrix for the thirty-four items	203
Table 7. 1: Findings of entrepreneurial orientation variables in family and nonfamily firms.....	212
Table 7. 2: Comparison between family and non-family firms focused on the firm performance construct	213
Table 7. 3: A comparison between family and non-family firms (self-reported) using the regional development dimension	214
Table 7. 4: A comparison between family and non-family firm involvement within industrial clusters	216
Table 7. 5: A comparison of the descriptive statistics for the decision-making dimension	217
Table 7. 6: A comparison of the descriptive statistics for the 'bridging social capital' firm dimension	219
Table 7. 7: Summary of the Mean and Standard deviation of the variables	219
Table 7. 8: Measures used to assess validity and reliability in the CFA stage.....	221
Table 7. 9: A summary of the latent Factors loadings after CFA analysis	222

Table 7. 10: The Correlation Matrix showing assessment of Discriminant Validity Test using AVE225
 Table 7. 11: Results for the multi-collinearity of the independent variables 226
 Table 7. 12: Goodness of fit for the Measurement Model Test for the initial measurement model ... 226
 Table 7. 13: Goodness of fit for the Common method Test for the model with CMB adjusted 227
 Table 7. 14: Measurement model fit summary for the group invariance test. 228
 Table 7. 15: Measurement Model fit Summary for the Interaction effects 230
 Table 7. 16: The hypothesis testing outcomes for differences between family and non-family firms’
 influence on regional economic development 238
 Table 7. 17: Measurement Model fit Summary for the mediation effects 240
 Table 7. 18: Mediation effects of industry clusters and firm performance 242
 Table 7. 19: A summary of the Model Fit 244
 Table 7. 20: The moderating effects of family involvement on the relationship between predictor
 variables and the dependent variable 245
 Table 7. 21: Summary of the hypotheses’ test results 247

CHAPTER 1: INTRODUCTION OF THE THESIS

1.0: Introduction

Family businesses (FBs, also family firms, FFs) significantly contribute to both developed and developing economies around the world (Astrachan and Shanker, 2003; Carney, 2005; Basco, 2015; Stough *et al.*, 2015). Further, some family business scholars have argued that they outperform non-family businesses (NFBs, Anderson and Reeb, 2003), as well as contribute more to regional development; especially to gross development product (hereafter GDP), employment opportunities and wealth creation (Shanker and Astrachan, 1996; Upton, Teal, & Felan, 2001; Basco, 2015; Stough *et al.* 2015). However, some researchers have suggested that the presence of FBs slowed down the rate of economic development in some regions (e.g. Western economies in the nineteenth century) (Burkart, Panunzi, & Shleifer, 2003). Arguably, there is a consensus that the type of ownership (family or non-family) influences firm contribution to regional development (Basco, 2015; Stough *et al.*, 2015). Based on this premise, it can be argued that family businesses are a unique set of economic actors that can alter regional development. Despite the increased importance of family firms in regional development, there is a dearth of studies that explore their impact on the economic and social development.

Until recently, family business and regional development fields have developed in isolation. From one perspective, the extant literature on family businesses has focused on exploring the behavioural differences between family firms (FFs) and non-family firms (NFFs) (Stough *et al.*, 2015). On the contrary, regional studies have focused on the effects of regional environments on the prevalence of family businesses in regional economies (Markusen, 2003; Chang *et al.*, 2008). This has prevented scholars the opportunity to explore the firm impact beyond the ontological differences between FFs and NFFs, in order to understand their economic and social impact. Particularly, one of the challenges with prior literature is identifying the strategic behaviours that matter when predicting FFs impact on regional development, as compared to NFFs. Therefore, this thesis primarily investigates how firm-level strategic behaviours of FFs and NFFs differ, and to what extent this determines their impact on regional development.

Indeed, despite the increase in studies focused on family firms in Western and North American regions, few studies focus on emerging and developing economies (e.g. in the Middle East, Asia and Africa). In particular, the African continent remains largely unexplored in this respect, even though family firms constitute majority of privately held firms (Carney, 2005; Zoogah, 2014). Africa is considered a unique context in that has distinct influences on managerial and resources practices, as compared to the Western context (Khavul *et al.*, 2009; Zoogah *et al.*, 2015). Therefore, this study will focus on a developing economic context - Kenya - to offer fresh insights into the link between family firms and regional development.

The outline of the rest of the chapter is as follows: The next section briefly outlines the background of the study, followed by the motivation of study, research problems, research objectives and questions. This is followed by the research methods and finally the significance of the study. Finally, the chapter outlines a layout of the rest of the chapters in the thesis with a brief summary at the end.

1.1: Background of the Study

The extant literature, with a specific focus on family businesses, has argued that family businesses contribute more to both developed and developing economies around the world, and particularly to gross development product (GDP), employment creation and wealth creation (Shanker and Astrachan, 1996; Gersick *et al.*, 1997; Anderson and Reeb, 2003; Villalonga and Amit, 2006; Basco, 2015; Stough *et al.*, 2015). In addition, family ownership is considered as the most common type of ownership of most firms around the world (La Porta, Lopez-de-Silanes, & Shleifer, 1999; Morck & Yeung, 2004). This depends, though, on the operational definition applied, the type of industry and country being studied (Gomez-Mejia, Cruz, Berrone, Catsro, 2011). According to International Family Enterprise Research Academy (IFERA) (2003), an estimated two-thirds of privately held firms in most countries were family firms.

According to Shanker and Astrachan (1996), family businesses represented approximately 60% of all the public and private organisations in the United States (US) (using the broadest definition). These contributed about 64% to the GDP, employed 62% of the workforce and accounted for about 89% of business tax returns. Similarly, a study by Faccio and Lang (2001) established that family firms formed most businesses in 13 Western European

countries. They estimated that 44.29% of the firms were family controlled, though they observed that privately held firms formed most businesses (based on a wider definition). According to the Family Firm Institute (FFI) (2015), family businesses formed most businesses in economies around the world in emerging economies such Brazil, Mexico, Peru and the Philippines , where 75% are family firms. Similarly, Africa is home to a significant proportion of family businesses, given the predominance of small firms which are organised around the family (Khavul *et al*, 2009).

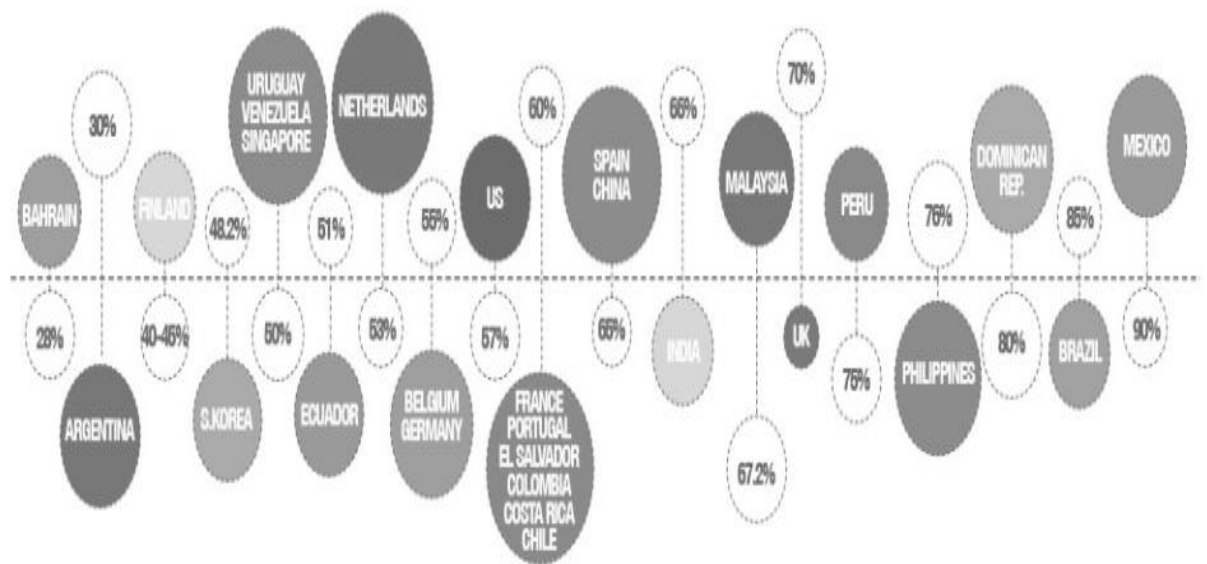


Figure 1. 1: Estimates of family firm proportion

Source: Family Firm Institute (2015)

Despite the obvious statistics on the predominance of family enterprises and their notable contribution to regional development in the US and UK economies, family firms were largely overlooked in the early twentieth century (Chandler, 1990). Researchers in the management field initially focused on multinationals, and then on small and medium enterprises (hereafter SMEs), without acknowledging the role of the family in the organisation structure. For instance, Chandler concluded that the growth of the US economy was credited to the large organisations (devoid of family) which dominated the organisations (1977). Furthermore, he criticised family-owned businesses for being inefficient and detrimental to economic growth. In the literature on family firms, Chandler has been criticised for failing to recognise that some of the organisations he studied were either family-owned or family-controlled, such as

Du Pont (Trevinyo-Rodriguez, 2009). In the 1960s and 70s, studies begun to emerge that identified the misconceptions in significant theoretical arguments, when ‘the family’ was considered as a major stakeholder in organisations.

In the first inaugural article of the Family Business Review (FBR) (a journal dedicated to family business research), Lansberg *et al.* (1988) observed that there was a dearth of studies focused on the role of the family in the organisations, specifically ownership, management and governance. Until this point, previous literature had focused on the succession in family firms, leaving out other possible outcomes of family involvement in the business (Ward, 1988). However, the Introduction of the FBR article challenged family business scholars, family institutes, peer-reviewed journals, family consultants and practitioners, and general social researchers to explore other outcomes of family participation in businesses. Although, the last three decades have seen a tremendous increase in family business studies published in mainstream journals, there is still a shortage of studies investigating the role of FFs strategic behaviours in regional development, as compared to NFFs (Basco, 2015; Stough *et al.*, 2015). Therefore, a gap emerges in the current literature concerning the role that family businesses play in regional economic and social development, and vice versa, around the world.

A general review of empirical studies investigating the intersection between family firms and regional development revealed that the focus was on the regional effects on organisations. In particular, the focus was based on the regional factors that influence the scope and scale of family firms, as well as institutional effects on the prevalence and embeddedness of family firms in regional economies (e.g. Chang *et al.*, 2008). For instance, there was consideration of the influence of factors such as population size and growth in regions on the prevalence of family and nonfamily start-ups (Bird and Wennberg, 2014). However, this approach has prevented scholars from investigating the impact family firms (as economic actors) have on regional development across the world. Indeed, Markusen (2003) observed that most regional development scholars were focused on macro-oriented research and failed to acknowledge the importance of firm actors (especially in decisions that they make) on the firm behaviours and performance and their aggregate regional outcomes.

Family business scholars, on the contrary, had focused on micro-orientated research directed at understanding the behavioural aspects of family firms, thus failing to recognise their aggregate regional economic and social impact (Basco, 2015). Recently, studies have emerged that investigate the role of family business on regional economies (e.g. Bjuggren,

Johansson, and Sjogren, 2011; Bird, and Wennberg, 2013; Backman and Palmberg 2015; Cucculelli and Storai, 2015; Memili *et al.*, 2015). These studies argue that family firms are a unique category of actors capable of altering regional development through their interaction with regional factors (tangible and intangible), regional processes (such as spillovers, learning processes, information exchange, competition dynamics, social interactions, and interactional dynamics) and regional productivity dimensions (social, cognitive, institutional, and relational) (Basco, 2015, P. 2). However, there are no conclusive studies on whether family firms are good or bad for regional development.

A 'family business' can be defined as a firm governed, managed or both by a coalition of the same family members, or a coalition of families, in a manner that is potentially sustainable across generations of that family or families (Chua *et al.*, 1999, p. 25). 'Regional development' can be defined as the application of economic processes and resources available in the region resulting in the sustainable development of and desired economic outcomes for a region (Stimson, Stough and Roberts, 2006, p. 6). This study investigates how family firm actors influence strategic behaviours, and thus their contribution to regional development outcomes, in comparison to NFFs. Therefore, the next sections set out the main reasons for this study.

First, family firms are a unique form of economic actors (interaction of both the family and business logics) with specific characteristics and behaviours. Particularly, the presence of a family as a dominant coalition in the firm influences the organisational business choices, strategic direction, performance, and entrepreneurial strategy to achieve their goals and aspirations; a condition that is absent in NFFs. Therefore, the study seeks to understand how family involvement (in ownership, management, and governance) influence the strategic behaviours of the firm as the dominant stakeholder (Chrisman *et al.* 2010). In addition, how this affects firm performance, firm involvement in industrial clusters and regional development.

Second, entrepreneurship in SMEs (in both FFs and NFFs) is recognised as a stimulus for economic growth and development globally because of the actions of individual or teams within the firms (Ireland *et al.*, 2001). However, previous scholars in the field of management and entrepreneurship tend to underestimate the strategic role of family firm actors in the entrepreneurial process, as many existing scholars focus on wealth preservation rather than

wealth-creating activities, such as opportunity recognition, innovation, strategy and growth (Lumpkin, Steier, and Wright, 2011).

Third, although some scholars argue that family involvement in the business has direct impact on wealth creation (Habbershon *et al.*, 2003) and value creation (Chrisman *et al.*, 2003), as well as transgenerational wealth creation (Habbershon, 2006), there have not been conclusive studies as to whether this has a direct or indirect impact on regional wealth creation at the regional level. Therefore, it is important for studies to explore the potential effects of family firm actors on their actions and behaviours, and how this impact on regional dimensions has an impact on regional development.

Fourth, existing family business studies reveal that family firms have distinct strategic behaviours compared to NFFs. FFs are considered to have a competitive advance (idiosyncratic resources and capabilities) as a result of the intersection between family and business subsystems (Habbershon and Cowling, 1999; Habbershon *et al.*, 2003). Further, the presence of family involvement is felt through their influence on the formulation of goals. This gives rise to both economic and non-economic goals in family firms and has distinctive effects on firm performance as compared to NFFs (Chrisman *et al.*, 2012; Kotlar and De Massis, 2013). In addition, family business owners are known to protect their socio-emotional wealth (SEW) at the expense of the financial growth of the firm (Gomez-Mejia *et al.*, 2007). Furthermore, the presence of family owners and managers in firms contributes to strengthened personal and social networks, which affects relationships and network resources (Pearson, Carr and Shaw, 2008; Sharma, 2008). Although, these studies extend our understanding of the behavioural aspects of family firms at the family or firm level (Basco, 2013; Zellweger and Nason, 2008), they have failed to integrate family business behaviours at the regional level to measure their economic and social impact (with some exceptions: Block and Spiegel, 2013; Backman and Palmberg 2015; Memili *et al.*, 2015). Therefore, a shift of emphasis from the micro perspective of family firms is required in order to capture the essence and nature of family firms within the territory, and their interrelationships with regional dimensions that boost or hinder regional development.

Fifth, while some studies argue that family firms outperform non-family firms (Anderson and Reeb, 2003; Randoy and Goel, 2003; Lee, 2006; Maury, 2006) others have stated that the presence of family firms diminishes the economic growth of the regions (Facio, Lang and Young, 2001; Villalonga and Amit, 2006). Despite the mixed findings evidenced by

empirical studies that focus on publicly listed organisations, there are still no conclusive studies on the impact of family firms on regional development compared to NFFs. Further, recent studies have failed to advance knowledge on the impact of firm performance on regional development, as they argue for the presence of both family and non-family SMEs (Memili *et al.*, 2015). Therefore, there is a need to investigate whether privately held firms show any differences when they interact with regional dimensions responsible for regional development.

Finally, from a policy perspective, several scholars have highlighted the importance of the entrepreneurial climate in fostering economic development through the activities of social actors (Stough *et al.*, 2015). Given the spatial variations of economic activities across regions (Reynolds *et al.*, 1994; Johannisson *et al.*, 2007), it is worth studying how family firms' involvement in industrial clusters (a special context) mediates the relationship between family firms and regional development (Rosenfeld, 2002; Rocha, 2004; Niu, 2009). Because of the unique characteristics of family businesses and the prevalence and embeddedness of business families and family firms in regional economies, it is possible to argue that they are in a privileged position to alter social and economic relationships or networks within their geographical context, thus impacting economic development (Basco, 2015; Stough *et al.*, 2015). The next section presents the motivation for the study.

1.2: Motivation for the Study

In the initial stages of this study, the intention was to design a comparative approach to investigate family business impact on regional development, focusing on a developed economy (United Kingdom) and a developing economy (Kenya). From the onset, it was evident that there was scarcity of studies focusing on developing economies, despite the huge proportion of family firms in these economies (Carney, 2005; Khavul *et al.*, 2009). After attending the Family Enterprise Research Conference FERC in June 2015, the researcher was inspired by Anderson Reeb's keynote speech that noted that the biggest challenge in resolving the inconsistencies in family firm research was in distinguishing how family firms differed from non-family firms, as opposed to conducting comparative studies across regions or nations thought this is still significant.

Although, comparative studies are required to understand the contextual, institutional and cultural influences on family businesses. The question, though, is to whether there were any differences between FFs' contributions to regional development as compared to NFFs appeared to have received less attention. Hence, it was surprising to see the lack of studies examining the impact of family firms on regional economies despite the consensus among scholars that family firms outperformed NFFs and had superior contribution to regional development. The question that remains unanswered is , how did they arrive at this conclusion? Reeb's observations during his speech (and scholarly works e.g. Anderson and Reeb, 2003), dedicated to exploring the performance differences between family and non-family businesses, raised concerns as to whether family firms outperformed non-family firms on regional development.

Indeed, a special issue published by the *Journal of Family Business Strategy Business (JFBS)* on the impact of family businesses on regional development confirmed that there was a gap in studies that focused on the two domains: family businesses and regional development. The editors, Stough *et al.* (2015), noted that family business and regional development research fields had developed separately, with very few studies recognising the role of family firms in economic and social development. At this stage, it was clear that more studies were needed, not only to explore sources of the differences between FFs and NFFs, but also the extent to which family firms influenced regional development. Therefore, the primary aim of this study was to investigate how and to what extent family involvement in the firm influenced the firms' regional development impact compared to NFFs.

Given that most of the existing studies were focused on western economies, the researcher was convinced that investigating the role of family firms in developing economies would help increase knowledge on their influence on regional development. Firstly, the extant literature has argued that the family form of organisation is more predominant in the developing world compared to developed markets, such as those of North America and Western Economies, where most studies have been conducted (Villalonga and Amit, 2006). Secondly, developing economies are home to a large proportion of small and medium businesses that are organised around family (Khavul *et al.*, 2009). Thirdly, there is a scarcity of studies that focus on a developing economies context. Most of the studies found in the literature have focused on developed markets (e.g. Backman and Palmberg 2015; Block and

Spiegel, 2013; Memili *et al.*, 2015; Trevinyo-Rodriguez, 2009; Westhead and Howorth, 2007), though with a few exceptions (e.g. Guo and Wanangwa 2016; Villalonga and Amit, 2006). The next sections introduce the research problem, objectives and questions.

1.3: Research Problem

Although family business scholars have made efforts to investigate the relationship between family firms and regional development, to the best of the researcher's knowledge, there are no studies that empirically investigate the effects of family influence on the strategic behaviours of the firm impacting regional development. Some of the studies that have studied the aggregate effects of family firms on economic development use the family as the unit of analysis, rather than family firm level (e.g. Backman and Palmberg 2015; Block and Spiegel, 2013; Memili *et al.*, 2015).

Studies exploring the impact of family firms on regional development (e.g. Chang *et al.*, 2008; Memili *et al.*, 2015) focus on using demographic component (ownership and management) characteristics to classify the firms into FFs and NFFs (i.e. level of ownership and family members present in the management). This is instead of analysing the societal level outcomes as a result of family involvement (and family essence) in the firm's activities (e.g. decision making, innovations, performance, collaboration, strategic direction). Thus, to fill this gap, this study aims to explore whether the presence of family businesses is good or bad for regional development.

1.4: Research Objectives

The following were the research objectives that guided the study

1. To examine firm-level strategic behaviours that affect family firms influence on regional development compared to non-family firms. This research will identify the strategic behaviours that potentially differentiate family firm impact on regional development from that nonfamily firms.
2. To investigate the mediation effects of firm involvement in industrial clusters (FIIC) on the intersections between firm-level strategic behaviours and regional development. Given that industrial clusters are significant in regional development, this study will determine their effect on the relationship between family firms and regional development.

3. To determine the mediation effect of firm performance (FP) on the relationship between firm-level strategic behaviours and regional development. As firms aim to improve performance and growth, this objective will determine the effect of performance on regional development.
4. To evaluate whether family involvement is a key determinant on the differences between family and non-family firm contributions to regional development. This objective will assess the extent to which family and non-family firms differ on their regional impact, as well as determine if family involvement can be the main differentiator between the two types of firms on their contribution to regional development.

In order to achieve the above research objectives, the following are the main research questions.

1. How do firm-level strategic behaviours affect the family firm impact on regional development compared to nonfamily firms?
2. What is the effect of firm involvement in industrial clusters on the relationship between firm-level strategic behaviours and regional development?
3. What is the effect of firm performance on the relationship between firm-level strategic behaviours and regional development?
4. How and to what extent does family involvement in the business affect contribution to regional development compared to nonfamily firms?

1.5: Research Methods

A systematic literature review was conducted to determine the scope and identify key literature in the area of entrepreneurship, family business and regional development (**See appendix 1**). This was geared towards establishing the link between firm-level strategic behaviours and regional development. Further, how this relationship was be mediated by firm involvement in industrial clusters (FIIC) and firm performance or moderated by family involvement in the business.

A conceptual framework was developed indicating the established relationships. This adds to similar attempts from prior studies (e.g. Johannisson, *et al.* 2007; Nordqvist and Melin, 2010; Hitt *et al.*, 2011; Basco, 2015; Stough *et al.*, 2015) that sought to provide explanations of how

firm-level behaviours (micro-level) influenced regional outcomes (regional level). It is essential to note that, in order to fully understand the effects of family firms' behaviours on RD, the study collected data on firm demographics (e.g. age, size, nature of the firm, geographic distribution), as well as the level of family involvement (Westhead and Cowling, 1998; Chua *et al.*, 1999). This enabled the study to investigate the moderation effects of family involvement on the relationship between firm-level strategic behaviours and RD.

As suggested by Yin (2003), a pilot study was conducted, using a sample selected from Strathmore Enterprise Development Centre (SEDC), to provide conceptual clarity to the study. Further, the research instrument was pre-tested to determine its validity and reliability, and to demonstrate that it tested the intended relationships between the variables. The data from the 410 respondents was collated in Excel, where it was filtered to facilitate analysis. After eliminating the questionnaires with missing data, only 307 remained, minimising complications with SEM analysis. Several normality tests were conducted on the data to check for suitability for statistical analysis. The tests included the Shapiro-Wilks and Kolmogorov-Smirnov tests, Levene test and the Mann-Whitney test (Saunders *et al.*, 2012; Bryman, 2016). The preferred method for analysis was a structural equation model (SEM), as it is recommended for exploring new ideas, especially within a less studied context (Hair *et al.*, 2006). Further, the study followed the six stages of analysis suggested by Hair *et al.* (2006) (explained in chapter 6). To the best of the researcher's knowledge this was the first study applying SEM techniques in investigating the role of family firms on regional development within a developing economic context.

1.7: Significance of the Study

The significance of the study stems from the contributions it makes to the body of knowledge in family business scholarship, exploring how family firms impact regional development. Prior studies have indicated that firm entrepreneurial behaviours had a positive impact on regional development (Shephard, 2005). However, mixed findings emerge in family firms considering that family participation can have positive or negative influence on firm behaviours, performance and hence regional development. The results of this study will enrich the debate by providing evidence from a developing economy context. Surprisingly, there is a dearth of studies that focus on developing economies despite the large proportion of family firms (Khavul *et al.*, 2009). Further, given that family business is a common form of

ownership in developing economies, there is possibility that this helps to mitigate the impact of weak institutions and uncertainty of markets, which can influence the extent to which firms contribute to regional development (Murithi *et al.*, 2019).

In addition, the focus on the effects of firm-level strategic behaviours (such as EO, decision makings, development of social networks ‘familiness’, ‘socioemotional wealth’) has been studied in isolation of other significant factors, which has led to inconsistencies on the effects of family involvement on firm-level behaviours. Moreover, unlike in non-family firms, where business choices are based on economic gains, in family firms this has different reference points and could range from economic to non-economic perspectives (Gomez-Mejia *et al.*, 2007). Therefore, this thesis expands the body of knowledge by advancing that a multidimensional approach is best suited to investigate the effects of family involvement on firm strategic behaviours. Further, such efforts will showcase how family firm behaviours differ from those of non-family firms, and the extent to which it differentiates their contribution to regional development.

This study is also significant as it acknowledges that in order to understand the relationship between family firms’ prevalence or embeddedness in regional environment with performance and regional development (and also that of non-family firms), researchers should investigate the dynamics of family ownership as opposed to just the presence of family firms within the region. As Basco posits “it is not the presence of family businesses themselves that makes them dress as Dr Jekyll (bright side) or Mr Hyde (dark side), but their collective aggregate actions as regional actors” (2015, p.1). Therefore, this study investigates the influence of family firms’ strategic behaviours, not only in altering firm performance, but also in their involvement in industrial cluster networks. This intersection has potential for understanding the family businesses influence on regional factors and processes within the regions. Hence, investigation of family firm embeddedness in the regional economies makes this study significant in contributing to our knowledge on their influence on regional development.

As far as this study is concerned, the researcher believes it is the first of its kind in a sub-Saharan African context, particularly with a focus on Kenya. Kenya has shown tremendous economic growth potential in the last decade and presents a unique context to test some of the already conceived management theories. This is especially in the family business domain, based on the high proportion of family firms in emerging economies (Khavul *et al.*, 2009)

and unique influence of the context on organisational resources and effectiveness (Zoogah *et al.*, 2015). Further, the researcher believes that there are institutional and spatial differences in developing economies compared to developed economies settings that will unveil the weaknesses present in existing theoretical and conceptual studies. To achieve this, the study explored the underlying assumptions and inconsistencies in the present literature on the effects of family business behaviours on firm performance and regional development.

Additionally, the study demonstrates that the regional environment, particularly the industry cluster context, is "an important yet under-theorised area of research" (Bird and Wennberg, 2013, p. 1). Investigating family firm involvement in industrial clusters could help to understand how family firms' unique characteristics, strategic behaviours and performance exhibit distinctive outcomes compared to non-family firms. Consequently, investigating the effect of the family (vis-a-vis non-family) firms as social actors within their spatial space might help researchers to understand the main causes of uneven wealth distribution among regions (Ireland *et al.*, 2011). In line with these arguments, this study combines the strategic behaviours, performance, family involvement and regional context characteristics to enable researchers, practitioners and policymakers to understand the impact of family firms on regional development.

Finally, this study will help enhance both researchers' and practitioner's knowledge and appreciation of family firms, as unique economic actors capable of altering the regional factors and processes that can influence regional development outcomes. Policy makers and business consultants in developing economies such as Kenya can benefit from the findings of the study, as there seem to be no concerted efforts to develop policies that particularly focus on family firms, despite their differences compared to non-family firms. All SMEs are treated as the same, with the sector implementing policies with the assumed approach that 'one-size fits all'. Unfortunately, that leads to the unsustainability of closely held businesses based on their heterogeneity and particularistic behaviours (Carney, 2005; Westhead and Howorth, 2007). The next section presents the layout of the rest of the chapters in the thesis.

1.8: The Layout of the Chapters

The rest of the chapters in the thesis are organised as follows:

Chapter 2 (following this Introduction) presents a systematic review of the literature on the link between entrepreneurship, family businesses and regional development. Furthermore, the

chapter provides a conceptual definition of family businesses. Further, the chapter discusses the importance of family firms and their significance in influencing regional development, as compared to NFFs. The chapter contributes to understanding the gaps within the literature regarding the role of family businesses and their impact on regional development.

Chapter 3 critically evaluates the strategic behaviours and theories used in studying family firms. The chapter outlines the theoretical debates and gaps to propose a conceptual framework for studying the firm-regional impact. In addition, the dimensions included in the framework and hypotheses are outlined.

Chapter 4 presents reflections on the research context of the study. It outlines the overview of the entrepreneurship and regional development context in developing countries. The chapter also explores the economic and social development of the Kenyan context. A further justification is also provided for the choice of the research context of the study.

Chapter 5 presents the research methodologies and methods, discussing the philosophical approaches for the study. It provides the justification for the research approach, designs and methods used in data collection. The chapter explains the data collection methods and techniques used in the analysis. Finally, the chapter outlines some of the ethical considerations and limitations during the data collection and analysis.

Chapter 6 reflects on the data analysis processes and techniques and elaborates on the processes undertaken to ensure validity and reliability of the analysis and interpretations. The chapter details the procedures followed using structural equation modelling (SEM) techniques and data analysis. It outlines analysis techniques followed to ensure the data is suitable for statistical analysis, and that valid and reliable conditions were met. Finally, the chapter presents the respondents demographic characteristics in the data set.

Chapter 7 provides analyses of the findings of the study. The chapter present an overview of the firms' demographic characteristics, then the results of the exploratory factor analysis (EFA) and the confirmatory factor analysis (CFA). The results of the hypothesis testing, using both measurement and structural models, are also presented. The chapter concludes with the findings of the study.

Chapter 8 presents the discussion and synthesis of the findings from the quantitative analysis, focused on the analytical framework. Further, the chapter discusses the findings in comparison with previous literature.

Chapter 9 presents the final reflections on the findings and conclusions. The chapter outlines the theoretical, empirical and practical contribution of the thesis. Finally, the chapter outlines the research limitations, implications, and recommendations for future studies based on the results of the study.

1.9: Summary of the Chapter

The chapter has provided the introduction to the thesis by scoping the research background, and research problem. This was followed by setting the research objectives, research questions and a description of the research methodology used. The chapter also has presented the significance and how the thesis is organised. The next chapter presents the reviews of literature on the link between family firms and regional development.

CHAPTER 2: LITERATURE REVIEW: THE ROLE OF FAMILY BUSINESSES ON REGIONAL DEVELOPMENT

2.0 Introduction

This chapter systematically reviews relevant studies that link entrepreneurship, family businesses (FBs) with regional development (RD). As noted by Stough *et al.* (2015) in their review 'Bridging the Gap', both family business and regional development studies have developed in isolation. Therefore, the aim of this chapter is to provide an underpinning for understanding the role of FFs in regional development. The chapter explores the different approaches used in studying the impact of FFs on regional development. The relevant literature identifies that top-bottom and bottom-up approaches are the main approaches used to study the regional impact of firms. Using the bottom-up approach, this chapter identifies firm-level endogenous factors, which impact regional development.

The chapter is organised as follows:

The first section outlines the systematic literature review undertaken for the study. The second and third sections provide the definition of FFs and typologies of firms. Section 2.3 has focused on the firm performance differences between family (FFs) and non-family firms (NFFs). Sections 2.4 and 2.5 critically evaluate the role of FFs on regional development (RD). Further, the effects of FFs on industrial clusters (IC) and firm performance are presented in sections 2.6 and 2.7 sections, respectively. While section 2.8 reviews the theoretical and conceptual perspectives in studying the role of FFs, section 2.9 presents the research questions. Finally, a summary to the entire chapter has been presented in section 2.10.

2.1: Systematic Literature Review

In order to assemble a wider scope and identify relevant literature in the fields of entrepreneurship, family business and regional development, a systematic literature review (SLR) was undertaken. The general aim of this preliminary literature review was to scope the fields to enable a clear understanding of the intersection of the concepts and determine the research questions to be addressed in the subsequent research. Based on the SLR objectives suggested by Tranfield, Denyer and Smart (2003), the study's main question guiding the SLR

was “How and to what extent family firms differed from nonfamily firms in their contribution to regional development?” Thus, to effectively conduct a SLR key words were identified (see table 2.1) and used to develop search strings in various combination (see **appendix 1a**). As suggested by Tranfield *et al.*, (2003) an inclusion and exclusion criteria were developed based on several aspects such as research level, methodology and type of data source (**appendix 1b**). In addition, appropriate resources and databases were identified using the De Montfort University library and a further search conducted at Lancaster University (**appendix 1c**). Finally, the limitations for the SLR were considered and actions taken to overcome them.

Table 2. 1: Key words used in the SLR

Keywords	Alternative words/terms
Entrepreneurship	Entrepreneurial, Entrepreneurialism, enterprise, innovation, creativity, venture, commercial, risk-taking
Family Business	Family-owned business, family firm, family enterprise, family-owned firm, private business/ enterprise, privately-owned business/enterprise, family employed, closely-held firms
Firm Performance	Outcome, Results, Harmony, financial, economic, profitability, productivity
Regional development	Growth, Improvement, economic development, social development, national development, clusters

The relevant studies identified from the SLR exercise were then used to explore the role of family business on regional development compared to nonfamily firms using the following key themes.

1. What is a family business?
2. What are some of the configurations/typologies of family firms?
3. How does family (nonfamily) business performance differ?
4. What is the link between family (nonfamily) business and regional development?
5. Does family firms’ involvement in regional economies differ from nonfamily firms?
6. What are some of the theoretical and conceptual arguments on the role of family firms on regional development?

2.2: Defining Family Firms

The overriding question in the study of family businesses has been “*What is a family business?*” (Lansberg, Perrow, and Rogolsky, 1988). Defining a family firm as a unit has continued to pose a challenge to researchers due to the individual and organisational factors that emerge from family participation in the ownership, management and governance of the business. Furthermore, while a family might be present in a business, some of the firms do not identify themselves as a ‘family business’ (Westhead and Howorth, 2007; Zellweger, Eddleston and Kellermanns, 2010). In addition, the diversity of firms that can be categorised as FFs adds to the difficulty in developing a universally acceptable definition. For instance, FFs range from ‘mom and pop’ enterprises to large corporations, such as Walmart (USA), IKEA (Sweden), Fiat (Italy) Du point (USA) (Holland and Boulton, 1984; Treviño-Rodriguez, 2009).

Although considerable efforts have been made to develop an acceptable definition (Chua *et al.*, 1999), there is still no consensus on how best to define a family business (Brockhaus, 1994; Vought *et al.*, 2008). The extant literature presents a wide range of definitions that navigate the complexities entrenched in FFS to offer a definition suited to their relevant research objectives (Holland and Boulton, 1984; Ward, 1987; Handler, 1989; Holland and Oliver, 1992; Litz, 1995; Westhead and Cowling, 1998; Chua *et al.*, 1999; Sharma, 2002; Astrachan and Shanker, 2003; Basco and Perez Rodriguez, 2009).

Earlier definitions focused on family participation in the ownership, management and governance of the business. For instance, Holland and Oliver (1992) stated that FFs are organisations whose decisions regarding ownership and management of the firm are influenced by family relationships or family groups (p. 27). Litz (1995, p72) suggested that family businesses had their ownership and management concentrated within a single-family unit. However, the participation of the family in the three functions of a firm were considered as insufficient when defining FFs (Litz, 1995; Chua *et al.*, 1999; Henssen *et al.* 2011). From the extant literature, family involvement in the three functions of an organisation (ownership, management and governance) has limits and failed to explain why some businesses (despite meeting this criterion) did not define themselves as family businesses (Henssen *et al.*, 2011). Thus, the study by Westhead and Cowling (1998) emphasised that in addition to family involvement in the three functions, studies would benefit from using the ‘self-identification criteria’ as to whether or not family respondents actually considered themselves to be a

family firm. Although to some extent this was appropriate, the approach was challenged because of the subjective views of different people in the business on these criteria (Litz 1995; Chua *et al.*, 1999; Litz 2008). Chua *et al.* (1999) suggested a definition that encompassed both the operational and theoretical aspects of family involvement in the business. Although most of the operational definition components of family participation corresponded with their theoretical definition, the authors argued that family involvement was a weak predictor of intention, and thus not always reliable for differentiating FFs from NFFs.

Therefore, family involvement in ownership, management and governance is not a sufficient criterion for family business to behave distinctively. Given the complexity in defining family firm, instead of relying on family involvement in the family firm ownership, management and governance functions to operationalise family firm definitions, it is essential to determine the essence of FFs.

The essence of the family (or family essence) is referred to as “the vision of the dominant family coalition, and the intention of that dominant coalition to sustain such a vision across generations” (Chua *et al.*, 1999; Litz, 1995). The essence approach goes beyond demonstrating the ability of the dominant family to influence the strategic decisions of the firm to show their willingness to influence the firm’s strategic direction (focus on behaviour rather than potential) (Chua *et al.*, 1999; Chrisman *et al.*, 2005; Zellweger *et al.*, 2010; Henssen *et al.*, 2011). De Massis *et al.* (2014) suggest that ability is “the discretion of the family to direct, allocate and add to, or dispose of firm’s resources” (p. 346). In addition, willingness is the “favourable disposition of the involved family to engage in distinctive behaviours”. (p. 347). Therefore, both ability and willingness are enough conditions for the family firm to exhibit family-oriented particularistic behaviours (Carney, 2005; Zellweger *et al.*, 2010).

Another criterion builds on the fact that the family firm is an affective institution, with kinship relationships that are built on commitment, loyalty and trust developed over time (Westhead and Cowling, 1998; Lumpkin *et al.*, 2008; Zellweger *et al.*, 2010). Such an organisation is influenced by the decision-making power of multiple generations of a family. The generations could be in the form of blood relatives, relatives by marriage or adopted children. They have the authority to develop a vision and pursue distinctive goals for their enterprises. However, the legitimacy and power to pursue a family or group of families’

visions can vary, as the family is seen as a dynamic organisational form (Montgomery, 2008; Randerson *et al.*, 2016). The diversity ranges from the traditional American or Western nucleus family to the predominant extended family structure in African societies. Therefore, the strategic business decisions will differ regarding how the actors and businesses are embedded within family relationships (Aldrich and Cliffs, 2003).

In this study, the research is intended to determine the ability and willingness of the family involved to influence the strategic behaviour of the firm, as well as to avoid discriminating against different typologies of FFs. Therefore, this study applies the suggested definition from Westhead and Cowling (1998) as well as Chua *et al.*, 1999). The researcher considered recommendations from Westhead and Cowling (1998) to use a broader definition that captures the demographic (ownership, management and governance), the relationship (kinship) and identify the perspectives. Westhead and Cowling (1998) broadly define FFs as businesses with:

“more than 50% of ordinary voting shares were owned by members of the largest single-family group related by blood or marriage, and the company is perceived by the chief executive, managing director, or chairman to be a family business” (p 40).

The four minimum criteria drawn for the operational definition of FFs are (Anderson *et al.*, 2005).

- 1) Self-identification - the respondent perceives the firm as a family or nonfamily business (yes/no).
- 2) Membership -the CEO/respondent is a member of the family or extended family (yes/No).
- 3) Ownership - the family owns more than 50% of the ordinary shares of the firm (with possible proportion of ownership being 0-100%).
- 4) Management - family members hold a top management position, i.e. at least two family members are involved in the management of the firm (none to more than 2)

Further, to capture the effects of 'family influence' along different dimensions of the firm, there was a need to use a theoretical definition that validated the operational definition of a family business. Hence, the focus on the behaviour, which can be argued as being the best

way to differentiate them from the non-family business, was also considered. Thus, the researcher used the definition suggested by Chua *et al.* (1999):

“The family business is a business governed and/or managed with the intention to shape and pursue the vision of the business held by a dominant coalition controlled by members of the same family or a small number of families in a manner that is potentially sustainable across generations of the family or families (p. 25).

In addition to the minimum criteria identified above by Westhead and Cowling (1998), Chua *et al.*, (1999) definition added two more criteria:

5. Generations - more than two generations of the family (or the dominant coalition) are involved in the day to day management or running of the firm (the possible range of generations involved in day to day operations of the business being 1 to more than 5).
6. Succession - the firm’s owners intended to pass the business to a member of the family upon the retirement of the current CEO (i.e. intra-family succession) (yes/no).

Although this section has concentrated on identifying the dimensions used to differentiate "FFs" from “NFFs”, it is worth noting that the intention was not to generate a universally acceptable definition. Despite the several attempts made in the extant literature, there is no acceptable definition of ‘family businesses. This continues to be a subject of debate, as there is a lack of theoretical consensus among family firm researchers (Brockhaus, 2004; Sharma *et al.*, 2012).

In addition, it is worth noting that the definitions adopted by various studies depend on the institutional and legal frameworks, and differ from nation to nation (Dyer, 2006; Allouche *et al.*, 2008). However, in the opinion of the researcher, the ‘family business’ definition should be able to capture both the operational ‘ability’ and theoretical ‘willingness’ (De Massis *et al.*, 2014) to influence the behaviours or strategic direction of the firm, and that these are the firms that qualify to be compared to NFFs. Therefore, it is important to have a look at the different typologies of family businesses to understand the heterogeneity among them. Typologies are used to demonstrate the heterogeneity of family businesses even though all the criteria have been met. The next section briefly reviews some of the typologies identified in the literature.

2.3: Typologies of Family Firms

To address the definitional challenges, FFs have been classified using a range of variables and theories that take into consideration the composition and objectives of the firms; based on the family ownership and involvement in the business (De Massis, Sharma, Chrisman and Chua, 2012; Dyer, 1986). This section provides some of the identified typologies in the literature and their descriptions.

2.3.1 The Two-circle and Three-circle Models of the Family Business

Efforts to define a 'family businesses' led to the identification of a two-circle model (family and business) (Tagiuri and Davis 1992), and the expanded three-circle model (family, business and ownership) (Tagiuri Davis, 1996; Gerick *et al.*, 1997). Tagiuri and Davis (1992) proposed the two-circle model of family business for organisational and managerial culture, where the two intersecting circles represent the family and business (Figure 2.1). This considers the family and business to be two different subsystems though they overlap. This is derived from the systems approach, where the family (a social system) is intertwined with the business (a legal system). Whilst the two systems can be independent of each other they are intertwined, which raises concerns as to whether they are distinct, or interconnected "Möbius strip" (Litz, 2008). Given the connectedness of the family and the business, Litz argued that the business can become a family business, while the family can be a business family. Therefore, the two subsystems are interdependent on each other and it is difficult to separate them.

The three-circle model represents family participation in the ownership and management of the business (Figure 2.2). Since its introduction, family business scholars have used this model to demonstrate that family involvement in the firm differentiates family businesses (FBs) from nonfamily businesses (NFBs) (Sharma, 2002; Tagiuri and Davies 1996). The three circles present an even more complex organisational structure, with dynamic conceptualisations (Gersick *et al.*, 1997). The argument has been anchored in both theoretical and empirical research on the family's role in the ownership and management of the firm, with a significant effect on firm behaviour, family dynamics, governance, strategic direction, business decisions, performance and entrepreneurship of the firm (Gersick *et al.*, 1997; Chrisman *et al.*, 2010; Basco and Perez Rodriguez, 2009; 2011; Basco, 2014). Indeed, the three-circle model is widely supported in prior literature, as it demonstrates the

distinctiveness, peculiarities and attributes, as well as conflicts, which can emerge from the various conceptualisations in FFs.

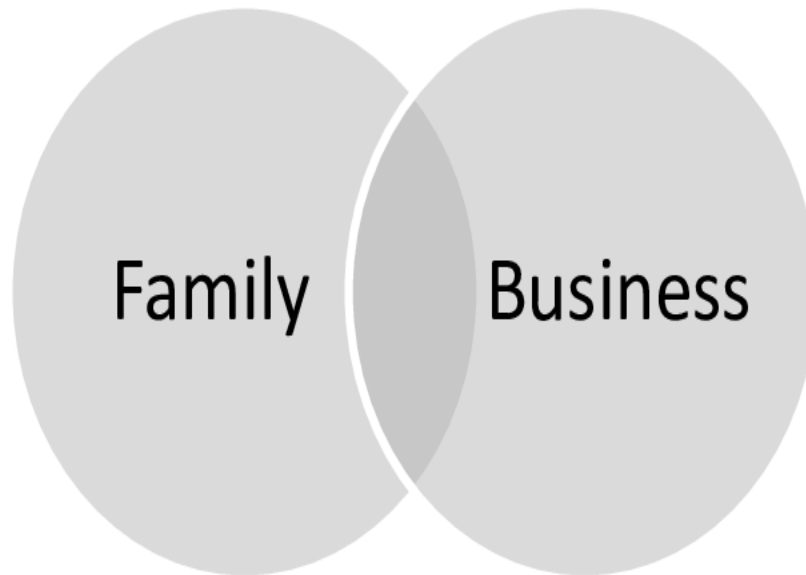


Figure 2. 1: Two-circle family firm model

Source: Tagiuri and Davis (1992)

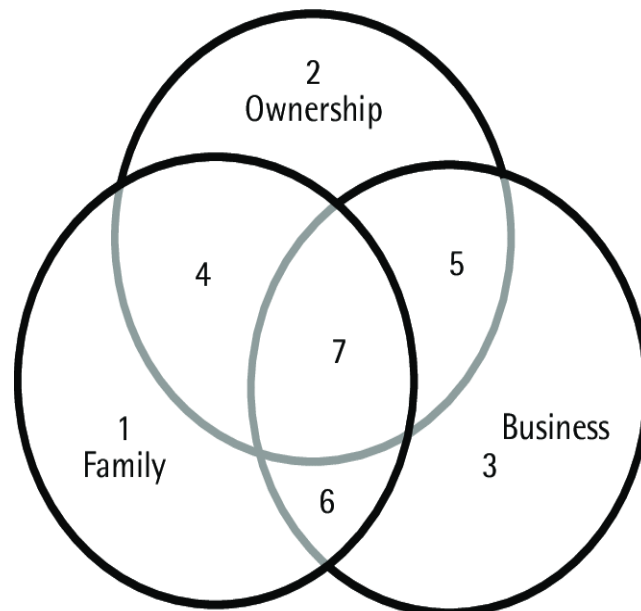


Figure 2. 2: Three-circle family firm model

Source: Tagiuri and Davis (1997)

Using the three-circle model, Sharma (2002) developed a typology consisting of seven possible internal family firm relationships, using the stakeholder theory. Based on figure 2.2, these represent:

1. Family member - not involved in the enterprise.
2. Non-family owners - not involved in the operations of the firm.
3. Non-family employees - involved in the business but not part of the family or ownership.
4. Family member owners - not involved in the business.
5. Employee owners - not part of the family.
6. Family employee - does not own the business
7. Family member and employee of the enterprise.

2.3.2: The Bull's Eye Model (BEM) (Shanker and Astrachan, 1996)

The BEM was developed to demonstrate the complex variations that can emerge due to family involvement in the business. Further, Shanker and Astrachan (1996) sought to illustrate the importance of family businesses in the US. In a bid to demonstrate the significance of family business contribution to the economy, the BEM (figure 2.3) classified family business into three categories - broad, middle and narrow. Based on the degree of family participation in the business, the outer layer (broad) represents a situation in which the founding family has minimal involvement in the business. The middle layer indicates a situation where the family has some involvement in the business with some descendants running it or have legal control. Whilst the centre core (narrow) represents a situation where the family has a stronger presence, with multiple generations involved in the ownership, management and governance.

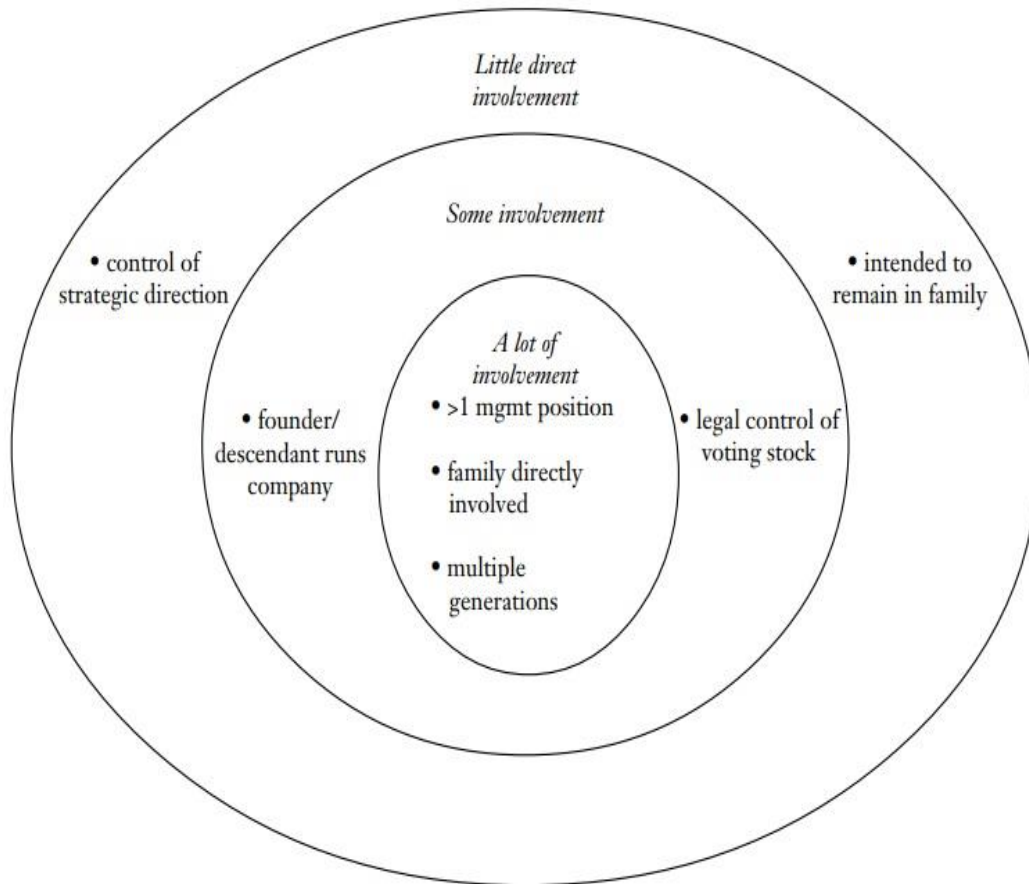


Figure 2. 3: The Bull's Eye Model

Source: Astrachan and Shanker (1996, p 109)

2.3.3: The Sustainable Family Business Model (SFB) (Stafford, Duncan, Dane and Winter, 1999).

The SFB model was developed to operationalise the family business system. In advancing the three-circle model, the authors argued that as opposed to viewing the family business as either a single system or two-separate systems, it was important to develop a research model that would capture the determinants of both a functional family and a profitable business. Therefore, the SFB model should guide empirical research seeking to examine the unique features that exists at the interface of the family and business systems.

Subsequently, other conceptual and empirical typologies of family businesses exist, as follows:

Lansberg (1999) categorised FFs using ownership structure, where firms are viewed as evolving from a single owner-manager (i.e. 'controlling owners') to diverse ownership

among siblings (i.e. 'sibling partnership'), where each part of the partnership faces distinct challenges.

Subsequently, **Birley (2001)** focused on founding owners to classify FFs using a twenty-item questionnaire that measured family involvement in the firm, using the owner-manager as a single respondent per firm. The author noted that in firms where the family's presence was salient, 'jugglers' (the owner-manager) attempted to strike a balance between the objectives of the organisation and those of the family, with none overriding.

In addition, **Ward (1987)** proposed a typology based on the philosophical orientation of the family business with regards to decision making as "family first, business first, and family enterprise first". Later, **Poza (2007)** categorised family businesses as "family first, ownership first, and management first". Even though there appears to be not much differences between the two, Ward looks at the sub-systems as a whole - family or business, while Poza distinctively refers to either the family individuals who own the business, or managers who run the business.

Further, **Basco and Perez-Rodriguez (2009)** draw on a sample of 732 Spanish firms to classify family involvement in the strategic process, board of directors, human resources and succession. They state that in those firms that had 'family in', the family's objectives influenced the behaviour of the firm. In 'family out' firms, however, family issues were not considered when making decisions. In addition, the work of Basco and Perez Rodriguez (2009) viewed the family firm from a holistic perspective, integrating both the demographic and essence approaches to measure family involvement. Applying the configuration approach, they empirically demonstrated that FFs that gave emphasis to both family and business, as a whole 'family enterprise first', demonstrated better results than those business that limited governance to firms with only 'business first' or family only 'family first' emphasis.

Dyer (2003) argued that using the family as a variable might significantly alter the research findings and provide a more robust family business theory. However, the recognition of the family in the business equally challenged traditional assumptions that viewed firms as a homogeneous group regarding the composition of firms' management and governance systems. The three-circle framework was conceptualised to understand the complex interactions between the three main dimension of the family firm; family, ownership and business. However, the model faces criticism for not considering the element of time, as it

only provided a snapshot of the business system, and not its composition over a time period (Gerick *et al.*, 1997). The review of the literature on typologies of FFs indicated different outcomes related to the organisational composition and performance of FFs using the three-dimensional model. Thus, instead of categorising businesses based on the two or three circles, family business researchers should draw on Litz (2008) proposition of using a ‘Mobius strip’ indicating that family and business continually interact with each other. Thus, when scholars draw on various assumptions, they should be either theoretically or empirically supported to some extent by the findings. The next section reviews the literature on family business performance in relation to regional development.

2.4: Review of Family and Non-family Firms Performance

Prior studies that investigated the differences between FFs and NFFs reported mixed findings on firm performance. Whilst some of the studies argued that FFs (owned, managed or both) seemed to report improved performance than NFFs (e.g. Anderson and Reeb, 2003; Randoy and Goel, 2003; Lee, 2006; Maury, 2006), others painted a gloomy picture concerning the influence of ‘the family’ on performance (e.g. Facio, Lang and Young, 2001; Villalonga and Amit, 2006). Though it can be argued that different measures have been applied to determine performance differences between FFs and NFFs, family involvement in the ownership and management of the business emerges as the major differentiating factor between the two types of firms (Carney 2005). Further, there is criticism on the level of family involvement in the firms, as prior studies that investigated the differences between family and NFFs' performance were focused on publicly listed corporations using traditional financial measures of profitability. These included return on assets, returns on investment, operating profits, market value (Tobin's Q) and capital structure such as the debt to total capital ratio, the long-term debt to total capital ratio, and quick ratios.

Indeed, as already indicated, earlier studies conducted around the world have established that FFs differ from NFFs, especially in their behaviours and performance. Thus, the fundamental questions that arise from the literature, comparing family to non-family firm contributions to regional development, are:

1. What are the factors that differentiate FFs' behaviours from NFFs' behaviours?
2. How do these factors affect the firm's potential contribution to regional development?
3. To what extent does the contribution of FFs to regional development differ from that of NFFs?

The level of family involvement in the ownership and management is a key determinant of the influence the firm has on behaviours and performance, as well their contribution to regional development. From one perspective, firms with family ownership or control are associated with higher performance compared to NFFs. In their study estimating the contribution of FFs to the US economy, Shanker and Astrachan (1996) found that family businesses represented approximately 60% of all the public and private organisations in the United States (US) (using the broadest definition). These contributed about 64% to the GDP, employed 62% of the workforce and accounted for about 89% of business tax returns. With the Bull's Eye Model above, the authors focused on family involvement in the ownership, management and governance as the major determinants of their contribution to GDP and employment opportunities in the US. Similarly, a study by Faccio and Lang (2002) established that FFs formed most businesses in 13 Western European Countries. They estimated that 44.29% of the firms were family controlled, though they observed that privately held firms formed majority of businesses (based on the wider definition). The authors focused on five countries in Europe in a comparison with Asian firms, in which they established that firms in Europe paid higher dividends as compared with firms in Asia.

Indeed, the concentration of ownership among majority shareholders was more likely to lead to higher performance and valuations, when compared with firms controlled by non-family owners. Anderson and Reeb (2003), using a sample of Fortune 500 firms, concluded that FFs performed better than NFFs. Specifically, the findings revealed that FFs with founding family members in management outperformed NFFs. According to Randoy and Goel (2003), using a sample of 68 SMEs publicly traded in Norway, the empirical results indicated that firms with the founding family leadership (CEO and Chair) moderated the relationship between ownership structure and firm performance.

Using as sample of S&P 500 firms which consisted of one-third of firms with founding families present, Lee (2006) established that FFs tended to experience a higher employment

and revenue growth and were more profitable compared with firms owned by diverse shareholders. Furthermore, regression analysis supported the hypothesis that performance of the firms improved when founding family members were involved in the management of the firms. In addition, when Maury (2006) examined the effects of family control on a sample of 1672 non-financial firms in Western Europe, the findings showed that firms with active family control had a higher profitability as compared with NFFs. Similarly, the longitudinal study of Villalonga and Amit (2006), using proxy data on all Fortune 500 firms during 1994-2000, established that family ownership created value in firms with the founder as the CEO of the family firm or when they served as chairman with a non-family CEO. However, when the descendants of the family served as CEOs the value was reduced. Another longitudinal study conducted by Allouche *et al* (2008) on data collected in the time period 1998-2003 in Japan confirmed that FFs performed better than NFFs, using profitability measures such as of return on assets and return on investment.

More recent studies, post the 2008 global recession, not only emphasised the high performance of FFs compared to their NFFs counterparts, but also the ability of FFs to maintain sustained business growth and sustained performance recovery after a crisis. Macheck, Hnilica, and Kolouchova (2015), using a sample of 271 manufacturing firms from the Czech Republic, showed that family businesses were more profitable than NFFs, using financial measures such as return on assets, debt ratio and cash liquidity. In addition, drawing on a sample of 98 Japanese firms, Amann and Jaussaud (2012) verified the assumption that in times of crisis, FFs perform better and have stronger resilience, both during and after an economic crisis. Further, they found out that FFs were better at resisting economic downturn, recovered faster, exhibited better performance and had stronger financial structure over time compared with NFFs. In another study using the Canadian context and data from publicly listed firms, Munoz-Bullon and Sanchez (2011) found that FFs invested more on research and development activities than NFFs, which had a positive impact on their performance.

By contrast, some studies have suggested that NFFs outperform FFs. In the Spanish context, Gallo *et al.* (2004) established that non-family public firms experienced improved performance compared to FFs. Similarly, Facio, Lang and Young (2002) noted that FFs showed poor performance due to conflicts that emerged as a result of the

family's desire to manage and control the firm. Further, as noted above by Villalonga and Amit (2006), when the next generation took over the business, there was a depletion of family firm value compared to NFFs. Similarly, Perez-Gonzalez (2006) suggested that when the family CEO is replaced, the operating profits of FFs decreased compared to NFFs. A study was also conducted by Singapurwoko (2013) in Indonesia from 2006-2010 using data from firms listed on the Indonesian stock exchange. It indicated that NFFs performed and were sustained better than FFs. In summary, these mixed findings have revealed that there is still limited knowledge on the factors that contribute to superior performance of FFs compared to NFFs, and vice versa. Although a significant but limited body of literature has explored the differences in performance of publicly traded FFs and NFFs in different contexts, these findings are far from definitively identifying the factors that contribute to the differences between the two sets of firms.

Studies focusing on the performance of public firms appear to be in the majority, perhaps due to the availability of financial information over a longer period (Anderson & Reeb, 2003; Villalonga & Armit, 2006; Allouche *et al.*, 2008; Simoes Viera, 2014). There are relatively few studies comparing unlisted private family and NFFs (Sharma and Carney, 2012). Methodologically, it is difficult to obtain objective financial information from privately-held firms. Although there are studies that have focused on these types of firms, the findings are mixed. For instance, Cucculelli and Micucci (2008) revealed that in Italy, maintaining family control had a negative impact on firm performance and these firms experienced improved performance when managerial succession was transferred to a non-family member.

In contrast, using privately-held Italian firms, Naldi *et al.* (2013) found evidence that preserving socioemotional wealth, specifically having a family CEO, enhances firm performance. This is particularly so in environments that are characterised by tacit rules and social norms, such as industrial districts, but becomes a liability in stock exchange markets. Furthermore, Chrisman *et al.* (2004), using a study of 1141 small, privately held firms in the US, indicated that NFFs were more likely to experience agency problems than FFs; thus, reducing their financial performance. In addition, Graves and Shan (2014), using a sample of four thousand, one hundred and twenty-seven (4,127) unlisted SMEs from Australia, found that FFs had higher returns on

assets as a result of having superior returns on sales compared to NFFs. Additionally, despite the negative association of internationalisation with return on assets for SMEs, family SMEs performed better in the international marketplace.

From the reviewed studies, it is apparent that the findings regarding FFs' and NFFs' differences on firm performance are inconsistent, and there is limited knowledge regarding which factors cause these inconsistencies. This is especially so when publicly-held and privately held company samples are utilised. In addition, most studies focus on Western economies such as Australia, Europe, and North America with very few, if any, focusing on Asia, Middle East and the African context. Therefore, there is a gap within the literature centred on examining the impact of FFs on regional development. Additionally, regarding whether FFs contribute more than NFFs in emerging economies with different corporate governance structures (Smith, 2008).

Following the contradictory results from these studies on FFs and NFFs performance, it is essential for more studies to establish, not only whether FFs outperform NFFs, but also the 'family effect' on a firm's contribution to regional development (Dyer, 2006; Basco, 2015; Stough *et al.*, 2015). This will help to develop a better understanding and will aid theorising within the field of FFs. Furthermore, scholars acknowledge that family businesses do not represent a monolithic group in reference to their organisational performance (Chua *et al.*, 2012; Corbetta & Salvato, 2004; Sharma, Chrisman, & Chua, 1997).

Thus, it is important to note that these prior studies exhibit major theoretical limitations. Firstly, they use different definitions across the studies leading to inconsistencies in the outcomes (Astrachan and Zellweger, 2008; Cucculelli and Micucci, 2008; Hensen *et al.*, 2011). This is with the exception of Graves and Shan (2014), who found consistent results across different definitions of the family business. Secondly, the studies used different variables as metrics when measuring performance within FFs (and NFFs). However, they have not recognised that FFs are different from each other with regard to their goals and objectives (Chrisman *et al.*, 2012), resources and capabilities (Habbershon and William, 1999), leadership and attributes (Kellermanns and Eddleston, 2007), and strategic management processes (Basco, 2013). Further, the 'family system' is perhaps the major driver of strategic decisions, especially within SMEs, where their influence is felt more (Basco and Perez Rodriguez, 2009). Finally, studies investigating the differences

between FFs and NFFs have reported inconsistent findings because they fail to control for the effects of context and industries within their samples (Smith, 2008).

In the last decade, it appears that family firm researchers have moved away from focusing on investigating the demographic differences between FFs and NFFs' performance. Instead scholars have responded to calls to design studies that focus more on understanding the behavioural influence of family ownership, control components and family involvement (essence of the FFs). This has been not only at the firm level (Astrachan and Zellweger, 2008; Chrisman *et al.*, 2012; Jaskiewicz, Uhlenbruck, Balkin, and Reay, 2013; De Massis *et al.*, 2014), but also at the regional level (Basco, 2015; Stough *et al.*, 2015).

As Dyer (2009) highlighted earlier, the contradictory findings are the result of a failure to clearly describe the 'family effects' investigated in relation to organisational performance. The author draws on agency theory and the resource base view (RBV) of the firm to identify and define the possible effects families have on organisational performance. This was in order to gain an in-depth understanding of the influence of the family on the firm. Another study by Sciascia and Mazzola (2008) focused on the two major variables used to differentiate FFs from NFFs; namely family involvement in ownership (FIO), and family involvement in management (FIM). Using a sample of 620 privately-held Italian firms, they established a negative quadratic association between FIM and performance, but no relationship was found between FIO and performance.

These findings suggest that the family may only have positive effects when actively being involved in the management of the firm and where they are involved in the strategic decision-making process (willingness), rather than just having a passive ownership of the firm (ability). Similarly, Revilla *et al.* (2016) found evidence to support their hypothesis that it is FIM rather than FIO that makes the difference in preventing risk of firm failure during economic downturn. Further, this also highlights the importance of adopting a definition that incorporates both the operational and theoretical definitions of the family firm, in order to capture clearly both the ability (ownership, management and control) and willingness (family essence) as sufficient conditions for family-oriented, particularistic behaviour. This is as proposed by De Massis *et al.*, (2014) in differentiating them from NFFs. The next section explores the increasing interest in family firm prevalence and embeddedness in regional economies, and their importance to regional development.

2.5: Does Family Firms' Prevalence or Embeddedness have any Impact on Regional Development?

The aim of this section is to review the role of FFs in regional development, with an objective to position family businesses as significant actors capable of altering regional growth and development outcomes. Generally, previous scholars who investigated the role of FFs in economic and social development have either adopted the traditional top-bottom approach or a bottom-top approach (e.g. Block and Spiegel, 2013; Memili *et al.*, 2015; Blackman and Palmberg, 2015; Basco, 2015; Stough *et al.*, 2015).

The top-bottom approach, which is based on the traditional approach to studying economic development, considers the exogenous factors and their effect on regional growth and development. This is based on the neo-classical theory of economic growth, and enabled researchers to design studies that determined exogeneous factors that influence organisation behaviours and development. These include relational, institutional, organisational, social, and cognitive proximity (Basco, 2015). However, this approach does not consider the organisational context, or the role of the owners of capital who are responsible for firm behaviours.

On the contrary, the bottom-top approach allows the examination of the effects of endogenous factors, such as entrepreneurship, leadership, institutional capacity and capability, innovations, and the identification of new technologies (Karlsson, Johannisson, and Stough, 2013). For instance, the approach considers the presence of an economic actor who controls most of the business resources and knowledge base, and possesses the power to alter the strategy, behaviours and performance outcomes of the firm. This would influence the impact of the firm on regional economic and social outcomes. When the bottom-top approach is conceptualised at the firm level, it forms the basis for the proposition asserting that the prevalence or embeddedness of firms (whether family or non-family) will affect regional development (Basco, 2015).

The relationship between FFs and regional development has been studied from different perspectives, both theoretically and empirically. Some studies have focused on the prevalence of family businesses (Chang *et al.*, 2008; Memilli *et al.*, 2015), and others have focused on their embeddedness in the regional environment (Basco, 2015). The prevalence of family businesses is defined as the proportion of the number of FFs compared to the total population

of firms in a given region (Memili *et al.*, 2015). Whereas, the embeddedness of family businesses is defined as the degree to which FFs are intertwined and interdependent within the broader social context (Grannoveter, 1985; Basco 2015). These two perspectives inform the central debate on the relationship between FFs and regional economic and social development (Stough *et al.*, 2015).

The proportion of FFs in regional economies is said to be significant compared to NFFs (Tagiuri and Davies, 1996; Gersick *et al.*, 1997; Astrachan and Shanker, 2003; Villalonga and Amit, 2006; Chang *et al.*, 2008; Memili *et al.*, 2015). However, the relationship between the prevalence of FFs and regional development is not well understood (Basco, 2015; Memili *et al.*, 2015). Family businesses have unique behaviours and performance outcomes. So, their predominance in regional economies will have unique contributions as compared with those of NFFs (Westhead and Howorth, 2007; Chua *at al.*, 2012). According to Westhead and Howorth (2007) family businesses are heterogeneous in nature, with capabilities of leveraging on their experience and knowledge to influence local economic development. Further, family involvement in a business adds to the increasingly diverse pool of variables, as they pursue non-economic goals, which also influence firm performance and their contribution to regional development (Chua *at al.*, 2012).

In addition, FBs represents a unique economic and social actor capable of influencing regional dimensions that will in turn impact on regional development. The regional dimensions, as per Memili *et al.*, (2015), include policy development, market development, and economic growth. Whereas, Stough *et al.* (2015) identified regional dimensions as GDP, employment, internationalisation, innovation, resilience and living conditions (p. 211). The FFs play a significant role in creating, allocating, and transforming resources within a geographical space (Markusen; 2002; Backman and Palmberg, 2015). Based on this argument, the concentration of FFs within the local and regional environment will have a distinct impact on regional development as compared to NFFs (Backman and Palmberg 2015; Memili *et al.*, 2015).

For instance, according to Backman and Palmberg (2015) FFs had a higher contribution to employment opportunities in rural areas compared to NFFs. Therefore, FFs can produce different outcomes based on the regional context in which they operate. Likewise, countries in the Global South region face serious challenges due to their changing economies and the need to create professions and share the benefits of development. The commitment to

economic development is aimed at creating measures to develop and improve the economy, in connection with the necessary research and strategic institutions in the region. The NFFs in the region lead to changes in the economic sphere and, as a rule, provide general benefits to the population (Skoneczna *et al.* 2018).

In contrast, FFs are heterogeneous firms with both functional and dysfunctional characteristics. For instance, FFs can have an effective entrepreneurial orientation that promotes the development of competitive advantage. This would be due to unique resources and capabilities leading to growth, or cost reducing strategies arising from reduced agency problems. However, FFs also possess dysfunctional characteristics (e.g. innovation aversion) that do not necessarily emerge from either size, age or industry (Memili, *et al.*, 2015), but instead emerge because of the unique characteristics of the family stakeholders (Gedajlovic and Carney, 2010).

According to Basco (2015) the embeddedness of family businesses in regional productive structures enables them to alter exogenous factors which influence external economies of agglomeration and regional externalities (p.1). This perspective is underpinned by the idiosyncratic behaviour of FFs referred to as ‘familiness’, conceptualised by Habershon and William (1999) and Habberson *et al.*, (2003). For instance, scholars have argued that FFs possess unique resources and capabilities that enable them to generate ‘familiness capital’, a competitive advantage that enables them to improve firm performance (Sirmon and Hitt, 2003).

The interaction of the family-business systems produces particularistic behaviours (Carney, 2005) that not only influence endogenous factors within the firm, but also exogenous factors that affect regional productive structures. Therefore, the embeddedness of FFs in the regional environment will result in them altering the regional dynamics due to their ability to determine the allocation of resources and their timing. Therefore, based on their uniqueness, one can argue that FFs are unique actors who can influence regional development differently from NFFs.

Despite the emerging interest by scholars investigating the role of FFs, there are limited studies integrating family firm behaviour at a regional level in order to measure their impact on regional development (Basco, 2015). Most family business studies have focused on micro-oriented research that seeks to understand the influence of family ownership and control on developing behaviours and performance (Basco, 2013; Zellweger and Nason, 2008) instead

of their regional impact. Therefore, it was essential to develop a conceptual model that goes beyond the prevalence approach, so as to establish the effects of family firm prevalence or embeddedness on regional development. This is in line with Basco's integration of firm level behaviour (such as 'familiness') with regional dynamics, which he refers to as 'Regional Familines'. Following this line of argument, Basco (2015) stated that:

“..... Family firms are important actors not only because the family is the most representative form of organisation (as is usually proclaimed), but also because regional factors, processes and proximity dimensions are altered, depending on the embeddedness of family businesses in regional productive structures” (p. 2)

The next section reviews some studies that have focused on the intersection of family business and industrial clusters.

2.6: The Involvement of Family Firms in Industrial Clusters

Industrial clusters are specialised groups which can be defined as: “geographic concentrations of interconnected companies, specialised suppliers, service providers, firms in related industries, and associated institutions (e.g. universities, standards agencies, trade associations) in a particular field that compete but also cooperate” (Porter, 2000, p. 16). This definition emphasises the aspects of proximity and interconnectedness of firms and other supporting institutions in a context that have shared interests and complement each other. An industrial cluster, which is sometimes referred to as an ‘industrial district’, can also be viewed as a geographically, shared-focused and sectoral concentration and combination or entrepreneurial ecosystem of firms. However, a more recent perception of industrial clusters defines them "as an open social-technical system, goal-oriented and having a particular structure" (Bembenek *et al.*, 2014, p606-607).

According to Rocha and Sternberg (2005: 270), there are three dimensions that are necessary for defining clusters: geographic proximity, an inter-firm network, and an inter-organisational or institutional network. Other scholars have advanced the definition by looking at both geographical and sectoral concentration, and a combination of firms (such as Niu, 2009) focused on manufacturing clusters and potential benefits drawn from a cluster of firms (United Nations Industrial Development Organisation, UNIDO). Additionally, these would be from economic and social interdependencies (Rocha and Sternberg, 2005), and inter-industrial level and underlying networks of interrelated co-operating firms (DeBresson, 1996).

Table 2. 2A summary of empirical studies linking family firms and regional development

Authors	Literature/ Theory	Scope/Space/ context	Dependent variable	Study Design /Sample	Findings/Results
Memili <i>et al.</i> (2015)	Knowledge-based view of economic growth	Regional State level in the USA	Economic growth - year-on-year log difference in gross state product (GSP) per capita	family firms 18, 263 nonfamily firms-21, 700	Find support for our hypothesis and the underlying contention that economic growth is maximized when an economy includes a balanced mix of family and non-family SMEs
Cuccunelli and Storai (2015)	Family governance	Industrial District Level, Italy	Industry return on sale	Sample firms 16.2% of all Italian manufacturing firm	A positive effect of family ownership on firm profitability
Backman and Palmberg (2015)	Regional embeddedness	family firms” European Commission (2009), Sweden	Growth in employment year on year (2008-2012)	Sample of 600 observations from two databases	Established that family firms do not influence employment growth, however, when corporate governance structures and regional context are combined, the urban-rural context influences family firm and nonfamily firm employment growth differently, with family firm exhibiting greater employment, compared with nonfamily firm, in rural areas.
Choi, Zahra, Yoshikawa and Han (2015)	Behavioural decision model, family control perspective and agency theory.	National, South Korea	R&D intensity- firm's R&D expenditure to its total sales	Uses 10 year data (1998-2007) from Korean firms	Family ownership is negatively related to R&D, but the relationship becomes positive when growth opportunities are present. However differs between independent family firms and family business groups. Family owners tend to invest more in R&D when their family control goals are threatened by the loss of growth potential.

Basco and Calabro (2015)	Clustering of firms- natural resource cluster Open innovation	Industry clusters, Chile 597 firms	Innovation- internal innovative activity (4 items)	Empirical analysis of a sample of 245 Chilean firms.	Family SMEs search for new ideas and knowledge within their closest network of relationships (e.g. customers, suppliers and competitors), whereas non-family SMEs mainly focus on broader network relationships (e.g. universities, public institutions and fair-trade organizations).
King and Peng (2013)	Pecking order theory of financing choice	Firm level, USA	Longevity of founding-family firm	211 family firms that had initial IPO on NYE between 1950-1965	Founding-family firms in industries jointly characterised by cyclicity, capital intensity and growth have a shorter control span than founding-family firms in other industries. The article also reveals that the lifespan of non-founding- family firms is less sensitive to the same industry characteristics
Campbell, James, and Kunkle (2013)	RBV Regional convergence	Regional, USA	Regional Income Convergence	US from 1990-2000	Accounting for the performance of high-growth firms adds significant explanatory power to the convergence process lending credence to the position that microeconomic variables should be included alongside more macroeconomic variables in models of regional income convergence
Block and Spiegel (2013)	Regional innovation systems	Regional, Germany	Number of granted patents	Survey of 326 German regions with locations of 526 medium to large scale family firms	The findings show that regions with a higher number of family business density also show a higher level of innovation output, measured by successful patent application
Bird and Wennberg (2013)	Organisational ecology, Social capital and embeddedness	Regional, Sweden	Prevalence of family and nonfamily start-ups (no. of start-ups)	Three longitudinal multi-level databases of Sweden between 1991 and 2007	While economic factors such as population size and growth in regions are primarily associated with the number of non-family start-ups, factors related to regional embeddedness, such as pre-existing small family businesses as well as favourable community attitudes toward small businesses, are more strongly associated with the number of family start-up

Bembenek, Jankowska-Mihulowicz and Piecuch (2012)	Strategic decision making, economic development ecosystems	Firms within Aviation Cluster Poland	Family business development	120 members, national and international. Sample 11 family firms, Aviation valley cluster	Firms that enter or function within clusters may be able to flexibly respond to stimuli externalities, thus developing dynamically, with the ability to develop and adapt their management structure under increasing complex and challenging external environment
Hosseini and Ghanbari (2011)	Social network theory	China	Commitment to innovation	Longitudinal case study data collected from SMEs between 2004-2007 Shanxi garment clusters.	The findings indicate that firm-level commitment to innovation is significantly driven by three groups of factors: competitor action and cooperation in supply chain, membership of various Gov. and industry associations, and Gov. stimulus policies in clusters
McAdam, Reid and Mitchell (2010)	Life cycles Critical incidents	Regional, EU	longitudinal dynamics of innovation	longitudinal study of a regional cluster of five family-based businesses	The findings suggests that critical incidents interacted with the firm's lifecycle and its approach to family v business, resulting I being a catalyst for developing a radical innovation or maintaining status quo or continuous improvements.
Banalieva and Eddleston (2009)	Agency Theory Stewardship	Firm level Western European Firms	Performance- ROA, net profit to total assets, ROS, Net profit to total sales, profit margin	202 western European family firm from 1996-2006	They find support for the hypothesis that family leaders are most beneficial when pursuing a regional strategy (i.e. high home region focus (HRF)) whereas, non-family leaders are more advantageous when pursuing a global strategy (i.e. low HRF)
Chang <i>et al.</i> (2008)	Agency, RBV' Stakeholders theory.	State Level	Prevalence of family firms	Sample of 15,918 firms	They establish a negative relationship between proportion of family firms in a state and gross state product per capita.

In addition, industrial clusters are characterised by informal rules (i.e. traditions, customs, moral values, and beliefs) significant to the business context, as they impose some constraints and conditions on businesses operating therein. Although they are also guided by formal rules and regulations, studies have shown that informal institutions influence important aspects of their operations, such as commercialisation and growth and other strategies, because of long-term collaboration (Oba and Semirioz, 2005). In today's globalised world, even the most successful regional economies are to a certain extent vulnerable to challenges brought about by globalisation and technological advancement (Rosenfeld, 2002; Niu, 2009).

Rosenfeld (2002: 5) argues that “no nation and certainly no region, can be outstanding in producing everything”. Therefore, because of their history, even the most prolific nations and regions, must identify their geographical peculiarities, competitive advantages and innovative capacities in relation to certain types of industries or clusters. Thus, the concentration of firms either within a geographical or sectorial area can provide firms with certain opportunities, such as:

“access to more suppliers and specialised support services, experienced and skilled labour pools and the inevitable knowledge leakage that occurs where people meet and talk about business” (Rosenfeld, 2002: 5).

This is particularly true for small firms in nations that lack necessary and vibrant domestic markets essential for growth, and for enterprises in emerging economies with weak institutions, infrastructure and limited supporting industries (Niu, 2009).

Prior scholars have studied FFs with different outcomes as a result of their embeddedness in the regional environment in which they operate. Table 2 highlights the differences of the results of the level of analyses. Studies focused at the regional level explored the proportion of FFs in the entire economy. The proportion was determined to establish the impact of FFs on regional development (e.g. Memili *et al.*, 2015). However, studies focused at the national level explored the FFs within specific contexts to establish their impact on the nation's economic development. Finally, several studies also focused on special contexts, such as industrial clusters that are established or emerge within the regions or nations (e.g. Johannisson *et al.*, 2007; Bembenek, *et al.*, 2012; Basco and Calabro, 2015; Cucculelli and Storai, 2015). The presence of industrial clusters become a significant element as they are

capable of mediating or moderating the relationship between entrepreneurship (firms) and regional development.

As established by Johannisson *et al.* (2007), FFs are an essential component in the context of industrial clusters and they should be investigated to understand their role in regional development. Further, Rocha (2004) established that industrial clusters are significant in understanding the role of entrepreneurship (in this case FFs) on economic development. According to Rocha, industrial clusters conceptually moderate the positive relationship between entrepreneurship and development. Further, the literature on industrial clusters established that they not only impact firm performance, but also regional productivity and regional competitiveness (Cucculelli and Storai, 2015). In addition, Markusen (1996, 2002) highlighted that the role of firm actors in the geographic space was neglected when studying regional development. Therefore, how the involvement of FFs (NFFs) in industry clusters contributes to regional development needs examining.

As such, it is important, when investigating the role of family businesses in industrial clusters, to examine the “role of the strategic decision decision of family (nonfamily) firms actors to participate in the activities of an industrial cluster have in the process of family business growth and their impact on regional development” (Bembenek, *et al.*, 2012: 603). Indeed, industrial clusters are perceived to externally influence the development of various kinds of organisations, such as the family business. In addition to the resources and skills embedded within industrial clusters, they can also strengthen the competitiveness of family businesses during times of turbulence in the environment (Bembenek *et al.*, 2012). Therefore, the strategic decision to join an industrial cluster could significantly impact on regional development and contribute to substantially improve their situation in the market.

Indeed, there is evidence to support the arguments that the contribution of FFs is distinctive compared to NFFs in the context of industry clusters. According to Cucculelli and Storai (2015), the interaction between family ownership and locational factors produced different outcomes, with medium-sized businesses leveraging on their location in district clusters to report superior performance. Another study by King and Peng (2013) analysed the firm level intersection with industry. This indicated that founding FFs in industries were jointly characterised by cyclicity, capital intensity and growth, and had a shorter control span than FFs in other industries characterised by longevity. Focusing on the unique context of the studies, this study identified the industrial clusters context, which is considered an important

factor when considering the role of entrepreneurship in particular, FFs as regards regional development (Rocha, 2004).

One of the most problematic issues about industrial clusters is that there is no consensus on what comprises their definition and composition (Rocha, 2004). Further, given the continuous metamorphosis of industrial clusters over the years, it would be difficult to establish their boundaries, since they are no longer location based. This is because of new technological developments (Rosenfield, 2002). Therefore, instead of focusing on the industry cluster as a measurement unit, the thesis adopts the suggestion by Niu (2009) to conceptualise clusters based on firm involvement in the activities within industrial clusters. According to Niu (2009, P. 450), there is a fundamental difference in the unit of analysis between ‘industrial clusters’ and a firm's ‘industrial cluster involvement’.

In order to evaluate an organisation's performance outcomes, Niu (2009) recommended that the term ‘industrial cluster involvement’ is more appropriate. It is important to note that the actual focus of this approach is not on the ‘industry cluster’ as a whole. However, the focus rests on the effect of individual firms, because of being involved with other firms within the industrial clusters. Therefore, this study considered family firm involvement in clusters as the deliberate strategic actions by the firm actors to participate in the activities within the industrial clusters that generate and influence the regional dynamics through interactions with other firms. The next section focuses on the family firm impact on regional development outcomes.

2.7: Conceptual Perspectives Linking Family Firms and Regional Development

The section reviews theories applied in the studies linking family business and regional development. From the review, some of the theories include regional embeddedness, regional convergence, regional innovation, social capital, knowledge-based view, social network and business lifecycles. Most of the theories can only provide explanations of how the regional environment (level) of economies impacts the firms’ behaviours and performance. Additionally, their explanations are limited to a certain level, and may not provide an exhaustive, multi-level, explanation. For instance, Memili *et al.* (2015) application of the knowledge-based view of economic growth is limited in its explanatory power as to whether family and NFFs acquire and manage knowledge differently (which will influence economic growth).

From a theoretical perspective, some studies have utilised theories that position the theoretical explanation at the lower level, reasoning mostly at the individual or firm level. Banalieva and Eddleston (2009) established that family leaders are an asset when pursuing a regional strategy, such as a high focus on the home region. Drawing on agency, RBV and stewardship theories (mainly used at an individual level), it can be argued that FFs with family members operating the business will enhance the regional economy. Although the study was important, the evaluation of family firm participation was not conclusive, as they offer a nuanced view of the two explanatory theories. Further, the focus of the authors on family leadership does not capture the extent to which the family involvement influences the firm strategic behaviours. This is because they rely on the identity of family and NFFs. A few studies draw on theories to expand the explanatory powers when explaining the relationship between regional dimensions and FFs.

For instance, Bird and Wennberg (2013) have drawn on organisational ecology, social capital and embeddedness theories to explain how regional factors affect family and non-family start-ups. They established that several factors related to regional embeddedness theory affected the formation of FFs start-ups. These were influenced by favourable attitudes towards small businesses, while population size and growth influenced the formation of non-family firm start-ups. In addition, Campbell *et al.* (2013) use the RBV theory and regional convergence theories to offer a significant explanatory power regarding how the performance of high-growth firms' convergence was influenced by available resources. These enabled the researchers to include both microeconomic and macroeconomic variables when developing a model to demonstrate regional income convergence.

According to Chang *et al.* (2008), the economic development of a region has an influence on the prevalence of FFs, as compared to NFFs. Using aggregate firm data at the state level in the US, they concluded that the formation of firms, as well as their scale and scope, was likely to be influenced by the characteristics of the environment (p. 559). Though Mork and Yeung (2004) suggested that large family businesses might hinder economic growth, on the contrary, Chang *et al.* (2008) argued that small FFs may have an important role on economic development in less prosperous regions.

By drawing from the agency theory, the resource-based view (RBV) of the firm and stakeholder theory, Chang *et al.* (2008) argued that FFs behaviours are fundamentally different from those of NFFs. These theories have enabled the conceptualisation of endogenous determinants, that link to certain exogenous factors, which could facilitate or constrain the creation, survival or growth of FFs (Block and Spiegel, 2013; Chang *et al.*, 2008). However, there are no empirical studies that investigate whether or not there is a significant difference between FFs influence on regional development and that of NFFs (with exception of Backman and Palmberg, 2015). This is especially true in emerging economies mired by weak economic markets and institutional environments (Khavul *et al.*, 2009; Zoogah *et al.*, 2015).

From a conceptual perspective, several studies have provided models that explain the FFs' impact on regional development. These studies propose conceptual models of how FFs influence endogenous and exogenous factors, within either the industrial clusters or regional environment (e.g. Johannisson, *et al.* 2007; Nordqvist and Melin, 2010; Hitt *et al.*, 2011; Basco, 2015; Stough *et al.*, 2015).

2.8: Conceptual Models Exploring the link between Family Businesses and Regional Development

This section reviews some of the conceptual models proposed in the extant literature to explain how family firms influences regional development.

2.8.1: A Networked Model of Sustainable Industrial District Networks

Johannisson, *et al.* (2007: 545) presented a conceptual model concerning the 'industrial district as a networked community'. The model depicts the family business as a factor that influences the industrial district as a social networked community. These concepts include self-organising, networking, knowledge transfer, internationalisation and family business. They argued that the family firm is a unique actor that can influence the organisation of resources based on mutual trust and commitment (Johannisson, 2000a). Their ability to collaborate or co-operate with other firms enables them to create formal or informal networks within industry clusters. Further, their focus on generational inclusivity of family members will influence new generations in creating and expanding their entrepreneurial networks within or beyond the cluster to solidify their position. Therefore, to understand the industrial cluster networks, FFs are an important unit of analysis, as they are able actors. Thus, they

may hold similar views focused on the role of FFs on cluster networks. Therefore, research at this level could investigate the role of firms (family and non-family) as possible economic actors that can influence regional dimensions (such as networking, cooperation, competition, resilience). Although, this model has not been empirically tested to establish the effects family firms have on industrial districts networks, there is evidence that medium family businesses leveraged on distrivtual locations to achieve superior performance within the Italian districts (Cucculelli and Storai *et al.*, 2013)

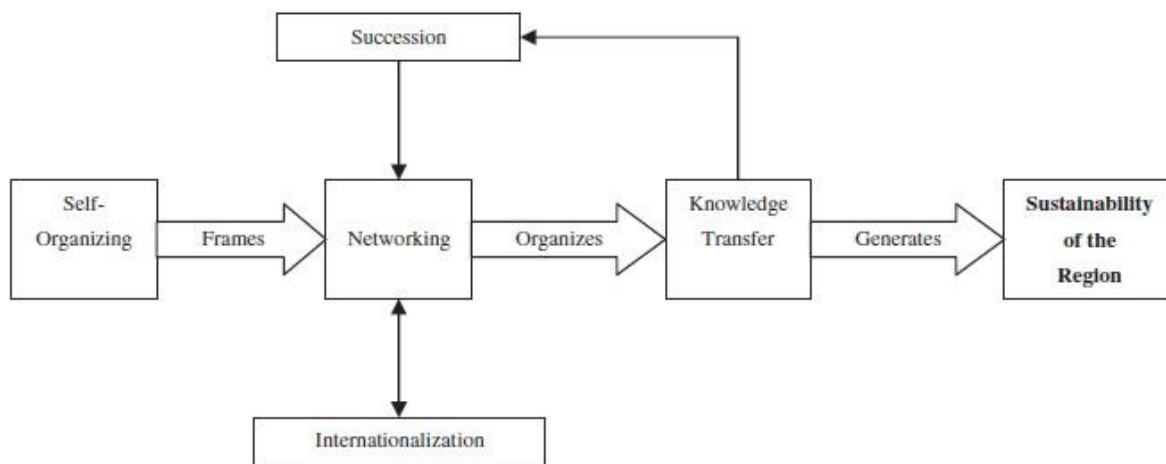


Figure 2. 4: A networked model of the sustainable industrial districts

Source: Johannisson *et al.*, (2007, p 545)

2.8.2 A Framework for Entrepreneurship and FFs

Nordqvist and Melin (2010) introduced a framework that linked entrepreneurship and FFs based on the ‘three A’s’ of entrepreneurial families: *Actors, Attitudes and Activities*. The ‘Actor’ refers to the family as an actor that undertakes entrepreneurial activities; that is, an entrepreneurial family. This shifts the unit of analysis in entrepreneurship studies to the family, not simply as a social or organisational context, but as a driver of economic. The ‘attitude’ represents the mind-set or approach taken by the family as a collective, or by individual family members in entrepreneurial processes. Further, they define ‘attitude’ as a cognitive notion, a way of thinking and an action-based orientation held by the family members, who take new initiatives and carry out changes. Finally, the ‘activities’ specifies actions taken by the family that indicate entrepreneurial meanings for the family, for its firm(s), and or for the social or economic development of the wider context (e.g. local community). The focus on family enables researchers to identify the entrepreneurial

opportunities or activities that family or individual members are likely to pursue (p.220). However, there was no clear link on their influence at the macro level, though they noted that family firms through their participation—the family as actors, their attitudes towards entrepreneurship, and activities they undertook- had potential impact on regional development. The diagram below summarises the three themes and their inter-connectedness.

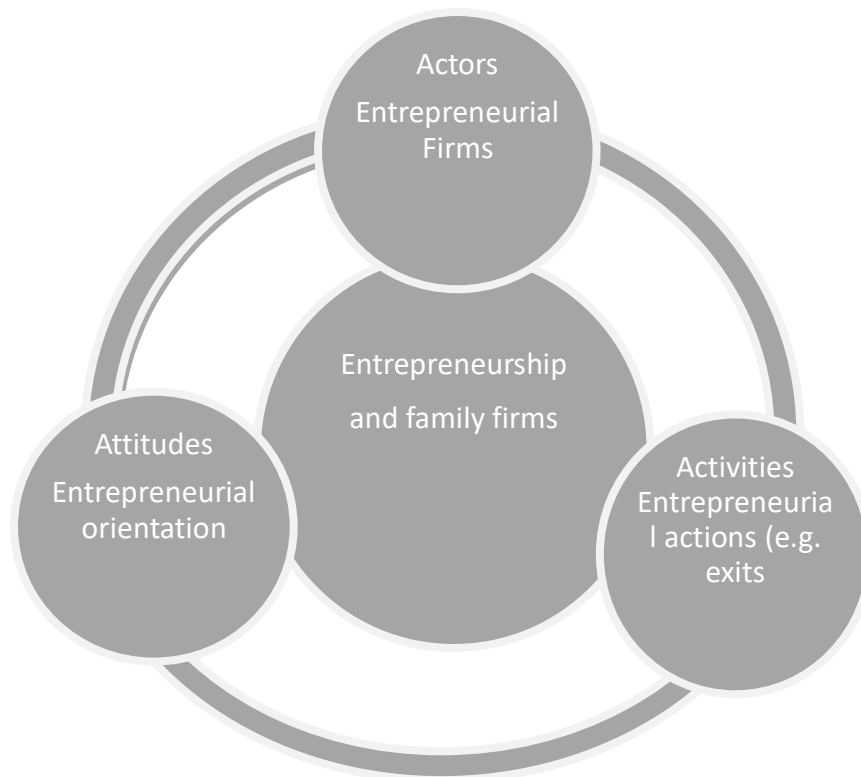


Figure 2. 5: A framework for entrepreneurship and FFs

Source: Nordqvist and Melin (2010, p.220)

2.8.3: A Multilevel Model Explaining Strategic Entrepreneurship Impact on Regional Development

According to Hitt *et al.* (2011) strategic entrepreneurship theory can be used to argue how FBs can influence regional development. The authors develop a multilevel model consisting of three dimensions or levels of interactions: namely, resource input, resource orchestration process and outputs. Firstly, the model incorporates “environmental, organisational, and individual foci into the dynamic processes of simultaneous opportunity and advantage-seeking behaviours” (p. 59). Secondly, the model conceptualises the processes, actions or both undertaken at the firm level, specifically focusing on the orchestration of its resources and the entrepreneurial actions. These are used to protect and exploit current resources, while

simultaneously exploring for new resources with value creating potential (p. 60). Finally, the outputs then are examined based on three levels i.e. societal, organisational and individual benefits. These benefits include, but are not limited to, societal enhancement, wealth creation, knowledge, and opportunity. This model clearly demonstrated the potential to explore and explain the relationship between family firms and regional economic and social development, using a multilevel approach- and at an individual, organisational and societal level. However, this is limited only to resources and does not potentially explore the effects of other firm level behaviours such as effects of participation in decision-making due to family involvement and entrepreneurial actions, or external factors that may influence availability and allocation of resources.

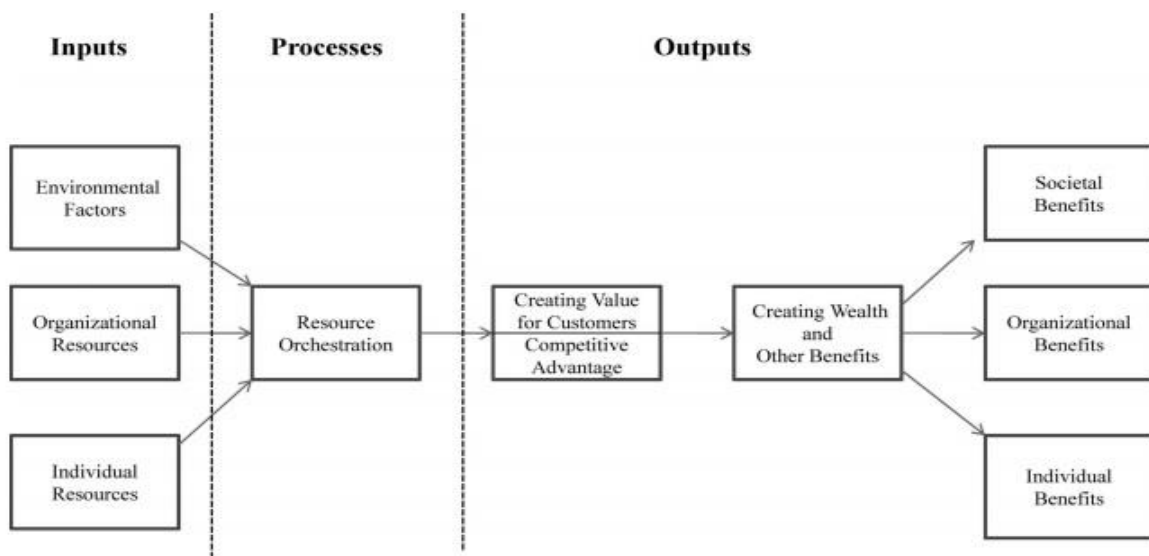


Figure 2. 6: An Input-Process-Output model of strategic entrepreneurship

Source: Hitt *et al.* (2011, p. 60)

2.8.4: A Model of Regional Development

Basco (2015) argued that the embeddedness of family businesses in regional productive structures affects regional factors, regional processes, and regional proximity dimensions. Thus, it alters external economies of agglomeration and regional externalities (p.1). This is based on the idiosyncratic behaviour of FFs referred to as ‘familiness’ (Habershon and William, 1999; Habberson *et al.*, 2003). While applying the RBV theory principles (based on Barney, 1991) to FFs, they argued that FFs possess unique resources and capabilities as a result of the presence of family stakeholders. Moreover, these contribute to their distinctive and systemic resources, and that are absent in NFFs, such as human, social, patient,

survivability, and governance capital (Sirmon and Hitt, 2003). In addition, a long-term orientation due to their focus on non-economic goals (Chrisman *et al.*, 2012), family-centred goals (Kotlar and De Massis, 2013) and Socioemotional wealth (Gomez-Mejia *et al.*, 2007:106). The interaction of the family-business logics produces unique characteristics and behaviours referred to as ‘particularistic behaviours’ (Carney, 2005). This distinguishes FFs from NFFs, with a focus on their influence on decision-making processes allowing them not only to influence endogenous factors within the firm but also exogenous factors and processes that affect regional productive structures, hence when their behaviours are aggregated they can influence regional development (Basco, 2015).

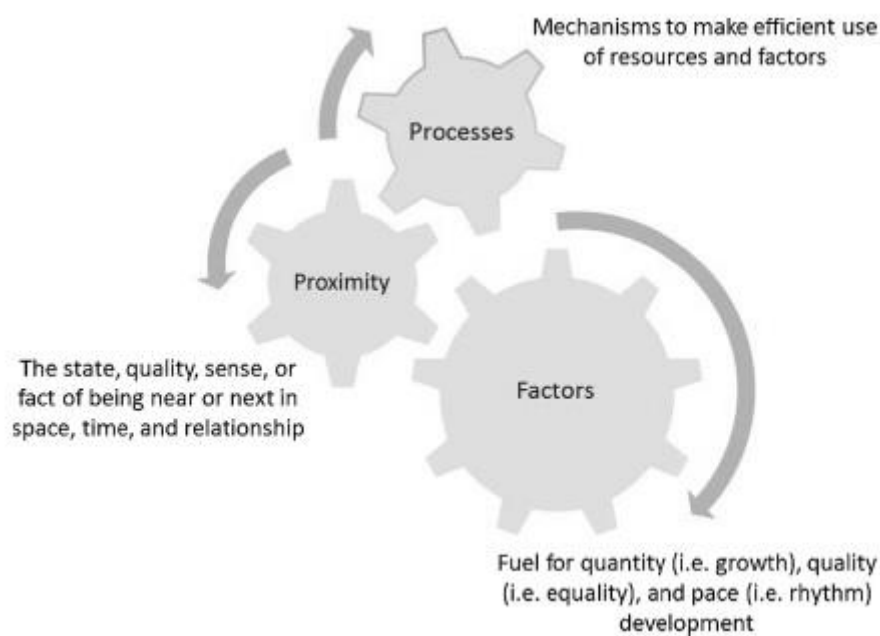


Figure 2. 7: Dimensions of regional development

Source: Basco (2015, p. 4)

2.8.5: Linking Family Firms and Regional Development

To bridge the gap between FBs and regional studies, Stough *et al.* (2015) presented a conceptual framework linking family businesses to regional development using three elements: *actor, space and time*. Firstly, they propose that the family firm *as an actor*. This represents a unique type of economic actor from the rest of the firms because of the idiosyncratic behaviour emerging from the intersection of family and business logics. They argue that when a business is led by a family (i.e. family involvement in ownership, management, governance or all three), this alters organisational goals, strategy, structures,

and consequently, firm behaviours (the way the firm creates, develops, and allocated resources). Secondly, they reinterpret space as a ‘relational space’ (Capello, 2009), as the family business interact with the regional environment (such as proposed by Basco (2015) in the ‘regional familiness’ concept). Based on the “unique characteristics of FFs, the regional embeddedness of families and family businesses”, they argued that such firms are in a privileged position to alter social and economic relationships or networks within their geographical context. Finally, the third element focuses on the long-term orientation of FFs compared to their counterparts. FFs are said to have a long-term orientation on investments, growth and management. This model interprets the elements using the family business field lens in order to investigate the relationship between FFs and regional economy.

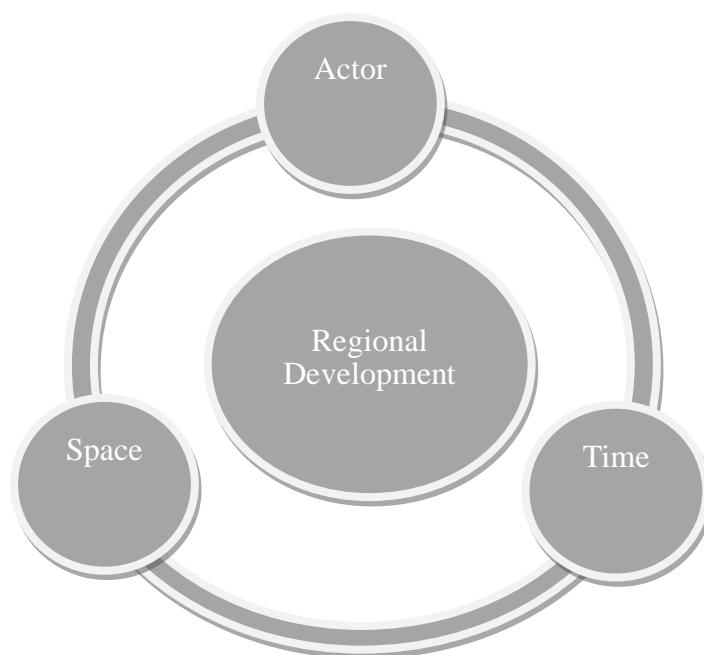


Figure 2. 8: A three element model linking FFs and regional economy

Source: Stough *et al.* (2015, p. 210)

At this level, the aggregate effects of the distinctive behaviours of firms alters regional dimensions (both factors and processes), and thus affects regional development. Based on this argument, studies could investigate the difference between FFs and NFFs on regional development, where FFs represent a special type of social and economic actors that account for a large amount of employment, business turnover, and GDP (Shanker and Astrachan, 1996; Basco, 2015; Bjuggren *et al.*,2011).This line of reasoning is endorsed by a number of previous empirical studies that provide evidence to support the argument that FFs are prevalent and contribute more to regional economies than non-family SMEs (e.g. Shanker

and Astrachan, 1996; Astrachan and Shanker, 2003; Anderson and Reeb, 2003; Villalonga and Amit, 2006; Chang *et al.*, 2008).

Indeed, there is a need for advancing theories that can provide rigorous explanation as regards FF's influence on firm impact on regional dimensions that influence regional development, and vice versa. Therefore, studies investigating the link between firm level (micro) and regional level (macro) variables in regional development should draw on appropriate theories to increase the explanatory power regarding the firm's regional impact.

Additionally, it is evident that despite prior efforts to theoretically link family businesses to regional development, there is no empirical evidence on how and to what extent family business behaviours influence RD. Although these models advance the family business research by situating FBs as critical actors within the regional context and geographical space, more research is required to evidence their impact on regional development outcomes. Therefore, this study focused on developing a conceptual model and empirically testing it to demonstrate how and the level of firm influence on regional development.

2.8.6 Theoretical Framework for the Study: Family Firms' Regional Development Impact

This study goes beyond the individual and family levels to investigate the effects of firm-level strategic behaviours on region development. The logic of enquiry for the study is to investigate whether the involvement of the family in the ownership and management of the business influences the strategic behaviours and the firm regional impact. Thus, the study aims to improve our knowledge on the differences between FBs and NFBs contributions to regional development. In order to answer the questions, the objectives of the study were explored using quantitative data collected from privately held registered firms operating in a chosen developing economy, namely Kenya. Specifically, the study employs a structured survey questionnaire to collect primary data from top-level managers (TLMs) to address the questions raised in the literature review.

As earlier stated, family business scholars have argued that FFs and NFFs differ in their strategic behaviours, strategic directions, strategic engagements and performance which affects their contribution on regional development. Thus, this study draws on entrepreneurial orientation, resource-based views and social capital theories to investigate the firm-level differences between FFs and NFFs. To address the first research question, given the role of entrepreneurship in generating employment opportunities and wealth creation, the study

draws on the construct of EO to determine the level of entrepreneurial behaviour (Miller, 1983, 2011) in FFs and NFFs and their effect on RD. In addition, the presence of unique resources and capabilities as well as decision making within firms generates competitive advantages (Barney, 2001). Thus, the study explores whether a participative strategy in decision making within FFs and NFFs differed, and their influence on RD. Further, social capital with external institutions is an important determinant of regional development (Woolcook and Nayaran, 2000). According to Niu (2009) firm involvement in industrial clusters is essential in assessing their contribution to regional development. Further, the higher the firm performance the more likely they are capable to influence regional and social development. Therefore, the study sought to investigate their mediation effects between firm level strategic behaviours and regional development. This study investigates whether FFs and NFFs bridging social capital differed on their bridging social capital and how this affects their contribution to RD. The research instrument was developed using items obtained from prior studies, which were utilised to collect data.

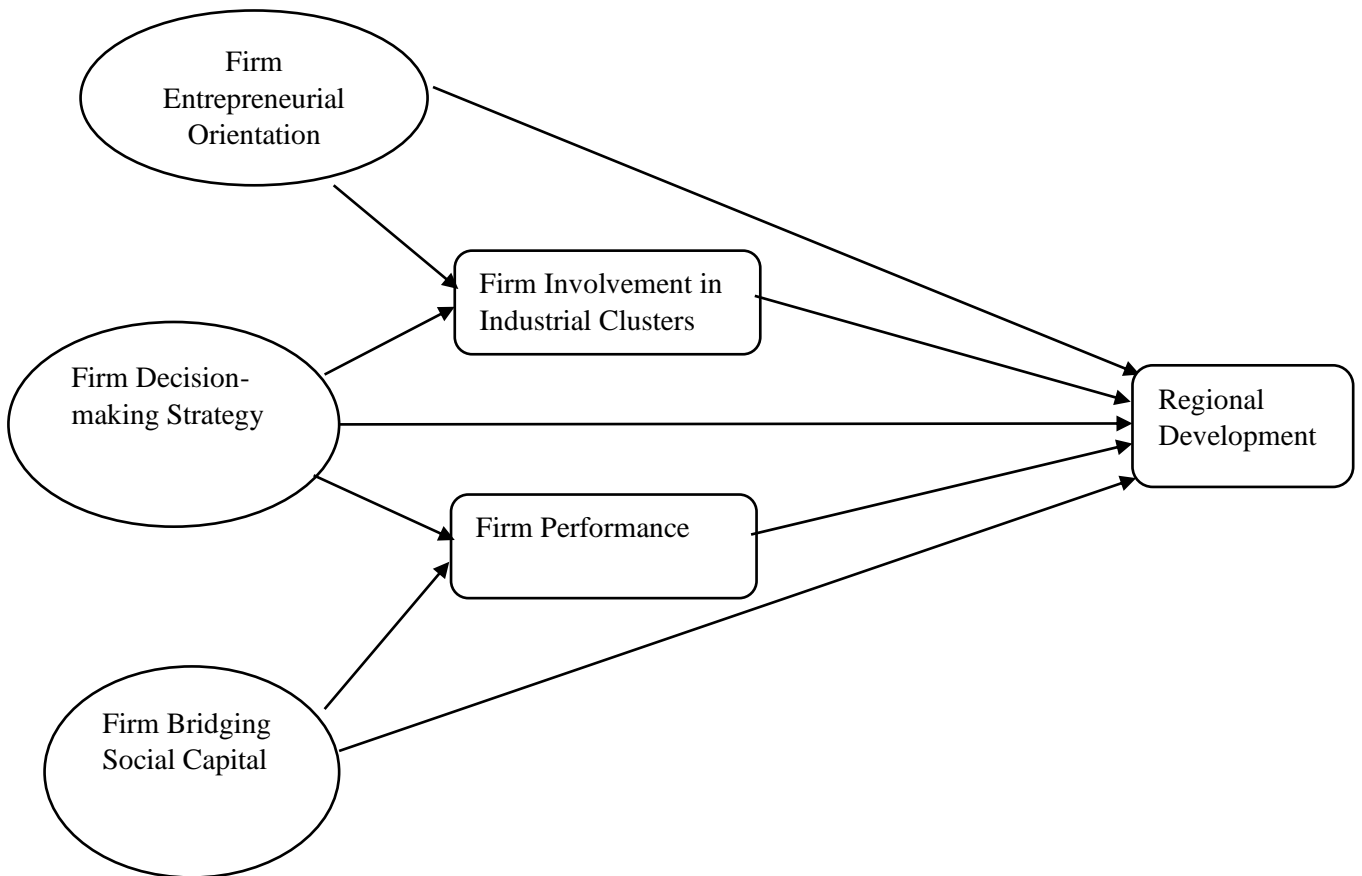


Figure 2.9: Conceptual Framework

Source: Authour

2.9: Research Gap and Questions for the Study

Following the above review, the extant literature suggests that there are differences between family and non-family businesses and their economic outcomes. Although, there is no empirical evidence showing significant differences between FFs and NFFs at face value, when the family involvement is considered, the outcomes differed (e.g. Backman and Palmberg, 2015; Basco and Calabro, 2016; Cucculelli and Storai, 2015). An in-depth analysis of the underlying structures revealed different outcomes such as their effect on employment growth (Backman and Palmberg, 2015), regional innovations (Basco and Calabro, 2016), and regional performance (Cucculelli and Storai, 2015). Generally, the main contention in prior studies is based on their ontological view of FFs, as most studies seem to not clearly justify their philosophical underpinning in data collection. The ontological view could be referred to as the researcher's conception of the world. Ontological paradigms focus on developing inferences about worldly information, where the information and notion of family and non-FFs have been presumed. *Prima facie*, several studies concluded that there are no significant differences between FFs and NFFs based on the demographic characteristics, as both tend to have strengths and weaknesses. In hindsight, the 'family essence' which not only demonstrates the 'ability' of the family to influence firm behaviours but also willingness to do so, was not well captured. Therefore, the need for studies to take into consideration the 'family effect' on firm-level strategic behaviours and their influence on regional development.

There is emerging evidence to indicate that significant differences emerge in studies that do not limit their explanation regarding the presumed FBs behaviours based on the demographic classifications of FFs and NFFs. This set of studies further considered how FF's unique characteristics, such as family essence or family identity (in combination with the contextual characteristics) affect the firms' contribution to regional development. In doing so, researchers such as Backman and Palmberg (2015), Basco and Calabro (2016) and Cucculelli and Storai, (2015) have found explanations for their observable phenomenon with reference to underlying structures and mechanisms, as a result of family involvement in the firm. That is, the combination of family firm specific 'strategic choices' (i.e. governance structures) and context specific characteristics (i.e. 'the rural context') can enable FFs to positively influence employment growth compared to NFFs.

The main challenge arising from studies such as Block and Spiegel (2013) and Memili *et al.* (2015), among others, was their inability to capture the underlying structural differences as a result of family involvement in the businesses, and their embeddedness in regional environment. Additionally, the impact of such interactions on the regional development outcomes, compared to NFFs. In other words, how do the unique family strategic behaviours and performance outcomes influence or alter the endogenous and exogenous factors and processes within a specific geographical context (i.e. industry clusters) or regional environment (i.e. developing economies) to impact regional economic and social development) and vice versa.

From this debate, it is evident that to advance the understanding of the relationship between FFs and regional development, researchers should investigate the dynamics of family firm embeddedness, rather than just the presence of FFs within the region. As Basco posits:

“it is not the presence of family businesses themselves that makes them dress as Dr Jekyll (bright side) or Mr Hyde (dark side), but their collective aggregate actions as regional actors” (2015, p.1).

That is, in order to understand the role that FFs play in regional development, studies are required to investigate the influence of FFs' unique attributes, aggregate behaviours or both, not only in altering the firms' stock of capital (such as financial, human, and social capital), but also the regional factors and processes within the regional environment.

Therefore, consistent with the supporting arguments by Markusen (2002), Basco (2015), Stough *et al.* (2015, p.201) among others, one can argue that FFs are a unique set of social and economic actors (due to the intersection between ownership, management and governance). In addition, TLMs in FBs can alter the interaction between family and business systems, influencing their behaviour in the way the organisation creates, develops and allocates resources. This in turn will influence the regional dimensions that have an impact on RD.

Therefore, the study is concerned with the following questions:

RQ 1: How do firm level strategic behaviours affect the family firm impact on regional development compared to non-family firms?

RQ 2: What is the effect of firm involvement in industrial clusters on the relationship between firm level strategic behaviours and regional development?

RQ 3: What is the effect of firm performance on the relationship between firm level strategic behaviours and regional development?

RQ 4: How, and to what extent, does family involvement in the business affect contributions to regional development, as compared with non-family firms?

2.10: Chapter summary

The chapter reviews the link between FFs and regional development with a view to integrating the effects of firm level strategic behaviour and regional economic development. The chapter has highlighted the historical phenomenon on regional development, establishing the gap for study as firm level entrepreneurship impact on development. Further, the role of FFs (NFFs) on regional development was reviewed, which identified FFs as unique actors, given their power to alter resources that influence regional dimensions. The significance of the prevalence and embeddedness of FFs in a regional environment was critically discussed to emphasise the relevance of understanding their underlying differences and contributions to regional development compared to NFFs.

Since the primary focus of this study was to explore how and to what extent FFs differ from NFFs in their contribution to regional development, a bottom-top approach focusing on the firm level endogenous behaviours is adopted. The chapter has highlighted that family firm embeddedness in the regional environment produces different outcomes, depending on the level of analysis. Further, to establish the importance of FFs on regional development, the chapter has reviewed both theoretical and empirical studies to identify the gap in the literature. Four research questions were advanced based on the gaps identified. The next chapter presents the research on FFs' strategic behaviours, the theoretical and conceptual framework for the study, as well as the hypotheses.

CHAPTER 3: FAMILY BUSINESS PERSPECTIVES AND HYPOTHESIS DEVELOPMENT

3.0 Introduction

The previous chapter has systematically reviewed existing studies on family firms and regional development. The review revealed a dearth of studies that focus on understanding of family firm impact on regional development. Moreover, the review established that the uniqueness of FFs), and their embeddedness in regional economies, both have a significant influence on regional development compared to their counterparts (NFFs). Therefore, the current chapter will review the effects of strategic behaviours on family business impact on regional development. The rest of the chapter is organised as follows; the first sections 3.1, 3.2 and 3.3 reviews the strategic behaviour in firms, particularly family involvement in influencing strategic behaviours such as firm goals, socioemotional wealth, and familiness. Section 3.4 critically evaluates the family influence on entrepreneurial behaviours and performance. While section 3.5 presents a review on theories and hypothesis development. Section 3.6 defines the dimensions used in the conceptual model and 3.7 provides hypothesis tested respectively. Finally, section 3.8 provides the summary of the chapter.

3.1 Strategic Behaviour in Family Businesses

The basic strategic management processes between family and non-family businesses are similar (Miller and Le Breton-Miller, 2005; Miller *et al.*, 2011), but what differs is the set of goals the organisation pursues, the way the process of resource allocation is implemented, and the participants involved (Sharma *et al.*, 1997; Chrisman *et al.*, 2005; Basco, 2013). Consequently, even when firm performance is similar, the involvement of the family in the business and the goals they pursue will produce different outcomes on entrepreneurship, strategic management processes and performance in family and non-family firms. The strategic management process involves decision-making. Decisions are made regarding the entry and expansion of markets (Shanker and Astrachan, 1996), entrepreneurial innovation and opportunities (Wiklund and Shepherd, 2005) and access to social network relationships (Carr, Cole, Ring and Blettner, 2011), organisation identity and learning (Hamilton, 2011) and growth and performance outcomes (Anderson and Reeb, 2003). For instance, in family

businesses, the owners are likely to exact their influence on the strategic management process, while in non-family firms, family influence is either non-existent or indirect.

Strategic behaviour is defined as the actions taken by a firm (i.e. top-level managers) that are intended to influence the market environment in which they compete (OECD, 2003). Therefore, to demonstrate the differences in strategic behaviours, this study will follow the suggestions of Sharma *et al.* (1997), Chrisman *et al.* (2005) and Basco (2013). The authors reveal that the differences can only be understood by investigating the influence of controlling family owners' involvement in the ownership and management on business decisions, strategy making and performance. This will then be in comparison with firms that have non-family controlling owners' involvement in management. This is consistent with the definition suggested in the previous chapter by Chua *et al.* (1999), which highlighted the presence of controlling family owners and their willingness to influence the strategic direction of the firm to either pursue family or family business visions.

Arguably, the understanding of similarities and differences between strategic behaviours in FFs and NFFs is important in determining the firm's outcomes. Generally, the strategic behaviour of entrepreneurs deals with goal formulation, strategy formulation and strategy implementation. Likewise, the focus of this study is on the influence that owners and actors have on the strategic management processes in the firm. Particularly, how family involvement and control of the firm affects the strategic entrepreneurship of firms (wealth creation and advantage seeking behaviours (Hitt et al., 2001). Furthermore, the strategic behaviours involves the participation in strategic decision-making process. Also, it involved the development and access of external social networks that have an impact on the performance of family (or non-family) firms and their contribution to regional development. This is less explored in the literature. This study proposes that:

1. TLMs within businesses are committed in developing goals and objectives to identify opportunities and create wealth in order to outperform their counterparts. The influence of the family in strategic management process in FBs is felt through the family involvement in the goal formulation process. Such an influence affects firm entrepreneurial orientation, as FFs pursue both financial and non-financial goals, which influence their regional development outcomes differently from NFFs.
2. TLM in firms can influence strategic choices and direction through their involvement in strategic decision processes to outcompete other firms. Thus, family participation

in the strategic decision-making process creates a unique and dynamic context based on their control and allocation of the firm resources, which has an influence on their regional development outcomes as opposed to NFFs.

3. TLMs in businesses develop social networks and relationship to unlock and access resources to improve their competitiveness. Therefore, FBs relations, and how the firm's TLMs perceive and benefit from personal and social networks with external entities, can influence the firm's performance and regional development outcomes compared to NFFs.

3.2: Family Involvement in the Family Business

The concept of 'family involvement' (also referred as family participation) in the business provided the basis for the arguments on the differences between family and non-family firms (Shanker and Astrachan, 1996; Westhead and Cowling, 1997; Chua *et al.*, 1999). Family involvement could be observed in two approaches: namely, the 'components' and the 'essence' of family involvement (Chrisman *et al.*, 2005; Henssen, *et al.*, 2011). In the 'components' approach, family involvement is examined in terms of family ownership, management and governance of the firm. For instance, according to the stakeholder theory (Mitchell *et al.*, 1997), family involvement in ownership, management, and governance of the firm will grant the "power and legitimacy to influence a firm's goals" (Chrisman *et al.*, 2010, p. 271). Whilst proponents of the 'components' approach argue that the constructs of ownership, management and control are sufficient to define family involvement in the firm, opponents argue that this can only signify a potential for the family to influence the firm (Henssen *et al.*, 2011). Thus, the focus should be on how the family uses their legitimate power to shape the firm's strategic decisions, with an emphasis on behaviour rather than potential (Chrisman *et al.*, 2005; Zellweger, Kellermanns, Chrisman and Chua, 2012).

In the 'essence' approach, family involvement (or 'family essence') is interpreted as how the family exercises their influence over the firm's affairs. The involvement could be in venture creation, strategy formulations and renewal taking place within the organisation. Gomez-Mejia *et al.* (2011) stated that family influence was also possible in the case where other non-family owners were present. As in publicly traded firms, the firm is managed by professional (non-family) executives (p. 658). Chrisman *et al.* (2012) drawing on behavioural theory (Cyert and March, 1963) and stakeholder theory (Mitchell *et al.*, 1997), the authors argued

that the family as the dominant coalition in the firm can influence the organisational decision-making and strategy in order to achieve its goals and aspirations. Habbershon, and Williams (1999) draw on resource-based theory of the firm (RBV) to advance the concept of ‘familiness’, which refers to idiosyncratic resources and capabilities that generate competitive advantage, whilst Habbershon, Williams and MacMillan (2003) argue that it helps to create transgenerational wealth. Other family business researchers have adopted agency theory (e.g. Schulze *et al.*, 2001; Chrisman, Chua and Litz, 2004) to demonstrate the effects of principal-agency relationships between family owners/managers and nonfamily managers on business decisions. Therefore, the reason for adopting ‘family involvement’ was to explore the influence of the dominant family (or family coalition) on their influence on strategic choices, behaviours and routines in family firms.

Generally, there is a consensus among family business scholars that family firms exhibit different behaviours compared to non-family firms. Further, research by Chrisman, Chua *et al.*, (2005), Westhead and Howorth, (2007) and Chrisman *et al.*, (2010) showed that the involvement of the family in family firms leads to heterogeneity among family firms. Therefore, presence of the family stakeholder(s) in the firm has developed an interest from researchers, who seek to understand their role in decision-making within the firm. Family stakeholders play an important role in the strategic renewal, entrepreneurship, firm growth, innovation and performance of family firms (Mazzi, 2006). In order to understand family business behaviours, scholars have opened the debate on what roles the individuals and family groups play at the firm level (Habbershon *et al.*, 2003). For instance, accounts of family (as individuals or as a group) demonstrate that family firms are willing to retain the ownership of the firm in order to remain autonomous. In the context of family firms, autonomy refers to control of the ownership and management of the firm, despite the risk of low financial performance involved, rather than give up ownership (Gomez-Mejia *et al.*, 2007). So, the decision to retain control of the firm by family stakeholders could be associated with lower business risk (Zahra, 2005). Moreover, the presence of a controlling family coalition enables them to pursue family-centred financial and non-financial objectives using the firm as a mechanism to create generational wealth (Habbershon *et al.*, 2003; Carney, 2005; Chrisman *et al.*, 2012; Kortlar and De Massis, 2013).

With this perception of family businesses in mind, this study views the construct of family involvement as a denominator. Such construct enables the perpetuation of family-centred

goals, preservation of socioemotional wealth (SEW) and ‘familiness’ in order to exert family influence on the firm’s strategic decisions and routines. The next section reviews the literature on the main distinguishing strategic behaviours explored within family business literature resulting from family involvement in the firm (i.e. family-centred goals (FCG), nonfamily centred goals (NFCG), Sociomotional wealth (SEW), and ‘familiness’).

3.3: Family Influence on the Strategic Behaviors of the Firm

From a strategic perspective, family involvement is likely to affect the organisations’ goals, resources and relationships. Generally, family business scholars have argued that the main differences between family and non-family firms is their emphasis on the pursuit of non-financial goals (Chrisman *et al.*, 2012), as well as family-centred goals (De Massis and Kotlar, 2013). As earlier mentioned, family firm owners are more likely to be concerned about protecting their SEW than increasing their financial income, especially when faced with possible dilution of their control of the business.

Further, family firms are said to possess idiosyncratic resources and capabilities that are referred to as ‘familiness’, which have distinctive or constrictive effects on the firm performance (Habbershon and William, 1999; Habbershon *et al.*, 2003; Chua *et al.*, 2003). An emerging interest in understanding the ‘Blackbox’ of ‘familiness’ (Mazzi, 2011; Dawson and Mussolino, 2014) also prompted the study of the effects of family business relationships on firm performance beyond the family business (Sharma, 2008). Although family business scholars have emphasised on the positive impact of family internal relationships on performance (Pearson *et al.*, 2008; Dawson and Mussolino, 2014), there are calls to investigate the effect of external relationships on firm performance (Sharma, 2008) and contributions to regional development (Basco, 2015; Stough *et al.*, 2015). The next section reviews the intersection between family involvement and family centred goals.

3.3.1: Family Involvement and Family-Centred Goals

Family business scholars argue that the involvement of family in the business leads to Family Centred Goals (FCGs) (Kotlar and De Massis, 2012). FCGs are closely related to family involvement in ownership, management and governance of the firm. FCGs are goals that originate from individuals or within a family group to achieve their ‘non-financial values’.

These values meet the family's affective needs, such as identity, the ability to exercise family influence, and the perpetuation of family dynasty (Gomez-Mejia *et al.*, 2007).

According to Kotlar and De Massis (2013: 1272-3), there are diverse goals within family firms. The goals are categorised as Family-Centred Economic Goals (FCEGs) and Family-Centred Non-economic Goals (FCNEGs). FCE goals result from the family's control of the firm and generation of wealth, as indicated by growth, survival and profits. FCNEGs, though, relate to satisfying internal and external stakeholders, as indicated by family harmony, family social status and reputation, and maintaining the link between family and the business identity. Prior research identified the following as some of the FCNEGs: autonomy and control (Olson *et al.*, 2003), family harmony and cohesiveness (Astrachan and Jaskiewicz, 2008; Sharma, Chrisman, Pablo and Chua, 2001), family social status (Dyer and Whetten, 2006; Zellweger and Astrachan, 2008) and family and firm-identity linkage (Gomez-Mejia *et al.*, 2007; Milton, 2008; Zellweger *et al.*, 2011).

According to Chrisman *et al.* (2010), it would be difficult to argue that “non-family firms will have FCNE goals, because of the absence of a controlling family that would directly benefit from adoption of such goals” (p. 271). For instance, autonomy and control of the business would be less of a concern to the owners or managers of non-family firms. Likewise, the FFs owners or managers perceive their business to be less significantly successful when they function more autonomously as individuals than as a group (Olson *et al.*, 2003). Indeed, family's control and dominance does provide them with the ability to make decisions that influence the strategic direction of the firm, which may not be the case for non-family firms (Chrisman *et al.*, 2010). The ability of family members to function in harmony has an impact on the family firms than NFFs. Thus, conflict within the family often translates into business disruption. Such conflict may affect the overall value of the firm (Astrachan and Jaskiewicz, 2008).

Generally, some family firms are more concerned with the ‘social status’ (reputation) of the firm in the communities than NFFs, due to the intersection between the family and the business. Whilst evidence showed that non-family firm Chief Executive Officers (CEOs) and employees' social status is tied to the size and performance of the firm (Zellweger and Astrachan, 2008), family firm CEOs and employees perceive their success and social status to be tied to the emotional endowments of the family firm. In addition, the pursuit of

FCNEGs should enable family firms to be more embedded in the business and surrounding communities (Berrone *et al.*, 2012). Finally, according to some studies, family businesses pursue a family business fit that encourages family (employees) to identify with the firm (Milton, 2008; Zellweger *et al.*, 2011). Thus, can lead to influencing the strategic decisions of the firm (Chrisman, *et al* 2010).

For instance, Gomez-Mejia *et al.* (2007) demonstrated that the strategic decisions of family business owners, such as risk taking, is influenced by non-financial objectives, referred to as ‘socioemotional wealth’ (SEW). Further, Zellweger and Astrachan (2008) suggested that the SEW consideration was reflected in the family’s perceived value of the firm. Based on the arguments presented, the study proposes that in family firms, the participation of family members in the firm’s strategic decision-making process will have a positive effect on firm involvement with stakeholders within industrial clusters, firm performance and regional development (unless their ownership stake in the business is threatened). This is because the focus on FCNEGs ensures that there is minimal conflicts or selfish gains. The focus is also on top-level managers, who seek to ensure they make the best choices, while avoiding conflicts and maintaining harmony in the firm. The next section expounds more on the preservation of socioemotional wealth.

3.3.2: Family Involvement and the Preservation of Socioemotional Wealth (SEW)

Since the introduction of the SEW construct by Gomez-Mejia *et al.* (2007), the concept has received unprecedented attention like that of ‘family essence’ and ‘familiness’ (Dawson and Mussolino, 2014). Socioemotional wealth is defined as the “*non-financial aspects of the firm that meet the family’s affective needs such as identity, the ability to exercise family influence, and the perpetuation of the family dynasty*” (Gomez-Mejia *et al.*, 2007, P.106). Other researchers refer to SEW as ‘noneconomic utilities’ or ‘affective endowments’ (Berrone *et al.*, 2010) that families derive from being in control of the firm.

Previous scholars classified the non-economic utilities into five dimensions of SEW construct abbreviated as FIBER: *Family control and influence, Identification of family members with the firm, binding social ties, Emotional attachment of family members and Renewal of family bond to the firm through dynastic succession* (for a review see Berrone *et al.*, 2012, P. 259). Berrone *et al.*, (2012) proposed a defence of the SEW approach. The authors have considered

a potential dominant worldview in the field of private companies. It was claimed that SEW is the most important feature of a family-owned firm. The SEW is the only substance, and given all the circumstances, makes it clear why family-owned businesses behave differently compared to non-family firms. Thus, the idea of SEW and its dimensions are perpetuated through family involvement in the business.

Central to this study is how the influence that family involvement has on the relationship between family firms' strategic behaviours (focus on FCNEGs and preservation of SEW) and the external environment manifests itself. Particularly, the involvement of family in reference to the engagement with external stakeholders, and participation in the wider regional economies. According to Naldi *et al.* (2013), who studied family firms located in industrial districts in Italy, the preservation of SEW was an asset for family firms. Further, the authors suggested that having a family CEO in managing interactions with external stakeholders within industrial clusters was an asset, whilst it was a liability with other stakeholders, such as stock market investors (p. 1353). Since preservation of SEW is significant to family businesses, it is possible to assume that it is a strong predictor of firm strategic behaviours and performance. However, in order to understand the significance of SEW, it is essential to determine the effects of family involvement (which indicate the ability of the family to use its influence) and the 'essence' of family involvement (which indicate the reason they might be willing to influence the firm's strategic direction) (Chrisman *et al.*, 2010; De Massis, Kotlar, Chrisman and Chua, 2014). However, there are no studies that have been able to capture clearly the family's influence (i.e. SEW) directly using research instruments. Most prior literature has either used family involvement captured by 'component' and 'family essence' approaches, or more specified scales.

Some studies have investigated a family's ability to influence the firm's behaviour and performance using the Family-Power, Experience, and Cultural scale (F-PEC) (e.g. Astrachan *et al.* 2002; Klein *et al.*, 2005; Rutherford, Kuratko and Holt, 2008). The studies explored how family firms differ from other types of businesses, and other family firms. The F-PEC scale has proved to be a useful tool in capturing family influence across various firms. It indicates that family influence could be high or low, depending on their power of control, the experience of the managers involved and the family culture. 'Family power', as per Memili *et al.* (2015), could be referred to as the authority owned by the family members when deciding the matters of business, which can be both financial and non-financial. Likewise, 'family experience' refers to the number of years that a person has in a particular role (e.g. CEO,

Manager). In addition, the ‘family culture’ scale is determined using the values owed to investors and owners concerning their orientation towards social and emotional wealth (Stough *et al.* 2015).

Hence, the higher the SEW orientation in the family firm, the higher will be the family control and participation in strategic decision-making. Further, if top level managers of family firms resolve to preserve their socioemotional wealth, if their control of the firm is threatened, then this will manifest itself in their goals, resources allocations and the external relationships they pursue. This will, in turn, affect the firm’s performance and contribution to regional development. Contrary to decisions to pursue short-term financial benefits for the shareholders in the case of NFFs, family firms would rather retain control of their business, even if this means losing financial benefits in the short-term. Although this will satisfy the FCNE goals in retaining control of the business, the decisions will have a negative impact on the firm performance, and possibly similar effects on regional development.

On the contrary, family firm preservation of SEW might reduce the level of conflicts or opportunistic behaviour by top level managers, which would have a positive effect on their stewardship behaviour and improve the family firm identity. Although this would reduce their financial income in the short-term, there is the possibility of increasing their resilience as a family business unit. This would positively influence family firms’ regional impact, such as retention of employees in times of economic distress (Amann and Jaussaud, 2011). The next section reviews the literature on concept of ‘familiness’.

3.3.3: Family Involvement and ‘Familiness’

Habbershon and William (1999) suggest that FFs have a competitive advantage compared to NFFs, because of the presence of ‘familiness’ as a result of idiosyncratic resources and capabilities. Based on the systems perspective, ‘familiness’ is defined as “*a unique bundle of resources resulting from the interaction of the family and business systems*” (Dawson and Mussolino, 2014, p.178). Further, Habbershon *et al.* (2003) suggested that the systemic interaction between the subsystems (individual, family group, and the business) led to distinctive (positive) ‘familiness’ that created a competitive advantage. At the opposite extreme, constrictive (negative) ‘familiness’ would lead to negative diseconomies (Dawson and Mussolino, 2014; Habbershon *et al.*, 2003). However, scholars have argued that instead of firms possessing either constrictive or distinctive familiness, these formed a continuum,

which produced a linear effect on the firm's strategic behaviours (Habbershon and William, 1999). For instance, using a systems approach, Habbershon *et al* (2003) built on the previous work and developed the unified systems perspective of the family business system.

The family business system involved an interaction between the individual, the family group and business systems. The systems performance goal was transgenerational wealth generation and wealth creation potential (Habbershon *et al.*, 2003, p.451). Further Chua, Chrisman and Steier (2003) expanded the focus from wealth creation to include a wider perspective of value creation. Habbershon (2006) also argued for an interaction between the family business social system and the environment generated societal wealth. These studies have demonstrated the ability that the enterprising family system generates in terms of resources and capabilities to influence the family firm's enterprise strategy for wealth generation. Sirmon and Hitt (2003) examined five resources and attributes of family firms that provided potential advantages over NFFs. These included, human, social, patient, and survivability capital, along with attributes of governance structure (p. 339). The authors argued that when these resources were strategically managed through resource inventory, resource bundling and resource leveraging, they could lead to wealth creation within family firms. Further, Van Wyk (2012) introduced the concept of 'familiness capital' (FamCap), referring to "the strategic processes in family firms based on the unique capabilities and involvement of the firm owners, who positively enhance the firm performance" (p.982).

In addition, Ensley and Pearson (2005) investigated the level of 'familiness' within the top-level teams (TMT) in family and non-family firms. Their quantitative study, which was guided by the upper echelon perspective, argued that:

"the unique dynamics created by the social aspects of family-owned firms will result in higher cohesion, potency, task conflict, shared strategic cohesion than those TMTs (top management teams) with less familiness" (p. 267).

Finally, Minichilli, Corbetta and MacMillan (2010) found evidence that the presence of 'familiness' among the TMT explained the variations in firm performance. However, the presence of non-family members in the TMT could lead to factions among the subgroups, which can negatively affect performance. These studies demonstrated the importance of 'familiness' not only to create competitive advantage through specific application, but also a motivation for family TMTs to influence the strategic decision process that may alter resource allocation to pursue family centred non-economic objectives. Therefore, family

involvement in the firm will influence the firms' strategic directions and performance in a way that the effect of the firm (when aggregated) will positively or negatively impact on regional development.

Although several studies have focused on understanding the 'familiness' construct and its effects on the firm strategic behaviours, it is still not very clear (Frank, Lueger, Nose and Suchy, 2010). Moores (2009: 1740) referred to it as being a "somewhat fuzzy concept", raising concerns about whether or not all family firms actually possess the 'familiness' resources. Some scholars have attempted to deconstruct the concept to determine the antecedents of 'familiness' in family firms. For instance, Irava and Moores (2010) suggested that 'familiness' is visible in resources, such as organisational (decision-making and learning), human capital (reputation and experience) and process (relationship and network). In addition, Pearson, Carr and Shaw (2008), using a social capital theory, argued that 'familiness' is manifested in the structural (social interactions and networks), cognitive (shared vision and purpose, as well as unique language stories, and culture), and relational (trust, norm, obligations and identity) dimensions.

Further, Craig and Moores (2005) add 'familiness' to the four balanced scorecard perspectives (financial, innovation and learning, customer and internal process) as a measure of family firms' non-financial and financial performance indicators, helping in their strategic business development, management and succession planning. The score card demonstrate the ultimate financial indicators of a firm, which are produced through the effectiveness and improvement in the four factors. Therefore, the extant literature focused on the concept of 'familiness' to demonstrate that the emphasis has been primarily on the family influence on strategic behaviour sat the firm level of analysis. However, a more nuanced understanding has been explored beyond the family firm.

Indeed, family involvement in the business will lead to 'familiness', which gives the power to participate in strategic decision-making processes. The concentration of ownership can be considered an asset (or a liability) for the firm, especially when it comes to decision-making. Prior studies have demonstrated that a concentration of ownership in family firms is associated with the greater involvement of family actors in the strategy making process (Kellermanns and Eddleston, 2004), and despite their centralised control (Gersick *et al.*, 1997). However, family firms have often been criticised for limiting the participation of family or non-family members in the decision-making process (Eddleston and Kellermanns,

2007). Even though, fast growing, high performing family firms encourage participation in decision-making (Upton *et al.*, 2001; Eddleston and Kellermanns, 2007). Family firms with lower levels of founder centrality encourage the sharing of control and power; essential in ensuring that other members participate and contribute to the decision-making process. However, firms with higher founder centrality tend to have decision-making concentrated in the hands of either the founder or dominant members of the family, which discourages the sharing of information. That would also have an effect on the firm level strategic behaviours.

In addition, the outcomes of ‘familiness’ were examined by several studies. For instance, ‘familiness’ enables the firm to create a competitive advantage (Habbershon and Williams, 1999), an organisational identity among employees of the firm (Carmon, Miller, Raile, and Roers, 2010), and promotes cohesion, potency, shared strategic cognition (Ensley and Pearson, 2005). It also encourages a culture of stewardship and the active participation of family members in the firm (Zahra *et al.*, 2008). In addition, ‘familiness’ is also evident beyond the firm level of analysis because of the social capital elements embedded in the firm.

There is evidence that beyond the resources and capabilities created within firms, ‘familiness’ is also responsible for the presence of relationships and social networks with external stakeholders. Some studies have evaluated the effects of ‘familiness’ beyond the firms, and have determined that it is visible in the family firm’s ability to ‘intercorporate’ with other firms (Lester and Cannella, 2006), that it can develop a better market orientation (Tokarczyk, Hansen, Green, and Down, 2007; Cabrera-Suarez, De la Cruz, and Martin-Santana, 2011), and can enable the formation of franchises (Chirico, Ireland, and Sirmon, 2011). Additionally, it can enable resource bundling and innovation within networks (Carnes and Ireland, 2013). There are conceptual arguments that ‘familiness’ (at the firm level) will generate ‘regional familiness’ (at the aggregate level), which will positively influence family firm participation in regional productive structures (Basco, 2015).

Moreover, the social relational support generated by family business owners is a key factor that contributes to the family firm survival and persistence of the individual family businesses, despite the increased family related costs (Sharma, 2008). For Cabrera-Suarez *et al.* (2011), the presence of social capital, through the ‘familiness’ elements, enabled family businesses to develop market orientation. Also, through their stewardship orientation, the development of specific knowledge management and the family identity was enabled. Further, Tokarczyk *et al.* (2007) established that the presence of ‘familiness’ qualities (i.e.

family relationships, strategic focus, operational efficiency and customer orientation) enabled family firms to contribute to the execution of an effective market orientation. Finally, Basco (2015) argued that ‘familiness’ could be extended to the regional level, which has implications for the firm’s contribution to regional development. Through the social proximity of family firms, aggregated ‘familiness’ could be developed, referred to as ‘regional familiness’, which might enable them to alter the regional dimensions responsible for regional development. Therefore, the presence of social capital elements in ‘familiness’ could enable family firms to develop individual and social networks relationships that would have an impact on their performance, as well as the regional development.

Consequently, the influence of family involvement goes beyond the formulation of goals, strategies and alliances to the implementation of such strategies, which then influences the firms’ strategic posture. Family involvement in the firm will not only influence the goals, resources and relationships but also firm entrepreneurship behaviours. The next section extends the debate on the family influence on entrepreneurial behaviour of the firm.

3.4: Family Influence on Firm Entrepreneurial Behaviour and Performance

Based on a review of entrepreneurship and family business studies revealed that scholars have explored family firm’s entrepreneurship, either at the family or firm level, using the five dimensions of entrepreneurial orientation (Cruz and Nordqvist, 2012; Zellweger, Nason and Nordqvist, 2011; Nordqvist, Habbershon, and Melin, 2008; Naldi *et al.*, 2007). Some of the studies adopted the three EO dimensions used to describe entrepreneurial firms engaging in strategy-making by Miller (1983). This was characterised by an active stance in pursuing opportunities, taking risks and driving innovation in order to generate wealth (Zellweger *et al.*, 2011; Lumpkin & Dess, 1996; Dess, Lumpkin & Covin, 1997). Other studies have adopted the five EO dimensions proposed by Lumpkin and Dess (1996), which added comprehensive aggressiveness and autonomy (Short *et al.*, 2009; Casillas and Moreno, 2010; Zellweger, Muhlebach, and Sieger, 2010). However, because of the multi-dimensional nature of EO dimensions, conflicting findings were observed within family firms. That was consistent with the arguments of Lumpkin and Dess (1996, 2001) that EO is on a continuum, with some firms registered a strong EO, whilst others registered a low score on EO (Zellweger, Muhlebach, and Sieger, 2010). Further, family firms can register a stronger positive correlation on some dimension of EO than others (Lumpkin and Dess, 2001; Short *et al.*, 2009).

In addition, the review revealed that some studies had examined the effects of the family firm on entrepreneurial orientation based on family members' characteristics (Kellermanns *et al.*, 2008; Cruz and Nordqvist, 2012; Michael-Tsabari, Labaki and Zachary, 2014), generations involved (Cruz and Nordqvist, 2012) family level (Zellweger, Nason and Nordqvist, 2011; Martin and Lumpkin, 2003) and firm growth (Casillas and Moreno, 2010). These studies examined how family involvement (through family CEO's characteristics, top management teams (TMTs) or individual family members) can influence a firms' strategic behaviours and performance. For instance, Kellermanns *et al.* (2008) assessed the relationship between CEO characteristics and family influence, and found no significant relationship between CEO's age, entrepreneurial orientation and growth. However, Cruz and Nordqvist (2012) established that CEOs and TMTs were strong predictors of EO.

Further, some of the studies indicated that when different generations were involved, they influenced the firm's entrepreneurial orientation (Martin and Lumpkin, 2003; Cruz and Nordqvist, 2012). Zahra (2005) found that long term tenures of CEO founders in manufacturing firms in the US reduced their risk taking, and the family firm became more conservative. Cruz and Nordqvist (2012) found that the perception between EO and external environment correlated differently depending on the generations. Thus, EO was stronger in the second generation, as compared with first generation family firms, where the founder was a vital asset. However, non-family managers in top management teams made a difference to firm EO only in third generations and beyond.

Moreover, firm EO can be overtaken by family EO, depending on the level of family involvement in the business (Martin and Lumpkin, 2003). According to Martin and Lumpkin (2003) the increased focus on family generation involvement in the business might lead to a family EO, as opposed to a firm EO. They argued that the two cannot coexist, as the notion of family orientation (interdependency, loyalty, security, stability and tradition) would suffocate that of firm EO. This could lead to the collapse of the firm as a result of a lack of enterprising behaviour for renewal (Zellweger *et al.*, 2011). This suggests that a firm's entrepreneurial orientation is driven by the firm level behaviours, rather than family level behaviours.

Therefore, we are led to ask what drives entrepreneurial behaviours in family firms. The exploratory study by Michael-Tsabari, Labaki and Zachary (2014) examined the family's role in entrepreneurial behaviour in the family firm and revealed that "entrepreneurial behaviour

emerges not only in response to business challenges but also predominantly from family needs and challenges” (p. 1). Whereas, in non-family firms, entrepreneurial behaviours arise because of drivers to compete or survive. That is, being the most competent in the market is the most important driver, which shapes the entrepreneurial behaviour of the owners of firms. Therefore, there is need to examine the effect of the family (as a controlling stakeholder or actor or both) on the entrepreneurial orientation of family businesses, and its effect, not only on firm strategic behaviours, but also on regional development.

Generally, extant literature on corporate entrepreneurship has highlighted the differences between family and non-family firms concerning their entrepreneurial orientation. This was measured using EO. According to Zellweger *et al.* (2010), family firms scored lowly on the five dimensions of EO, which raised concerns regarding the appropriateness of EO. However, its appropriateness is largely relied upon by corporate entrepreneurship scholars (such as Short *et al.*, 2009; Nordqvist, Habbershon and Melin, 2008; Naldi *et al.*, 2007) to explain entrepreneurial families and family firms’ behaviour. Further, the corporate entrepreneurship literature suggests that the most commonly used variables are innovativeness, pro-activeness and risk taking, and that competitive aggressiveness and autonomy are less studied (Rauch, Wiklund, Lumpkin and Frese, 2009; Lumpkin and Dess, 1996).

After having examined the differences between family firms and non-family firms, Short *et al.* (2009) stated that although family firms do exhibit language consistent with EO for all dimensions, there is less use of EO language than non-family firms in relation to autonomy, pro-activeness and risk taking. However, as most of these studies still focused on either the individual (owner-manager) or firm level in their analysis, they underestimated the influence of the family stakeholders’ entrepreneurial orientation, as exhibited in family firms (Dyer, 2003, 2006). For instance, Zellweger, Nason and Nordqvist (2011) argued that focusing on the family as unit could help to develop an understanding of the ability of family businesses to generate transgenerational value, instead of exclusively focusing on the firm level. In addition, Basco and Perez-Rodriques (2009) called for a holistic view of the family firm, integrating the family and business systems. They argued that in order to understand the ability of the family to influence strategic decision-making, researchers should focus on four important aspects of the family firm: namely strategy, human resources, governance and succession. In this study, the focus is on the strategic behaviours (which includes entrepreneurial strategy, decision making strategy, and external linkages).

The next section reviews the implications for family firms on the individual dimensions of EO compared to nonfamily firms.

3.4.1: Family Involvement and Innovativeness

It is argued that family businesses can develop entrepreneurial orientation patterns more efficiently than non-family firms, as their survival and continuity depend on their ability to innovate and remain competitive in the marketplace (Ward 1987; Zahra, Hayton and Salvato, 2004). Further, due to the focus on non-financial objectives and trans-generational ownership, family firms can become more entrepreneurial as compared to non-family firms (Habbershon and Pistrui, 2002; Habbershon *et al.*, 2010). Beyond the firm level, family involvement may have a positive influence on innovations within the region (Basco and Calabro 2016). In the context of the family firm, innovation is a highly relevant dimension of EO, and in that case, also firm performance (Casillas and Moreno, 2010; Zahra *et al.*, 2004). Thus, family involvement in business is more likely to influence innovation strategies if triggered by the firm's top-level managers.

In the context of regional economies, firm innovativeness is vital for the growth of regional innovativeness and competitiveness (Basco and Calabro, 2016; Block and Spiegel, 2013). For instance, Basco and Calabro (2016) established that while family and non-family firms did not differ in terms of internal innovations, they used different strategies when searching for new ideas from external sources. This meant that family firms sourced for new ideas and knowledge from close networks of relationships within the region such as competitors, supplies, and customers, while nonfamily firms sourced ideas from wider network relationships such as fair-trade organisations, public institutions, and universities (p. 280). Further, Block and Spiegel (2013) found that regions with a high concentration of family firms showed higher levels of regional innovativeness.

From this perspective, it can be argued that the greater the innovativeness in family businesses, the more intense the regional innovativeness, thus, the higher their contribution to regional development, as compared to NFFs. This can be attributed to (1) their centralised ability and speed in decision-making, (2) stronger long-term orientation, (3) improved survivability capital and (4) the greater embeddedness of family firms within regional productivity factors.

Firstly, FBs have centralised structures as regards decision-making, especially first-generation businesses (Chrisman *et al.*, 2003). Due to the reduced principal-agency relationships, the processes of decision-making develop quickly, allowing the owners to implement decisions quickly, as compared to non-family firms (Casillas and Moreno, 2010).

Secondly, family firm owners that intend to pass the business to the next generation will be under less pressure to obtain higher profits in the short term. Hence, they will tend to have a long-term orientation, as compared to other firms (James 1999). Furthermore, those with transgenerational involvement tend to develop long-term strategies, as they pursue transgenerational wealth creation (Habbershon and Pistrui, 2002). Therefore, there is less likelihood of developing risky innovations that do not increase returns in the short-term (Zahra, 2005)

Thirdly, family firms with a higher family involvement tend to have stronger ‘survivability capital’. This is due to the family being able to draw on their ‘familiness’ resources and capability, which can generate extra resources at minimal cost. These can then be allocated to innovative projects that enable the firm to gain a competitive advantage when compared to NFFs (Casillas and Moreno, 2010). Additionally, as a result of family involvement the firm, the degree of embeddedness within the regional structures increases, as they have a more community-oriented approach as compared with nonfamily firms (Cennamo *et al.*, 2012). Therefore, family firms are more likely to be a catalyst for regional innovativeness that will lead to an increased contribution to regional development.

3.4.2: Family Involvement and Risk-taking

When considering the relationship between family involvement and risk taking, prior studies have maintained that family businesses are skewed towards less risky activities than non-family enterprises (Zahra, 2005; Gomez-Mejia *et al.*, 2007; Hiebl, 2014). ‘Risk taking’ has been defined as: *“the degree to which owners and managers are willing to make large, risky resource commitments i.e. those that have a reasonable chance of costly failures”* (Zellweger *et al.*, 2010 p. 7).

Generally, risk taking has different meanings depending on the context that is being applied (Lumpkin and Dess, 1996). Thus, the meaning of risk taking can be associated with either uncertainty or a trade-off, with the possibility of a loss or negative outcome. In the context of family firms, the main reason why family firms have been criticised for their risk aversion

behaviour is because of: (1) their concentration of the family's wealth in the company, and (2) their focus on survival rather than maximising profit. As regards the first reason, previous studies have demonstrated that family firms make decisions that ensure they retain their controlling stake in the firm (Gomez-Mejia *et al.*, 2007; Zellweger *et al.*, 2010).

Family firm principals also have an orientation towards transgenerational continuity, which is geared towards a long-term survival (Athanassiou *et al.*, 2002). As family business owners tend to seek to pass down the business to the next generation, there is a tendency to reject high risk projects that may bring uncertainty in the outcomes.

In accord with the stewardship theory, Eddleston, Kellermanns and Zellweger (2010) found that comprehensive strategic decision making and the focus on long-term orientation positively enhanced the level of entrepreneurship. Similarly, Zahra (2005) demonstrated that family involvement in business ownership and management mitigated risk avoidance and promoted entrepreneurship. On contrary, the level of risk taking in family firms was lower compared with that of non-family firms and negatively affected performance (Naldi *et al.*, 2007; Nordqvist *et al.*, 2008). However, given that the family mitigates the level of risk in the firm, which has positive relationship to innovation and proactiveness (Naldi *et al.*, 2007), it is possible to have a compounded effect on firm performance and contribution to RD.

Further, in the context of regional economies, it can be argued that the presence of family firms may have a positive influence on the economic development in the long-term, due to their focus on non-economic goals rather than the short-termism focused on economic gains seen in non-family firms. Instead, family owners and managers are likely to engage in less risky behaviour in order to guarantee survivability, while still ensuring transgenerational wealth creation (Habbershon, 2006). For instance, they focus more on building community level social network relationships, which means that there is continuity and survival of firms for the long-term, rather than investing to maximise profits. Therefore, family involvement in the firm might have a negative effect on firm risk-taking behaviour. However, this might have an influence on the firm's contribution to regional development in such a way that the firm's contribution will be less intense when the family involvement in the firm is higher.

3.4.3: Family Involvement and Proactiveness

Lumpkin and Dess (1996) suggest that proactiveness is helping managers lead the way by anticipating demand, rather than being followers (i.e. 'pro-activeness' is a descriptive word

for a possible activity – only living beings – people - can “lead the way” or be “a follower”). That is, they have the ability and willingness to seize new opportunities, even if not always as the first to do so. In this sense, two arguments can be advanced: (1) where firms are proactive and willing to invest in new opportunities ahead of competitors, and (2) where firms are reserved, and adopt a ‘wait and see’ attitude. As noted by Nordqvist *et al.* (2008), together with autonomy and innovativeness, pro-activeness is regarded as a more important dimension in family firms (Zellweger *et al.* 2009).

Certain family firms have demonstrated a high entrepreneurial orientation, where there is strong leadership towards a proactive approach to seize new opportunities, and centralised structures (Casillas and Moreno, 2010). This is because the owners and managers can take swift decisions and actions due to the controlling power they have, and resources can be allocated to develop such activities (Ward, 1987).

Many FFs, though, are smaller firms with fewer resources (especially finance) to support proactive behaviour that develops new opportunities. That is despite the centralised nature of the structure, power and control in the hands of the few family members that manage the firm. So, there is apparently not much they can do apart from adopting a ‘wait and see’ posture. However, using behavioural decision-making theory, Choi *et al.* (2014) showed that family owners tend to invest more in R&D when the family control goals are threatened by a loss of growth potential. Overall, it is not clear how family firms’ pro-activeness levels can be accurately assessed, as there are also other factors that might have an impact. These might include the level of resources possessed (financial, human and social capital), the entrepreneurial mind set of owners and managers, generation in charge, and environmental dynamics (Zellweger *et al.*, 2009).

In regional economies, the regional environment may influence the pro-activeness of the firm, and hence affect their performance, and vice versa. In this topic area, Cuccunelli and Storai (2015) established that medium-sized FBs were able to leverage the benefits of being located within an industrial district. Likewise, applying the socio-emotional wealth (SEW) construct, Naldi *et al.* (2013) established that family CEOs positively influenced the firm’s performance within industrial clusters.

Although FBs can be conservative in nature, some studies have argued that they are proactively involved in pursuing new opportunities (Chrisman *et al.*, 2015). This can lead to co-operating with other firms, thus developing an improved market orientation, resource

bundling and innovation within social networks (Tokarczyk *et al.* 2007; Cabrera-Suarez *et al.*, 2011; Carnes and Ireland, 2013). Based on these arguments, there is evidence suggesting the ability and willingness of family firms to pursue new opportunities and ventures even though they are not necessarily the first to do it.

Whilst access to financial help is essential to develop a pro-active and aggressive strategy (Casillas and Moreno, 2010), the ability to draw on their different resources pool (financial, human and social capital) means that this can act as a substitute to developing proactive strategies. This will impact on the firm level strategic behaviours, and thus promote firm performance and regional development. For that reason, family involvement will positively moderate the relationship between pro-activeness and firm impact on regional development outcomes. However, this will be in such way that a family firm's pro-activeness will have a less intense influence on regional development when family involvement is high. The other dimensions of entrepreneurial orientation include competitive aggressiveness and will be discussed in the next section.

3.4.4: Family Involvement and Competitive Aggressiveness

Generally, competitive aggressiveness refers to “a firm's propensity to directly and intensely challenge its competitors to achieve entry or improve position; that is, to outperform industry rivals in the marketplace” (Lumpkin and Dess, 1996, p. 148). The evidence has indicated that family firms tend to shy away from being aggressive when dealing with competition, but instead adopt a “competitive posture that avoids direct confrontation” (Zellweger *et al.*, 2010: 20). There has, though, been minimal research on the effect of competitive aggressiveness on family firms, and especially as regards their influence on the external environment. Likewise, Nordqvist *et al* (2008) argued that family firms have a lower competitive posture compared to non-family firms based on the influence of three dualities: ‘historical or new path’, ‘independency or dependency’, and ‘formality or informality’.

Generally, family firms are perceived not to be competitively aggressive (James 1999; Dess and Lumpkin, 2006). In this sense, some family firms seek to dominate a market niche, thereby avoiding competition and striving to be what has been labelled as ‘hidden champion’ (Zellweger *et al*, 2009, p. 13). However, this should not be mistaken with being invisible, but rather in terms of the family firms avoiding a confrontational posture that may put it in direct competition against other firms in the market. Using the stewardship theorem, an argument can be made that subsequent generations in the family firms tend to adopt a less competitive

posture, as they tend to consolidate and preserve the assets of the family (Zellweger *et al.*, 2010).

Therefore, the perception of the competitive environment and EO correlate differently in FFs depending on the generation in control. Whilst the first-generation owner or manager maintains strong leadership and a highly centralised structure, which takes a competitive posture, it is generally less strong in second generation FFs (Cruz and Nordqvist, 2012). However, the presence of nonfamily managers in the top management teams makes a positive difference for EO in the third generation and beyond in family firms (Cruz and Nordqvist, 2012). Therefore, following these arguments it is possible that the higher the involvement of the family, the lower the level of competitive behaviour as family owners avoid a direct confrontation with competition (Martin and Lumpkin, 2003). Family firms strive to position themselves in a niche market, thus this helps to maintain a positive image and reputation (Zellweger *et al.*, 2010) as well as enhance the family firm's survival and growth in the long-term horizon (James, 1999). Indeed, this may influence family firms to cooperate more with other like-minded firms in the regional environment sharing resources, knowledge, integrating within the innovation networks to contribute to the growth and development of the region (Basco, 2015). Therefore, family involvement is likely to moderate the relationship between firm competitive aggressiveness and economic growth, in such a way that a firm's competitive aggressiveness will have a more intense influence on regional development when the family involvement is higher.

3.4.5: Family Involvement and Autonomy

Autonomy can be defined as “the ability and will of the owner to be self-directed in seeking and pursuing opportunities”, whilst in an organisational setting, it refers to taking actions without any stifling, organisational constraints (Lumpkin and Dess, 1996, p. 140). Autonomy is the most extricable dimension that integrates the EO of a firm. Although autonomy was not included in the list of dimensions identified by Miller (1983), together with innovativeness and pro-activeness, autonomy can be regarded as one of the most important dimensions in family firms (Nordqvist *et al.*, 2008). In the context of firms, autonomy refers to both the ‘internal’ and ‘external’ autonomies (Nordqvist *et al.*, 2008). The former, refers to the empowerment of individuals and teams within an institution, whilst the later refers to independence from external stakeholders, such as customers, investors, banks, suppliers and other organisations. In both family and non-family firms, ‘internal’ autonomy is an important

driver of entrepreneurial activity, especially in small or first-generation firms (Zellweger *et al.*, 2010). However, as a result of family firms not being able to develop formal mechanisms to restrict individual autonomy (Eddleton, Kellermans, and Sarathy, 2008; Zellweger *et al.*, 2010), the level of ‘internal’ autonomy tends to decrease when later generations join the family firm (Martin and Lumpkin, 2003).

In terms of ‘external’ autonomy, family firms tended to be reluctant to give up control of the firm, hence refusing any kind of dependency on external stakeholders, suppliers, banks and others (Casillas and Moreno, 2010, p. 275). Family firms valued their ‘external’ autonomy (Norqvist *et al.*, 2008), and saw it as a means of creating ‘internal’ autonomy for owners and managers, which is ultimately aimed at generating further entrepreneurial development (Zellweger *et al.*, 2010, p. 18). Further, Zellweger *et al.* (2010), using case studies, found that the organisation’s autonomy was a predominant theme within family firms across generations, and that it gave them freedom to develop “more explicative power with regards to transgenerational potential than internal autonomy” (p. 19).

Therefore, using the earlier identified arguments based on Gomez-Mejia’s SEW (which states that family firms have different reference points), when the family firm’s socioemotional wealth is threatened, the firm will have a higher orientation to ‘external’ autonomy. This will tend to reduce the willingness of family firms to collaborate with other firms or external stakeholders in the network, or to form joint ventures with others. Therefore, the focus on achieving ‘external’ autonomy for the family firm will negatively influence the firm’s performance and its contribution to regional development. This is because it will reduce its willingness and ability to influence regional dimensions responsible for regional development.

Beyond the family firm level, Johannisson *et al.* (2007) identified family businesses as a factor when studying industrial districts as a networked community. In addition, the authors stated that later generations within a family firm tended to extend their network with external contacts, to solidify their position and gain the confidence of the preceding leadership. Therefore, future generations may be more willing to collaborate with other firms in the network, and to form joint ventures; behaviours that are associated with higher performance and growth. Additionally, the extant literature has pointed out the willingness of family firms to ‘intercorporate’ with other like-minded firms (Lester and Cannella, 2006), form franchises (Chirico, Ireland, and Sirmon, 2011), engage in resource bundling and innovation within

networks (Carnes and Ireland, 2013), and participate in regional productive structures (Basco, 2015).

Therefore, the orientation of the firm towards an ‘internal’ autonomy as opposed to an ‘external’ autonomy will reduce the positive influence of the ability of the firm to impact on the regional development because it will be more difficult to:

- (1) Access external resources (finances, knowledge, human, and social capital) required to grow the firm.
- (2) Develop an entrepreneurial orientation, especially for small and young generation family firms.
- (3) Leverage the proximity dimensions to alter regional factors or processes.

Therefore, family involvement in the firm is likely to moderate the relationship between autonomy and regional development in such a way that a firm’s autonomy will have less impact on regional development when family firm involvement is higher.

The foregoing reviews in this section have highlighted that family involvement is a differentiating factor between FFs and NFFs. An understanding of the ‘family effect’ will help to generate more consistent and generalizable findings across different regions and geographical contexts. For instance, Mazzi (2011), based on a review of 23 empirical studies, showed that the relationship between family firms and financial performance was complex, and probably moderated or mediated by contextual factors. Therefore, to advance theory of the family firms and their performance, Mazzi called on researchers to design studies that address the following issues:

- (1) The multidimensional concept of performance and the shift from wealth creation to value creation.
- (2) The validity and perspectives of theoretical approaches to the study of family firms.
- (3) The family business definition dilemma and its implications.
- (4) The growing interest in privately held family firms.

In response to Mazzi’s call for enhancing the validity and perspectives of theoretical approaches to the study of family businesses, the next section critically reviews the mainstream management theories used for distinguishing between FFs and FFs. Such a

review will assist to identify the research gap, and to develop a conceptual model for this study.

3.5: Evaluating Theories Used in Studying Family Businesses and Hypothesis Development.

This section will focus on the review of three management theories applied in this study to differentiate family and non-family strategic behaviours and their impact on regional development. Until recently, family business research has been studied using theories emerged from other fields, such as management, economics, sociology and family studies (Berrone *et al.*, 2012). Generally, studies have focused on behavioural theory (Cyert and March, 1963), agency theory (Jensen and Meckling 1976), stewardship theory (Donaldson and Davis, 1991, 1993), stakeholder theory (Freeman, 1984), the resource-based view (RBV) of the firm (Barney 1991, 2001), social capital theory (Grannovetter, 1985), and entrepreneurial orientation (Miller, 1983; Lumpkin and Dess, 1996). Their contribution to theory of the family firm has been to develop an improved understanding of the theoretical differences between family and non-family firms. Some of these theories have provided a foundation that extends the theory of family firm (Sharma, 2004) by forming the foundations for advancing ‘home-grown’ constructs, such as ‘socioemotional wealth’ (SEW) (Gomez-Mejia *et al.*, 2007) and ‘familiness’ (Habbershon and William (1999).

Drawing on entrepreneurial orientation, the resource-based view and social capital theories, this study intends to extend the understanding of how family involvement influences strategic behaviours and performance, not only at the firm level, but also at the regional level. The next section critically evaluates the application of entrepreneurial orientation theory in the study of family firms.

3.5.1 Entrepreneurial Orientation Theory

Prior studies have adopted entrepreneurial orientation theory to explore the level of entrepreneurship within the firm, with the bi-polar ends of the continuum (scale), being ‘entrepreneurial’ and ‘less than entrepreneurial’. Some studies have adopted the conceptual definition presented by Miller (1983), encompassing the three original components i.e. innovation, risk taking and pro-activeness (e.g. Covin and Slevin, 1986, 1989; Zahra and Gravis, 2000; Kreiser, Marino and Weaver, 2002; Green, Covin and Slevin, 2008). However,

other studies have utilised either a refined definition (e.g. Russell Merz and Sauber, 1995) or an extended variation of the original conceptual definition (Lumpkin and Dess, 1996; Pearce, Fritz, and Davis, 2010) as shown in Table 3.1. Hence, despite the wide acceptance of the EO theory in the entrepreneurship literature, the existence of several conceptualisations signifies the continued challenge to develop a consensus when defining the EO construct (George and Marino, 2011).

Whilst the Covin and Slevin (1989) definition used the three dimensions identified by Miller (1983) to propose a strategic posture reflecting the decisions and processes of the firm, Lumpkin and Dess (1996) added two more dimensions ('autonomy' and 'competitive aggressiveness'), suggesting that the EO construct consisted of five independent dimensions that influence new entry. They stated that "EO refers to process, practices, and decision-making activities that lead to new entry" (p. 136). These two conceptual definitions of EO symbolise the contentious lack of consistency and clarity in the conceptual domain in the field of entrepreneurship (for an extensive review see George and Morino, 2011). The latter has come to be referred to as the 'multidimensional' construct while the former 'unidimensional' construct.

Miller defined an entrepreneurial firm as "one that engages in product-market innovation, undertakes somewhat risky ventures, and is first to come up with 'proactive' innovations beating the competitors to the punch" (1983, p 771). Consequently, a non-entrepreneurial firm was one with few innovations, highly risk averse, and tended to imitate the moves of competitors instead of leading the way (ibid). This definition proposed a unidimensional approach, which suggested that for a firm to be considered entrepreneurial, it should be innovative, risk-taking and proactive. However, as Miller argued, these dimensions were never intended to measure the level of entrepreneurship within firms, but to demonstrate that entrepreneurship and its drivers varied in different types of organisations (Miller, 2011, p. 874).

Table 3. 1: Definitions of Entrepreneurial Orientation

Authors	Definition	Dimensions	Focus
Miller (1983)	The EO as firm that engages in product-market innovation, undertakes somewhat risky ventures, and is first to come up with “proactive” innovations beating the competitors to the punch”	Risk-taking, innovation, pro-activeness	Configuration approach
Covin and Slevin (1989)	“The EO of a firm is demonstrated by the intent to which the top managers are included to take business-related risks, to favour change and innovation in order to obtain competitive advantage for their firm, and to compete aggressively with other firms” (p.128)	Risk-taking, innovation, pro-activeness	Strategic posture
Merz and Sauber (1995)	“the firm’s degree of pro-activeness in its chosen product-market unit and its willingness to innovate and create new offerings” (p554)	innovation and pro-activeness	Limited to action within a unit in the organisation
Lumpkin and Dess (1996)	“EO refers to process, practices, and decision-making activities that lead to new entry” (p136)	Innovation, risk-taking, pro-activeness, autonomy, competitive aggressiveness	Limited to new entry
Zahra and Neubaum (1998)	“EO is defined as the sum total of a firm’s radical innovations, proactive strategic action, and risk-taking activities that manifested in its support of projects with uncertain outcomes” (p125)	Risk-taking, innovation, pro-activeness	Specific projects the firm undertakes
Wiklund and Shepherd, 2005)	EO refers to a firm’s strategic orientation, capturing specific entrepreneurial aspects of decision-making styles, methods, and practices” (p 74)		Strategic orientation

Voss, Voos, and Moorman, 2005)	EO is defined as “a firm-level predisposition to engage in behaviours that lead to change in organisation or market place” (emphasis on Lumpkin and Dess 5 EO dimensions) (p 1134)	Innovation, risk-taking, pro-activeness, autonomy, competitive aggressiveness	Behaviour
Avlonitis and Salavou (2007)	“EO constitutes an organizational phenomenon that reflects a managerial capability by which firms embark on proactive and aggressive initiatives to alter the competitive scene to their advantage” (, p 567)	pro-activeness and risk taking	Managerial capability
Cools and Van den Broeck, 2007/2008)	“Entrepreneurial orientation (EO) refers to the top management’s strategy in relation to innovativeness, pro-activeness, and risk taking” (p. 27).	innovativeness, pro-activeness, and risk taking	Top management strategy
Pearce, Fritz, and Davis (2010)	“An EO is conceptualized as a set of distinct but related behaviours that have the qualities of innovativeness, pro-activeness, competitive aggressiveness, risk taking, and autonomy” (p. 219).	Innovation, risk-taking, pro-activeness, autonomy, competitive aggressiveness	Firm Behaviour

Source: Author

Although these variables reported a high reliability and were highly correlated, they differed in their sources, even within the same firm (Miller, 1983, 2011). Despite the wide acceptance of Miller’s conceptualisation of EO as a measure of firm level entrepreneurship, Lumpkin and Dess (1996) proposed an extended version of the EO construct consisting of five dimensions. Their approach conceptualised the five dimensions of EO to be independent of each other suggesting a multidimensional approach. Lumpkin and Dess argued that EO refers to “the process, practices, and decision-making activities that lead to new entry” (p 134). Based on this definition, they argued for the inclusion of ‘autonomy’ and ‘competitive aggressiveness’ in the EO of the firm. Lumpkin and Dess (1996), posit that ‘autonomy’ refers to “the independent action of an entrepreneurial orientation in bringing forth an idea or a

vision and carrying it through to completion” (p. 140). Moreover, that ‘competitive aggressiveness’ refers to “a firm’s propensity to directly and intensely challenge its competitors to achieve entry or improve its position; that is, to outperform industry rivals in the marketplace”. While the additional dimensions seem justified and would suffice as critical antecedents to achieving a firm level EO, their inclusion does seem to support the specific conceptualisation of an EO that leads to new entry (venture creation).

In other studies, authors have applied fewer dimensions of EO (e.g. Merz and Sauber, 1995; Avlonitis and Salavon, 2007). For instance, Merz and Sauber (1995) operationalised an EO with only ‘innovations’ and ‘pro-activeness’, while limiting their study to a single unit of the firm. These and other conceptualisations have been welcomed in the entrepreneurship literature, and their inclusion has demonstrated that while EO is a legitimate construct, and its measurement scales have been validated (Covin and Slevin, 1986, 1989), a ‘one size fits all’ approach is not always appropriate. As Miller (2011) observed, EO studies should not superficially just adopt EO as proposed but should distinguish the context and institutionalisation of the perspectives of entrepreneurship being studied. This is because EO can vary depending on the firm type, context, institutions, sources, and consequences.

In addition, studies that conceptualised EO at a firm level also revealed some inconsistencies in explaining entrepreneurial orientation in family firms. In particular, this applied to studies that used EO dimensions to explore the relationship between entrepreneurship behaviour and firm performance. From one perspective, some of the studies that focused on family firms reported a positive picture as regards the influence of EO on performance (Short, *et al.*, 2009; Zellweger *et al.*, 2010). On the contrast, despite several studies having adopted established scales measuring the EO construct in their studies of the level of entrepreneurial orientation of family firms, some found there was less use of EO language, as exhibited by Lumpkin and Dess (1996), as compared to non-family firms. For instance, the study conducted by Zellweger *et al.* (2010) observed that family firms scored lowly on the five dimensions of EO. Further, Short *et al.* (2009) revealed that although family firms exhibited language consistent with EO dimensions, there was less language used in relation to ‘autonomy’, ‘pro-activeness’ and ‘risk taking compared to NFFs’. Hence, these studies have revealed some of the weaknesses of the EO theory in explaining the drivers of firm level entrepreneurship.

Subsequently, studies that investigated EO beyond the conventional firm level of analysis (e.g. Davidsson and Wiklund, 2001) suggested that the family unit can have potential effects on entrepreneurship behaviours both at the family and regional level. For instance, Zellweger, Nason and Nordqvist (2011) introduced the concept of ‘family entrepreneurial orientation’, defined as “the attitudes and mind-sets of families to engage in entrepreneurial activity” (p. 8). They argued that by focusing on the family level of analysis, researchers could gain a deeper understanding of the family’s ability to create value across the generations. Therefore, the ‘family orientation’ construct may serve as an antecedent to transgenerational value creation by families (Zellweger *et al.* 2011). In addition, Martin and Lumpkin (2003) contrasted family orientation with entrepreneurial orientation at the firm level. They suggested that, “an increasing family orientation will overtake the entrepreneurial orientation as the family firm is passed on through generations”. Their family orientation dimensions were ‘interdependency’, ‘loyalty’, ‘security’, ‘stability’, and ‘tradition’. Thus, these perceptions by family owners can influence the interpretations of firm EO without having to undermine its effects at the firm level.

Indeed, the current conceptualisation of EO at the firm level is limited on its explanatory power as it does not take into consideration the influence of the firm on regional level. Though the firm level entrepreneurship influence on firm performance has been established, showing positive relationship on firm growth and profitability (Covin and Slevin, 1991; Wiklund and Shepherd, 2005; Gupta and Gupta, 2015), the influence on exogenous factors is less explored. In addition, there are calls to further explore firm level entrepreneurship in developing economies, as most of the studies have concentrated on Western economies (Kantur, 2016). Extant research evidence shows that businesses operating within developing economies are faced with increased uncertainty, imperfect competition and hostile environments. Although, some studies found a positive link between firm level entrepreneurship within developing economies and firm performance (Urban, 2012; Cai *et al.*, 2014), the literature has yet to develop, particularly regarding their influence on regional development.

The scope of existing literature on family business entrepreneurship and regional development presents implications for the current study. As Miller (2011) argued, “resource availability may play a role in the popularity of EO”. Further, Miller stated that there is a complementarity between the resources a firm has and the decision-making processes needed

to harness those resources for profitable purposes (2003, 2011). Therefore, the central question is that, does family involvement in the decision-making processes influence the firm EO effects on performance, industry cluster participation or RD? Will social capital stimulate EO behaviours (innovation, risk taking, proactiveness) given that it enriches relationships with external entities. The current study has a specific focus on the role of family firms, which form a large proportion of firms in emerging economies, as well as developed economies. The next section critically evaluates the application of resources-based view of the firm.

3.5.2 Resource Based View of the Firm (RBV)

Resource Based view (RBV) is perhaps the most applied theory in family firm research, with both theoretical and empirical testing that supports the proposition that family firms are unique actors. The underlying thesis of RBV is that a firm's competitive advantage and its success depends on the resources and capabilities that the organisation controls (Barney, 1991). 'Resources' refer to a firm's assets, processes and routines, capabilities, knowledge, skills and information (Daft 1983). 'Capability' refers to the "specific processes the firm uses to alter its resource bases" (Barney *et al.*, 2001, p.630) that are sources of competitive advantage. The assumptions of RBV in the mainstream strategic management literature have been captured simply by Barney *et al.* (2001, p.649) as:

"resources and capabilities that can be heterogeneously distributed across competing firms, that these differences can be long lasting, and that they can help explain why some firms consistently outperform other firms".

Therefore, when a firm controls resources and capabilities that are rare, valuable, imperfectly imitable, and non-substitutable, they can generate significant returns in comparison with other firms (Barney, 1991, Barney *et al.*, 2001). Similarly, the application of RBV when researching family firms appears to suggest that family firms possess bundles of tangible and intangible assets, originating from the intersection of the family and business systems, to generate competitive advantage (Habbershon and Williams, 1999).

In the context of family firms, RBV theory has focused on the arguments that the 'family' (or family involvement) in the business generates unique resources referred to as 'familiness'.

This differentiates them from non-family firms (Habbershon and Williams, 1999; Habbershon *et al.*, 2003; Chrisman *et al.*, 2003). Proponents of this argument have defined ‘familiness’ as the idiosyncratic firm level resources and capabilities that are generated when the family system interacts with the business systems (Habbershon *et al.*, 2003; Chrisman *et al.*, 2003, Basco and Perez Rodriguez, 2009). This in turn leads to a competitive advantage that drives superior performance (Irava and Moores, 2010). Although the application of RBV is interpreted and conceptualised differently from its original focus by Barney (1991) and others, the focus on family involvement in the business as a resource (‘familiness’) seems appropriate based on its uniqueness and centrality to family business behaviours and performance. Though the ‘familiness’ construct is yet to be fully understood (it is still considered a ‘fuzzy’ concept by Moore, 2009), efforts have been made to clarify its dimensions, antecedents, and consequences, particularly to the organisation’s competitive advantage and performance.

Like the application of agency and stewardship theories, that highlighted both the positive and negative consequences when applied to family business context, the RBV construct particularly in its conceptualised form, ‘familiness’, presents the same characteristics. Habbershon *et al* (2003) revisited the ‘familiness’ construct to differentiate the systemic interactions between the individual, the family group and the business that created systemic synergies, leading to either ‘distinctive’ or ‘constrictive familiness’. Thus ‘the family’ has the potential to create competitive advantages or disadvantages, influencing the process of wealth creation in the firm.

Further, Chrisman *et al.*, (2003) extended the notion of the firms influence on the resources and capabilities, not only to affect the wealth creation in the firm, but also to integrate value creation. They defined value creation in family firms as “the maximisation of the utility function of the family business system” (p. 468). Further, they argued that wealth creation was not the only goal of family firms. Further, that no economic efficiency was lost when a firm’s owner and managers chose to maximise the utility function of ‘family essence’, including non-economic goals. However, it is important to note that the involvement of the family in the firm can also lead to negative consequence as a result of its ‘constrictive familiness’. Therefore, there is a need to develop further these constructs before they can be used as the foundation for a theory of the family firm (Chrisman *et al.*, 2005).

Some researchers have suggested that it is only ‘distinctive familiness’ that generates a competitive advantage for the firm, labelling it as ‘familiness capital’, or ‘family capital’ (Van Wyk, 2012). Efforts have been made to bring clarity to the construct by identifying the antecedents of ‘familiness’ within family firms. For instance, from a firm level perspective, Habbershon *et al.* (2003) suggested that the firm’s resources can be categorised as physical capital, organisational capital, human capital, and processes capital. However, Sirmon and Hitt (2003) considered the intersection of family and firm’s system and suggested that the sources of family firm resources are human, social, survivability, and governance capital. Further, having used a case study approach, Irava and Moores (2010) suggested a ‘familiness’ resource model that consisted of a ‘familiness resource bundle’, visible in three main aspects of the family business organisational (decision-making and learning), human (reputation and experience) and process (relationship and network) resources.

Pearson, Carr and Shaw (2008) applied the social capital approach to develop an improved better understanding of how ‘familiness’ manifests itself within the family business. They proposed three dimensions through which ‘familiness’ can be observed; namely structural (social interactions and networks), cognitive (shared vision and purpose, as well as unique language stories, and culture), and relational (trust, norm, obligations and identity) dimensions. Indeed, these dimensions importantly clarify that the ‘distinctive familiness’ construct is a primary source of unique resources and capabilities that influence the competitive advantage of family firms, as compared with non-family firms. However, the key lessons from these conceptualisations is to understand how ‘familiness’ influence family firm behaviour and performances.

Table 3. 2: Dimensions of Familiness

Author	Dimensions of Familiness
Habbershon <i>et al</i> (2003)	Physical capital, organisational capital, human capital, and processes capital
Sirmon and Hitt (2003)	Human, social, survivability, patient, and governance capital.
Pearson, Carr and Shaw (2008)	Structural (social interactions and networks), cognitive (shared vision and purpose, as well as unique language stories, and culture), and relational (trust, norm, obligations

	and identity) dimensions.
Irava and Moores (2010)	Organisational (decision-making and learning), human (reputation and experience) and process (relationship and network) resources.

Source: Author

Although the identification of ‘familiness’ dimensions is an advancement to the RBV theory of ‘familiness’, there are no studies that unpack how the family can utilise these resources in influencing firm performance. So, it is important to further investigate how the family utilises these resources to generate an advantage, as their presence does not constitute performance advantage, as they can have both ‘constrictive’ and ‘distinctive’ effects (Irava and Moore, 2010). For instance, ‘familiness’ not only enables family owners and managers to make decisions quickly, allowing them the agility to respond to external opportunities and threats, but also can stagnate and expose the firm to excessive losses (i.e. when family conflicts arise). In addition, while the founders can build a strong family reputation that becomes a source of advantage for the firm and future generations, the same can hinder the ability of subsequent generations to develop their own reputation or grow the firm. Finally, strong family bonds can enhance the organisation’s processes, but can also impede its ability to develop networks outside of the family. Hence, it would not benefit from network resources, information, financing and opportunities.

Several studies have suggested various ways to capture the construct of ‘familiness’. For instance, Astrachan, Klein and Smyrnios (2002) proposed a family power, experience and culture (F-PEC) scale to solve the problem. As opposed to using the dichotomy of family versus non-family business, the F-PEC gained support among contemporary scholars, as it provided a measurement scale that allowed researchers to capture family influence on a continuous scale (Bird *et al.*, 2002; Chrisman *et al.*, 2003; Klein, 2003; Chrisman *et al.*, 2005).

The F-PEC scale was verified using a sample of 1160) firms, and there was evidence that supported the inclusion of a wider range of businesses, instead of focusing simply on the classification of firms as either family or nonfamily (Chrisman *et al.*, 2003). For instance, Rutherford, Kuratko, and Holt (2008) used the F-PEC scale to examine the relationship between ‘familiness’ and performance amongst 831 American FBs. Although they found

evidence of a positive association between ‘familiness’ and revenue, capital structure, growth and perceived performance in their findings, they also reported mixed results. Whilst Levie and Lerner (2009) study on UK firms relied on both RBV and agency theories to distinguish between family and non-family business performance. It was found that there was evidence to support positive results when the social capital of family firms offset their human capital deficits.

Despite the evidence to state that ‘familiness’ is a unique bundle of resources and capabilities, it is still not conclusive as to how dimensions such as those identified by Sirmon and Hitt (2003) are combined to create a competitive advantage that drives superior performance, and hence regional development, as postulated by Basco (2015). However, what is evident is that family businesses evaluate resources differently and have distinct capabilities from non-family business. The most important of these is social capital.

Even though prior studies have sought to extend the construct to offer an improved understanding of its explanatory effect on family business behaviour, there has been criticism on whether or not ‘familiness’, as conceptualised, was able to sustain a competitive advantage in the long run. Put simply, the question remains as to whether or not ‘familiness’ can be modified or reconfigured over time to ensure a sustained competitive advantage that will deliver superior results.

One of the solutions to the static nature of RBV, and to an extension ‘familiness’, is to investigate family business dynamic capabilities. To overcome the shortcomings of the RBV theory, the dynamic capability approach has been used to examine the ability of a firm to be able to “integrate, build and reconfigure internal and external competencies to address rapidly changing environments” (Teece, Pisano and Shuen, 1997 p. 516). The dynamic capability concept expands the RBV, as scholars posit that possessing idiosyncratic and valuable resources does not automatically lead to a competitive advantage. The firm or its managers should be able to modify and reconfigure the resources continuously to remain competitive. This view was supported by Sirmon and Hitt (2003), who suggested that firms should manage their resources effectively through conducting inventory, bundling and leverage to create wealth.

For both RBV and dynamic capabilities paradigms, the ‘family’ is at the centre for ensuring that the firm can reconfigure and modify the resources and capabilities to remain competitive in the long run. For instance, the paradox in strategic decision-making can be considered,

where there are situations that require a firm to act fast and sometimes need to consider their decisions carefully. Then, the family's ability to have flexible structures enabling management to make both quick and gradual decisions at the right time and in appropriate situations is central to maintaining a dynamic capability (Irava and Moores, 2010). According to Carnes and Ireland (2013) the distinctive 'familiness' found in family firms has positive effects in resources enrichment. This is because it can enable them to stimulate innovativeness, as they can easily modify and reconfigure resources to sustain a competitive advantage.

However, as earlier stated 'familiness' can be constrictive, and can prevent the family firm from sustaining a competitive advantage, especially when internal structures are rigid (Penney and Combs, 2013). In cases where paternalistic culture (rigid) is pronounced, it will influence the dynamic capability of the family business. Whereas, a more flexible culture that promotes entrepreneurial orientation will positively influence a dynamic capability (Chirico *et al.*, 2012). The dynamic capability paradigm has potential to extend research in family firms to establish how 'distinctive' (+) and 'constrictive (-) familiness' behaviours influence a firm's ability to create and sustain a competitive advantage, and hence firm performance.

As earlier noted, RBV is one of the paradigms that has attracted interest from a wide variety of researchers, both in relation to family and non-family firms. In its current conceptualisation (focusing on the economic lens) the RBV has provided insights into and explanations of the sources of a family firm's competitive advantages and disadvantages in comparison to non-family firms. As scholars have argued, the 'familiness' aspect of the family firm is yet to be fully understood, and efforts to approach the research from a dynamic capability lens has revealed pitfalls in applying RBV theory.

Having unique resources and capabilities does not lead to competitive advantage until firms have adopted different approaches that enable them to modify and reconfigure these unique, inimitable and non-substitutable firm-specific resources to create long lasting value. Such approaches include resource reconfiguration, renewal, building underlining processes and practices for knowledge-based and high value offerings. In a similar vein, having 'distinctive familiness' as a resource is not enough, and family firms must continuously reconfigure and modify these resources to sustain a competitive advantage. It is with this understanding that study sought to understand the impact of 'familiness' as a strategic resource that influences decision making processes (participative and inclusivity of other TLMs in making strategic

business choices). To complement the advanced arguments by Pearson et al (2008) the next section critically evaluates the ability of social capital with external entities on the effects on family firm impact on RD.

3.5.3 Social Capital Theory (SCT)

Social capital is a multi-faceted theory, described by some researchers as an ‘umbrella concept’ (Hirsch and Levin, 1999). SCT is also a prominent theory that has been widely applied in the field of sociology, economics, political science, management, organisational studies etc. (Adler and Kwon, 2002; Coleman, 1988; Portes, 1998). According to Alder and Kwon (2002), the social capital of ‘a collectivity’ “is in its internal structure, in the linkages, and among individuals or groups with ‘collectivity’, and specifically, in those features that give the ‘collectivity’ cohesiveness and thereby facilitate the pursuit of collective goals” (p. 21). A general definition of social capital has been provided by Nahapiet and Ghoshal (1998, p. 243) as being “the network of relationships possessed by an individual or social unit, and the sum of actual and potential resources embedded within, available through and derived from such a network”.

According to Acquah (2007, p. 1238), social capital is “the sum of resources, actual or virtual, that accrue to an individual or an organisation as a result of the development of personal and social networking relationships” (Bourdieu, 1986; Lin, 2001). From an organisational perspective, social capital reflects “the character of social relationships within the organisation, realised through members’ levels of collective goal orientation and shared trust” (Leana and Van Buren, 1999, p. 540).

In light of these definitions, it seems social capital is translated through individuals (owners, managers, employees), societies or nations in a region. Put simply, social capital theory exemplifies the value entrenched in the social relationships of individuals or collectives. Additionally, it is the norms and networks that enable people to act collectively (Woolcock and Narayan, 2000, p 3).

Generally, the two primary approaches to social capital advanced by some of the mainstream scholars are ‘bonding’ (Coleman, 1988, 1990) and ‘bridging’ (Burt 1992, 2000; Burt and Ronchi, 2007). The ‘bonding’ approach derives from an internal focus aided by the dense networks within a collective (Carr *et al.*, 2011). According to Gedajlovic *et al.* (2013), the ‘bonding’ social capital’s value can be described as “emanating from strong, repeated social

connections that result in norms of reciprocity, yielding trust” (p458). The essence of ‘bonding’ social capital is the ability for individuals or groups to benefit from a collective good, and that this is associated with the increased sharing and solidarity among actors in a collective. For instance, a firm’s actors would be able to benefit from their active involvement in a network by continually building relationships.

While ‘bridging’ social capital refers to external linkages between collective focal actors and available resources that ultimately lead to positive outcomes (Burt, 1992; Gedajlovic *et al.*, 2013). Prior literature has also highlighted other distinct configurations of social capital (such as Bourdieu, 1986; 2005; Granovetter, 1985; Lin 2002). For instance, Bourdieu’s perspective of social capital has focused on financial and informational resources derived from a relational network and leading to competitive advantages (2005). Putnam, however, concentrates on trust and affiliations (Gedajlovic *et al.*, 2013). Although these perspectives have gained approval in the study of social capital, they are used in tandem with Coleman’s and Burt’s perspectives or with each other.

In the case of entrepreneurship and family business studies, a multidimensional view of social capital by (Nahapiet and Ghoshal, 1998) is commonly used. This consists of three dimensions; namely structural (e.g. ties and relationship configurations), relational (e.g. trust, norms, and obligations) and cognitive (e.g. shared values, common language). According to Gedajlovic, *et al.* (2013) who advocate these concepts, “the structural dimension may better reflect the sources of social capital, while the relational and cognitive dimensions reflect the social capital resource” (p.459). This view was supported by both Tsai and Ghoshal (1998) and Pearson *et al.* (2008). Tsai and Ghoshal (1998) found strong evidence to support the argument that social capital facilitates value creation at both the team and the business unit levels. Further, they suggested that informal social relations and tacit social arrangements encouraged productive resource exchange and combination, thereby promoting product innovation (p. 473). Although, their study focused on the inter-unit relationships within a single firm, the findings suggested that units, or firms, can embrace the same organisational goals or values even when the units do not have strong interactions.

Pearson *et al.* (2008) advanced the theory’s outreach to the scholarship field of family firms with an attempt to clarify the ‘familiness’ constructs. In their theoretical explorations, they suggested that to have an improved understanding of the antecedents and outcomes of ‘familiness’, social capital theory could help solve the dilemma. Hence, it was suggested that

the structural dimension is an antecedent to both the cognitive and relational dimensions, as well as the cognitive dimension being an antecedent of the relational dimension (Gedajlovic, *et al.*, 2013). Moreover, that these three dimensions represented the nature of ‘familiness’ within family firms (Pearson *et al.*, 2008).

As Simon and Hitt (2003) have argued, social capital is one of the major forms of capital found within family firms, because of the presence of the ‘family’ stakeholder. They referred to social capital as resources embedded in the family network, accessed through relationships. Although the dimensions of social capital have been conceptually identified and differentiated, prior studies have found it difficult to empirically isolate and measure the dimensions of social capital within (and outside) the firm (Adler and Kwon, 2002). For instance, studies have found it particularly difficult to differentiate between human and social capital (e.g. Lester *et al.*, 2008). However, there seems to be a potential breakthrough as some studies (e.g. Davidsson & Honig, 2003; Levie and Lerner, 2009) have focused on the difference between human and social capital as regards entrepreneurial activities.

David and Honig (2003) established that social capital (both ‘bonding’ and ‘bridging’) was a robust predictor for nascent entrepreneurs (p. 301). Levie and Lerner (2009) found evidence from a sample of family and non-family firms in the UK. This showed that family firms mobilise and deploy resources differently, which influences their performance. Though there was not much difference in the performance of FBs and NFBs, social capital in family firms was responsible for offsetting the weaknesses in human and financial capital. As has already been described, family firms are prone to focusing on non-economic goals. These might include providing employment to family members, even at the expense of financial gains or even declining financial resources, to keep control of the firm (Levie and Lerner, 2009). Such decisions would be considered as a weakness compared to NFBs, but when stronger social capital (information, norms, trust, and relationships) exists among the family members, the firm can overcome them to enable the creation of competitive advantage.

In addition, there have been entrepreneurship studies that relied on social capital to explain performance relationship at the individual, group or organisational levels (e.g. Maurer & Ebers, 2006; Packalen, 2007; Yiu & Lau, 2008). However, these authors have been criticised for not developing conceptual models that explain how social capital resources lead to firm outcomes (Gedajlovic, *et al.*, 2013). For example, some studies investigated the influence of individual networks, such as families or ethnic groups, on entrepreneurial activities such as

‘start-ups’ (Davidsson & Honig, 2003), or even the choosing of an entrepreneurial career (Jack, 2005). However, these studies failed to identify clearly the social capital antecedents responsible for the outcomes. Another pitfall identified in these studies was the inability to identify the negative effects or ‘dark side’ of social capital. The literature has argued that family firms might have stronger structural relationships compared to NFFs because of their shared vision (i.e. cognitive social capital) and trust (relational social capital). If these resources become stagnated, through, (i.e. ‘constrictive familiness’) they will eventually be a liability to the firm (Maurer and Ebers, 2006).

Powell and Smith-Doerr (1994, p 393) summarised it as “the ties that bind may turn into ties that blind”. Thus, stagnated social capital could present a potential risk to the performance of the company, if it remains unaddressed. There is a need, therefore, to delve more into the negative outcomes of social capital, perhaps drawing on the ‘dynamic capability’ construct. This could be an implication for the current study. Though the writer’s review of social capital theory has been carried out in order to further his understanding of the firm, few studies tried to understand its implication beyond the firm-level. Thus, the current study would view the theoretical perspective in relation to family firms.

Further, there are even fewer studies that investigated the effects of social capital beyond a single level, with very few examining multi-level phenomena (with exception of Davidsson & Honig, 2003; Lester and Cannella, 2006). The focus on the internal ties within the family or family business (‘bonding’ social capital) would seem to have limited the understanding of how family social capital (‘familiness’) influences different outcomes across micro and macro levels. For instance, family business research would benefit from an understanding of how ‘familiness’ can influence relationships across levels such as teams and organisations, organisations and communities, organisations and institutions, or organisations and regions.

Finally, there is a paucity of research on social capital that has focused on emerging economies, despite the overarching differences in contextual factors (Hoskisson *et al.*, 2000; Peng and Luo, 2000; Wright *et al.*, 2005; Acquaah, 2007). In western economies, social relationships are predominantly studied through the lens of social capital. These were limited to the individualistic relationships between firm managers and top managers in other firms (Acquaah, 2007). However, little effort has been made to investigate the application and reliability of the social capital construct in emerging economies, which are characterised by collectivist relationships beyond the firm networks. For instance, studies in emerging

economies have revealed differences in the application and outcomes of social capital resources because of the presence of strong traditional institutions, such as kingship, chieftaincy, and religious organisations (Acquaah, 2007).

Hence, most managerial social capital developed in the sub-Saharan African countries has relied upon relational social capital developed between business managers and external entities. The latter would include community leaders, and political or government leaders in addition to top managers in other firms (Acquaah, 2007, p.1239). Therefore, when extending the social capital theory, studies should investigate the effects of micro-managing networking relationships and ties with external entities on macro-organisational performance. This is especially relevant in developing economies, which have shown contextual characteristics distinct from those of mostly developed, Western economies.

As outlined earlier, social capital theory has provided scholars with an improved understanding of how internal and external relationships and networks influence organisations in the process of creating value or performance. Moreover, ‘family involvement’ is significant in differentiating between FBs and NFBs, especially in their allocation and utilisation of social capital resources or capabilities that can influence firm behaviour, decision-making processes, and strategic posture or performance. For instance, entrepreneurship and family business research has shown some potential to address some of the pitfalls identified in the prior literature (Gedajlovic, *et al.*, 2013). Stam (2008) has drawn on entrepreneurial orientation and social capital to investigate the relationship between entrepreneurial orientation and new venture creation. Stam concluded that in firms with few bridging ties, their centrality weakened the relationship between entrepreneurial orientation and performance. Therefore, the application of the two theories was able to shed light when social capital becomes an asset or a liability for entrepreneurial firms.

Some scholars argue that it is important to distinguish between bonding and bridging social capital (Sjoerd and Sjack, 2003; Patulny and Svendsen, 2014) and within family firms (Pearson *et al.*, 2008; Sharma, 2008). Patulny and Svendsen (2014) for further empirical development of bonding/ bridging social capital to allow for the measurement of the effects on a community or region level. Sjoerd and Sjack (2003) posit that participation in both social networks is cumbersome and ‘comes at the costs of participation in the formal economic sphere and working time’ (p.1). Thus, developing higher levels of social capital would negatively influence economic growth. On the contrary, the participation in community and

regions networks reduces incentives for rent seeking and cheating. Thus, through this channel, higher levels of bridging social capital may enhance economic growth. The distinction shows that both bridging and bonding social capital produce different outcomes. Furthermore, as indicated by Pearson et al., (2008) and Sharma (2008) there are conceptual difference between the antecedents and outcomes of bonding and bridging social capital. As Pearson et al. (2008) theorised, using a social capital approach would improve our understanding of how the family businesses develops their familiness resources (structural, relational and cognitive). Whereas research evidence indicating strong ties-family capital-in family businesses (Khayesi et al., 2014; Wyk, 2014) from their close relationships (Zahra, 2010). However, there is very little evidence on the external ties despite their central role in understanding the industry networks (Johannison et al., 2007). Recent studies have indicated FBs from emerging markets have stronger association with external stakeholders- other firm managers, community, and political leaders (Acquaah, 2011; Peng, 2002). But, there are no empirical distinctions between family and nonfamily firms on the effects of bridging social capital which is associated with enhanced economic growth (Sjoerd and Sjack (2003).

Given the importance of the stock of social capital in fostering entrepreneurial networks (Casson and Giusta (2007) this study explores the effects of bonding social capital on the firm regional development According to (This is specifically in relation to influencing aspects of entrepreneurship, such as opportunity seeking, resource acquisition and project implementation (p. 230), with the overall outcome of improving the performance of the economy. Therefore, entrepreneurship researchers can benefit from drawing on social capital to understand the influence that EO has across models that contain multi-level components. These would utilise shared or configured components (Gedajlovic, *et al.*, 2013) as independent or dependent constructs at different levels of analysis. For instance, the application of SCT in studies investigating regional development outcomes could lead to important insights into how a firm's actors contributed to regional development (Woolcook and Nayaran, 2000). Thus, given the potential outcome of the 'cross-pollination' of social capital theory with other theories (such as RBV and entrepreneurial orientation, especially in the study of family firms), it is appropriate to define the entrepreneurial orientation theory as applied in the field of family firms.

3.6: Dimensions of the Theoretical Framework

The application of diverse theories in management research is not new in the family business literature. Consequently, this study draws on three established domains (i.e. entrepreneurship, family business and regional development) to explore how the strategic behaviours of FFs differ from NFFs, and their impact on regional development outcomes. For instance, Cabrera-Suarez *et al* (2011) has drawn on market orientation, the resource-based view, and stakeholder theories to develop a model for investigating market orientation in family firms. Similarly, Chang *et al* (2014) applied agency theory, the resource-based view (RBV) and stakeholder theory to distinguish family firm behaviours from those of NFFs. The authors explained the regional scale and scope in less developed regions in the US.

Therefore, the theoretical framework for this study is developed using three theories: namely, EO, RBV and SCT. The firm-regional impact framework includes three exogenous factors: firm entrepreneurial orientation (FEO), firm decision-making strategy (FDMS) and firm bridging social capital (FBSC). The endogenous factors are firm involvement in industrial clusters (FIIC), firm performance (FP) and regional development (RD). The following sections presents the dimensions included in the conceptual framework.

3.6.1: Firm Entrepreneurial Orientation

In this study, FEO denotes the procedures, expectations, practices, and the leadership practices that offer scope for a firm management. Thus, the study applies the five EO dimensions, specifically, innovativeness, risk-taking, proactiveness, competitive aggressiveness and autonomy (these denotes self-sufficiency, ingenuity, unforeseen circumstances, activity and purposeful strengths). Although each of the five dimensions is an integral part of understanding the business process, they are in different combinations (Skoneczna *et al.*, 2018). The variables in the environment change autonomously with respect to market changes. The probability hypothesis assumes that consistency between factors is necessary for perfect implementation, in which case, the link between FEO and the firm's executives becomes apparent.

Therefore, in this study FEO refers to the top-level managers' preferences, perceptions and behaviours that affect firm level entrepreneurial activities, as captured in their decision-making styles, methods and practices. Following the theoretical arguments of prior studies (Miller, 1983; 2011; Covin and Slevin, 1989; Lumpkin and Dess, 1996; Casillas and Moreno,

2010), the study utilised a collective measure of the EO. This was based on the five dimensions identified by Lumpkin and Dess (1996) relating to ‘innovativeness’, ‘risk-taking’, ‘pro-activeness’, ‘competitive aggressiveness’, and ‘autonomy’. Thus, FEO was measured using a 15 index already developed and validated by Casillas and Moreno (2010).

3. 6.2: Firm Decision-Making Strategy

This study will evaluate the level of participation of TLMs in decision making processes within the firm. A participative strategy in an organisation refers to the process of gathering and disseminating information when making strategic decisions (Duncan 1974; Eddleston and Kellermanns, 2007). Thus, it captures the degree of interaction and participation that takes place in the strategy making process. A participative strategy process can, therefore, be viewed as a style of decision-making that focuses specifically on interaction and participation of TLMs within the strategy making process. Firms or teams that encourage interaction and participation in the strategy making process through exchanging information, ensure that complete information is available. This leads to higher quality information (Kellermanns and Eddleston, 2004; Eddleston and Kellermanns, 2007).

Information sharing among TLM encourages the cohesiveness and trust necessary to promote effectiveness when making decisions. Indeed, prior studies have demonstrated that managers that are unwilling to share business information with other team members which affects the growth and performance of the firm (Mintzberg, 1994). Additionally, evidence shows that firms that encourage information and knowledge sharing about a firm’s specific processes tend to be more innovative and efficient (Davenport and Presack, 1998). Sharing information with other team members encourages a collective responsibility that allows members to participate in the development of the organisation strategies. Therefore, a stronger firm performance is likely to be associated with a participative process and firm involvement in industrial clusters that will promote regional development.

3. 6.3: Firm Bridging Social Capital

Social capital refers to the network of relationships possessed by an individual or social unit. It also includes the sum of actual and potential resources embedded therein, and available through and derived from such networks (Nahapiet and Ghoshal, 1998, p. 243). So, ‘firm bridging social capital’ represents the personal and social networks developed between the managers and external entities, including managers from other firms, community and political leaders and government agencies. These social relationships not only help

organisations to acquire information or financial resources, and access opportunities, but also offer the firm an opportunity to alter regional factors and processes that have an impact on regional development. Managers' social capital is also useful for managers and owners of enterprises in coping with regional change dynamics (Memili *et al.*, 2015). Hence, firm owners develop better relationships with other firms and stakeholders. Regional factors such as culture, organisational commitment, market development and network relationships with the community are also enhanced, if the firms possess bridging social capital.

Studies have revealed differences in the application and outcomes of social capital resources due to the presence of strong traditional institutions, such as kingship, chieftaincy, and religious organisations (Acquaah, 2007). That study investigated how the relationships between family firms and regional development exist. It was found to be largely because of the role management team play in linking their organisations with other external entities and stakeholders. The study used dimensions identified by (Peng and Luo, 2000; Acquaah, 2007) to investigate the effect of micro-managerial networking relationship and ties with external entities on macro-organisational performance in developing economies. The latter have shown different contextual characteristics from those of developed, mostly western economies.

3.6.4: Firm Involvement in Industrial Clusters

According to Niu (2009), there is a fundamental difference in the unit of analysis between 'industrial clusters' and a firm's 'industrial cluster involvement' (P. 450). He recommended that when evaluating an organisation's performance outcomes, the term 'industrial cluster involvement' is better suited. It is important to note that the actual focus of that approach was not the whole 'industry cluster', but the effect on an individual firm's outcomes as a result of being involved with other firms and stakeholders within the industrial cluster. Therefore, a family firm's involvement in clusters refers to the deliberate strategic actions of top-level managers to participate in activities within industrial clusters.

These activities of top-level managers within industrial clusters include research, development and innovation. Other activities arising from involvement include backward and forward integration with both suppliers and customers, knowledge exchanges, developing a shared vision, partnerships, joint ventures, supporting new ventures and developing new regional technologies where they are located. Such participation by senior managers

influences a firm's behaviours. These emerge from the interaction of the firm with regional factors and processes through regional proximity or associations. For instance, industry clusters advocates have argued that they enhance competitiveness among firms and regions (Porter, 1988; Rosenfeld, 2002). Firm involvement in industrial cluster activities is captured using items proposed by Rosenfeld (2002).

3.6.5: Firm Performance

Firm performance (or growth) is a multi-dimensional concept that has been investigated using different dimensions inclining towards objective or subjective measures. Firm performance has been the subject of research in the fields of entrepreneurship, family business and regional development. Liao, Harold and Pistrui (2001) refer to firm growth as the positive change in employee numbers, sales revenue, and return on assets. Similarly, other researchers refer to firm performance as an increase in profitability (Lee, 2006), and sales revenue (Casillas and Moreno, 2010). Generally, some of the objective measures refer to financial measures such as revenue growth, employee increase, gross income or profitability, return on assets, return on investments. While subjective measures, are non-financial, such as harmony, identity, social status (Chrisman *et al.*, 2012) and preserving socio-emotional wealth (Gomez-Mejia *et al.*, 2007). In this study, performance and growth are measured using five variables that capture sales growth rate, market share growth, employee growth, and profit growth rate in comparison with their intra-industry average.

3.6.6: Regional Development

This refers to the extent to which economic actors can influence regional factors and processes within a specific region in order to contribute to the development of that region. The RD dimension is used to assess the influence of both family and non-family firm actors in their regional economy as regards their contribution to GDP, job opportunities and wealth creation. Thus, this study builds on the views of Basco (2015) and Stough *et al.* (2015), who argued that the prevalence or embeddedness of FFs in their regional environment can influence regional factors and processes. This is due to their interaction with regional structures that have an impact on regional development. The influence of FFs is expected to be different from that of NFFs, as they are unique economic actors, with dominant powers to influence a firm choice. In relation to the entrepreneurial posture, the allocation of resources or accessing network resources, this can impact regional development (Stough *et al.*, 2015).

As earlier noted in chapter two, regional development has been measured using variations in GDP growth, availability of job opportunities and wealth creation. In this study, the researcher has considered the firm's impact on RD outcomes, as assessed by the top-level managers in the firm. The contribution to GDP, in the current study, refers to the firm contribution to GDP, the firm pays their fair share of tax, and the substantial role in meeting the economic transformation agenda for the region. The contribution to job opportunities refers to the percent of employment opportunities created directly or indirectly, absolute number of employees added to the firm as well as whether or not employees are informed about the economic transformation agenda. Finally, wealth creation refers to whether the firm pays dividends every year, and if the firm allocated a percentage of its income to community activities.

3.6.7: Family Involvement

Family involvement in a firm may be visible in several ways. In this thesis, family involvement refers to the ability and willingness of family members to influence the strategic choices that the business makes. The study uses both a broad definition (Westhead and Cowlings, 1998; Shanker and Astrachan, 1996) and a widely accepted definition that operationalises both conceptual and theoretical aspects of family ownership (Chua *et al.*, 1999). In the first instance, the study captures self-reported data on whether the firm is owned or not by a family. Then, family involvement is captured using both the 'components' and 'essence' approaches. Family involvement contains demographic components of ownership involvement in management and governance, which gives them the power to influence decisions.

Likewise, the family involvement in the current study considers 'family essence', which is willingness to pursue the vision of the incumbent family (Chua *et al.*, 1999; Litz, 1995). In this study, in addition to self-identification, family involvement in the firm has been captured using five dimensions. The dimensions comprise of percentage of ownership, number of family managers, if the family has a majority on the board, the number of generations involved in managing the business, and intentions for intra-firm succession. Further, the study assumes that when a family is highly involved in the ownership, management and governance of a firm, then this will increase their motivation to influence business choices. That in turn will enable them to pursue their vision, which will have implications for the firm's performance, involvement in industry clusters, and regional development. To satisfy

the requirements of firm level entrepreneurship behaviour to generate wealth for individuals, organisations and societies, a combination of these three theories has been used to develop the conceptual framework of this study. This can be seen below.

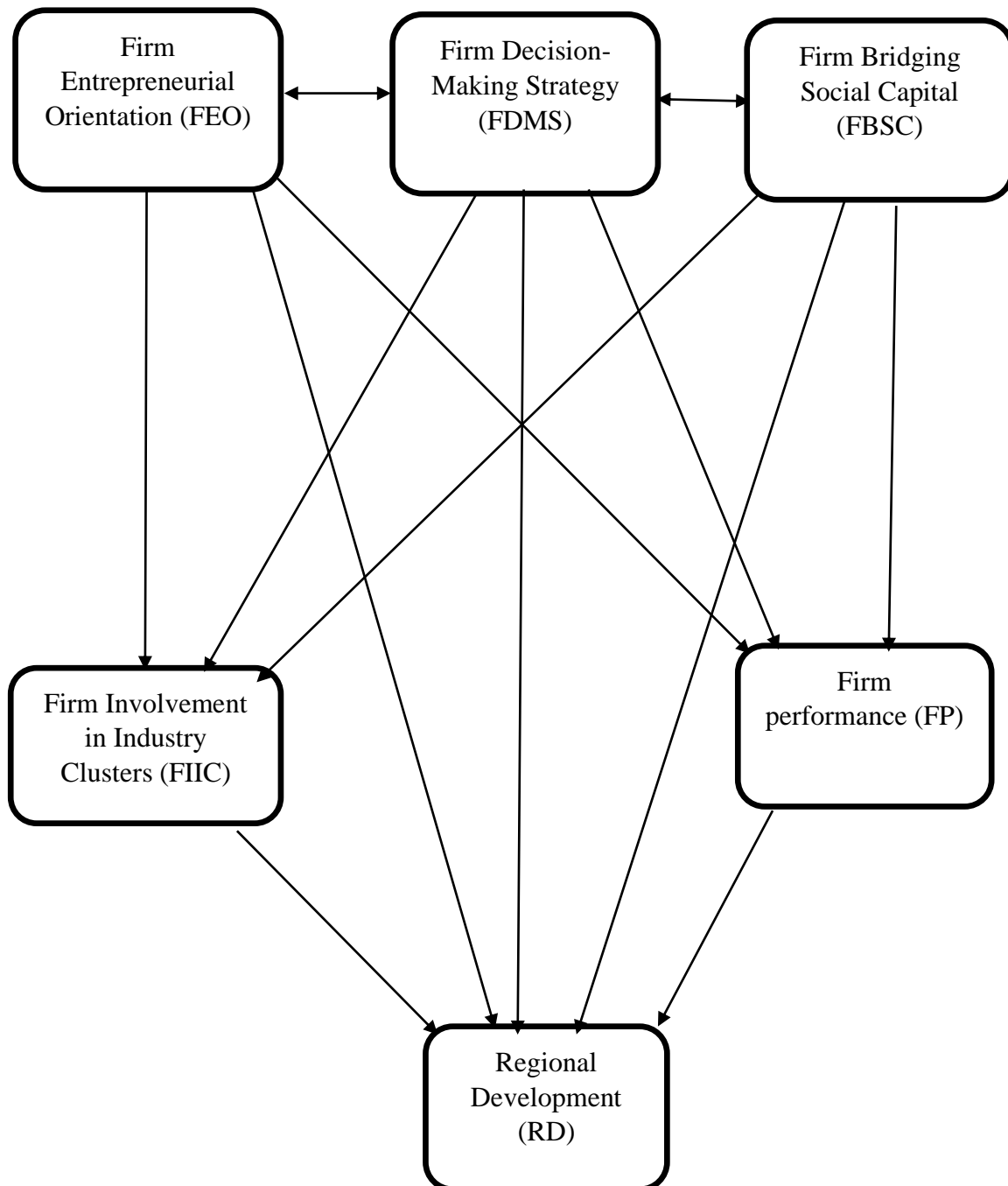


Figure 3. 1: The conceptual model developed to study the effect of strategic behaviours of family (nonfamily) firm impact on regional development

Source: Author

3.7: Hypothesis Development

3.7.1: The Effects of FEO on Regional Development

Studies applying the EO construct have established that in FBs, EO differs from that of NFFs. As earlier stated, the firm EO is linked to individual CEO's personality traits, characteristics (Kellermanns *et al.*, 2008) and perceptions (Cruz and Nordqvist, 2012), or that of top management teams (Ucbasaran *et al.*, 2003). Based on the review of EO theory, this study has adopted the views of Covin, Green, and Slevin (2006), who perceived EO as a strategic construct that "includes certain firm level outcomes and managerial preferences, beliefs, and firms' behaviours, as expressed by top level managers" (p. 57). Further, in order to capture how TLMs influence firm level entrepreneurial orientations, the study has incorporated the perspectives that in EO are referred to as a firm's strategic orientation. This is to capture specific entrepreneurial aspects of decision-making styles, methods, and practices (Wiklund and Shepherd, 2005, p 74).

Therefore, this study proposes that the TLMs will influence the adoption of FEO, which influences the strategic behaviours of the firm. These strategic behaviours will differ between FBs and NFBs, due to the presence of a controlling family stakeholder. Although studies that draw on EO theory have made progress in understanding the effect of the family on firm entrepreneurship orientation and performance (Wiklund and Shephard, 2005), there is still more that is unknown. This especially relates to how family firms condition their EO (i.e. the ability to innovate, take risks, be proactive, compete in the marketplace and independently execute their mandate, or the strategic alliances the firm develops with external entities). Therefore, the following hypotheses have been developed to evaluate the relationships between firm entrepreneurial orientation, firm involvement in industrial clusters, firm performance and regional development.

H1: In non-family firms, entrepreneurial orientation has a stronger positive influence on firm performance compared to family firms.

H2: Family firms have a stronger positive relationship between EO and firm involvement in industrial cluster compared to non-family firms.

H3: Family firms have a stronger positive relationship between EO and regional development compared to non-family firms.

3. 7.2: The Effects of FDMS and Regional Development

In family businesses, the participation of the family in the firm generates a level of trust, common beliefs, and similar culture amongst top-level managers or family members who make strategic decisions. A dominant family or family coalition has the power, experience and culture to influence the firm's behaviours and strategic decisions (Astrachan *et al.*, 2002; Basco, 2014). Additionally, family managers can encourage participation in making decisions, drawing on familial ties that influence the firm's allocation or acquisition of resources (such as assets, knowledge, skills, processes, routines, capabilities) (Habbershon *et al.*, 2003; Kellermanns and Edelston, 2007).

Consequently, family actors can influence specific regional factors and processes by altering the firm's resource bases (Basco, 2015). Therefore, the involvement of dominant or controlling families in the ownership, management and governance of a firm will determine who participates in the strategic decision-making (Basco, 2014). This will have either a 'distinctive' or 'constrictive' effect on firm performance and behaviour (Habbershon *et al.*, 2003). However, there is still much unknown as regards how family firms condition their stock capital (human, social, survivability, patient, and governance capital), as identified by Sirmon and Hitt (2003), to influence exogenous dimensions. Due to the family position and ability to influence business decisions, Basco (2015) proposed a model built on the embeddedness of family firms in regional economies. This is referred to as 'regional familiness'; a construct that explains how family businesses can influence regional economic and development outcomes.

For a firm to develop its competitiveness, firm managers should be willing and able to modify and reconfigure the resources to remain competitive in the long run. Therefore, based on the participation of TLMs in strategic decision-making processes the study explores the difference that emerge when the firm managers encourage other members to participating in strategy decision process. Therefore, the following hypotheses have been proposed:

H4: In family firms, participation in strategic decision-making within the firm has a stronger positive effect on firm performance, as opposed to non-family firms.

H5: In family firms, participation in strategic decision-making within the firm has a stronger positive effect on firm involvement in industrial clusters, as compared to non-family firms.

H6: In family firms, participation in strategic decision-making within the firm will have a stronger positive effect on the firm's influence on RD, as opposed to non-family firms.

3.7.3: The Effects of FBSC and Regional Development

The study investigated the effect of bridging social capital in family firms on the regional development. The various studies have been consulted for the development of these hypotheses. For example, from a conceptual perspective Coleman (1988), advanced the arguments that social capital can develop human capital. Nahapiet and Goshal (1998) noted that the development of social capital had a positive effect on the firm's performance. Empirically, several studies established a link between managerial social capital and firm performance. Peng and Luo (2000) reported a positive effect of social capital on firm performance, though this differed in relation to size, industry and rate of growth. Rowley *et al.* (2000) found the effect of social capital differed by industrial context.

Both family and nonfamily firms' top-level managers have the ability of developing relationships and social networks that can positively unlock network resources (financial, human and social). Several studies have established that social capital development by the managers or organisations is positively linked with value creation and firm performance. Further, the theory is used to support the effects of entrepreneurial orientation on new venture creation (Stam, 2008) and firm resources and capabilities and firm performance (Pearson *et al.*, 2008). Therefore, given the importance of social capital in determining the entrepreneurial orientation and performance outcomes, we argue that the interaction effects will have positive impact on firm performance, firm involvement with external stakeholders (Gedajlovic *et al.*, 2013) and regional development (Basco, 2014). Further, since family firms develop and deploy social capital differently compared to NFFs, it is possible for them to have a stronger impact on regional development outcome, as they seem to have strengthened stakeholder engagements (Cennamo *et al.*, 2012). Therefore, the following hypotheses have been established to test the relationship between bridging social capital, firm performance and regional development.

H7: In family firms, bridging social capital will have a stronger positive effect on firm performance, as compared with non-family firms.

H8: In family firms, bridging social capital will have a stronger positive effect on firm involvement in industrial clusters, as compared with non-family firms.

H9: In family firms, bridging social capital will have a stronger positive effect on the firm's impact on regional development, as compared with non-family firms.

3.7.4: The Mediating Role of FIIC on the Relationship between Firm Strategic Behaviours and RD

Alfred Marshal, who is credited with being the pioneer of industrial cluster related theory between the 19th and 20th century, viewed industrial clusters as “the many in one and one in many” (Niu, 2009, P. 450). This refers to the situation in which several organisations are located within a cluster as a result of one of them being specialised in an economic activity (Porta 1998). Family firms might be embedded within clustered environments that lead to the creation of a series of inter-connected economic operations and social dependencies among themselves and other firms, based on their goals, relationships, resources and capabilities. Industry clusters are important aspects of regional development as they either mediate or moderate the relationship between entrepreneurship and regional development. In view of the impact that clustered firms have on the industrial clusters, this study proposes that TLMs will make strategic choices that will influence firm involvement in the industrial clusters. Therefore, the research will explore the effect of FIICs on the relationship between strategic behaviours and regional development. Following this line of thought, the study proposes the following hypothesis:

H10: Firm involvement in industry clusters mediates the effect of the relationship between firm strategic behaviours and regional development in both family and non-family firms.

3.7.5: The Mediating effects of Firm Performance on the Relationship between Firm Strategic Behaviours and RD

Similarly, the study aims to investigate how the performance of the firm impact the relationship between strategic behaviours and regional development. Prior studies have shown inconclusive findings on the effect of family firms and non-family firms' performance on regional development (Anderson and Reeb, 2003; Villalonga and Amit, 2006; Maury, 2006). In this regard, the study by Dyer (2009) revealed that the contradictory findings are because of failure to clearly describe the 'family effect' investigated in relation to organisational firm performance. Sciascia and Mazzola (2008) study established a negative quadratic association between family involvement in management and performance, but no relationship was found between family involvement in ownership and performance. This

suggests that the family may only have positive effects when actively being involved in the management of the firm. Moreover, where they are involved in the strategic decision-making process (willingness), rather than just having a passive ownership of the firm (ability). Similarly, Revilla *et al* (2016) found evidence to support their hypothesis that it is FIM rather than FIO that makes the difference in preventing firm failure during an economic downturn.

Instead of focusing on the objective internal performance of the firm, this study focused on a comparison of family firms to rivals in the industry, as this was a stronger motivation that influences managers' choices, and hence an important measure (Anderson and Eshima, 2013). Further, the use of subjective firm performance measure "facilitates comparisons across industries, market contexts and economic conditions" (Andersson and Eshima, 2013, p. 420). Thus, these "contextual differences can confound objective performance indicators" (Anderson and Eshima, 2013, p. 420). As the study was more concerned with the mediating effect of firm performance on the relationship between strategic behaviours and regional development, this was deemed an appropriate measure of firm performance. Based on the potential effect of firm performance has on the relationship between strategic behaviours and regional development, the following hypothesis was proposed:

H11: Firm performance mediates the effect of the firm Strategic behaviours influence on regional development in both family and nonfamily firms.

3.7.6: The Role of Family Involvement in the Firm on the Relationship between Firm Strategic Behaviours and RD

The main contention as to whether family businesses contribute more to regional development than non-family firms is based on their firm behavioural differences. Some studies have concluded that there is no significant difference between family and non-family firms' contributions to RD, as both tend to have strengths and weaknesses (bright and dark side) (Block and Spiegel, 2013; Memili *et al.*, 2015). These limitations of these studies were their inability to capture the underlying structures and mechanisms of family business embeddedness in regional environment, and the impact of such embeddedness on the regional development compared to non-family firms. However, some studies have conceptualised how family businesses' unique characteristics (such decision-making, family essence) in combination with the contextual characteristics (such as relational/spatial, institutional,

organisational, social and cognitive proximity) affects a firm's contribution to regional development (e.g. Basco, 2015; Stough *et al.*, 2015).

In order to advance the understanding of the relationship between family firms' embeddedness and regional development, researchers should investigate the dynamics of family ownership, rather than just the presence of family firms within the region. Basco posits that "it is not the presence of family businesses themselves that makes them dress as Dr Jekyll (bright side) or Mr Hyde (dark side), but their collective aggregate actions as regional actors" (2015, p.1). That is, in order to understand the role that family firms play in regional economic and social development, studies are required to investigate the influence of family firms' unique attributes and aggregate behaviours not only altering the firm's stock of capital, but also regional factors and processes within the regional environment (Stough *et al.* 2015). Therefore, the embeddedness of family firms within regional structures alters regional productivity, regional factors and regional processes. This will impact on the regional economy. In line with these arguments, the following hypotheses is proposed

H12: The level of family involvement effects the firm level strategic behaviours influence on regional development, such that there is a significant difference between firms with higher levels of family involvement (FHFI) and firms with a lower level of family influence (FLFI).

3.8: Summary of the Chapter

The primary aim of the study was to investigate the role of family (and non-family) firms on regional development. Despite several studies focusing on understanding the behavioural and performance differences between FFs and NFFs, there has been a dearth of studies examining their effects on regional economic and social development. More recently, there has been an increase in calls for studies designed to understand the regional level effects of family firms, as compared to NFFs (e.g. Basco, 2015, Memili *et al.*, 2015; Stough *et al.*, 2015). Following the identification of the research gap in chapter two, this chapter focused on a systematic review of the extant literature on family business strategic behaviours and entrepreneurship to establish the main management and organisational theories. To advance an understanding of the effects of family and non-family firms on regional development, the study proposed a multidimensional model. Thus, the study draws on entrepreneurial orientation, the resource-based view and social capital to develop a conceptual framework and suggest hypotheses for testing. The next chapter presents the research context of the study.

CHAPTER 4: EMPIRICAL RESEARCH CONTEXT

4.0: Introduction

The following chapter sets out the research context for this empirical study. In every research project, the context plays a critical part in the research design, and analysis of the findings. In addition, the context helps to unpack some of the theoretical and empirical phenomenon under investigation. Further, it adds value in understanding the possible contribution to knowledge and implications of the study. In this regard, the empirical context is that of developing economies, with a specific focus on Sub-Saharan Africa. Further, it presents a brief overview of the Kenyan economic landscape, with a background on family firms. Finally, the chapter provides some of the rationale for the researcher to undertake this study on family businesses and their contribution to regional development in the developing economic context that is Kenya.

4.1: An Overview of Developing Economies with a Focus on Africa

Entrepreneurship is a critical component in the stimulation of growth and the reduction of poverty in most developing economies. Policy makers and researchers have both suggested that entrepreneurship is a key driver of economic development, through fostering business growth, job opportunities, wealth creation, technology adoption and innovations (Doran, MaCarthy and O'Connor, 2018). While it is evident that the question as to whether or not entrepreneurship has an impact on economic development seems to be well answered in developed economies, the same cannot be said about emerging and developing economies (Adusei, 2016, p. 202). There is empirical evidence that entrepreneurship has an impact on economic growth in industrialised and transitional economies, such as OECD Countries (Carree and Thurik, 2008), Russia (Berkowitz and Dejong, 2005), USA (Acs and Armington, 2004), Germany (Audretsch and Keilbach, 2004). However, there is conflicting empirical evidence on the role of entrepreneurship when comparing developed and developing economies.

Some scholars have established a positive relationship between entrepreneurship and real GDP (Hartog, *et al.*, 2010; Van Stel *et al.*, 2005). However, others have found a negative association between entrepreneurship and real GDP per capita in developing economies

(Doran *et al.*, 2018). However, empirical evidence has emerged from a study covering 12 African countries showing a strong positive relationship between entrepreneurship and economic growth (Adusei, 2016). Further evidence from Nigeria has also indicated that entrepreneurship was a key driver for economic growth (Farayibi, 2015).

Based on this evidence, any researcher might reasonably ask what has caused the studies from developing economies to report mixed findings in relation to entrepreneurship, real GDP and economic growth. The continued lack of studies focused on emerging and developing economies generates motivation for new research to investigate the contextual influences of entrepreneurship on economic development. After evaluating prior studies that sought to answer the question as to whether or not “entrepreneurship stimulated economic development”, Adusei proposed that this question had been answered in the context of developed economies, but not in developing economies such as Africa. Therefore, this study has focused on the African context to answer the emerging questions; (1) does firm level entrepreneurship influence regional development in emerging and developing countries? (2) How and to what extent do firm level strategic behaviours (i.e. FEO, FDMS, and FBSC) effect a firm’s contribution to regional development comparing FFs and NFFs?

Generally, Africa consist of a mixture of emerging, transitional, developing and least developed countries (LDCs). According to United Nations (UN), sub-Saharan Africa (SSA) consist of about 34 countries which are categorised as LDCs, accounting for 70 per cent of the world’s LDCs. SSA economies have continued to have robust growth, with an average of 5.4 per cent (excluding South Africa, the region’s largest economy) (Burns, and Rensburg, 2013). According to a report by the World Bank, SSA had 14 countries in the top 18 fastest growing economies in 2012 (See figure 4.1). In most of these SSA countries, entrepreneurship is mainly driven by opportunity recognition in the marketplace.

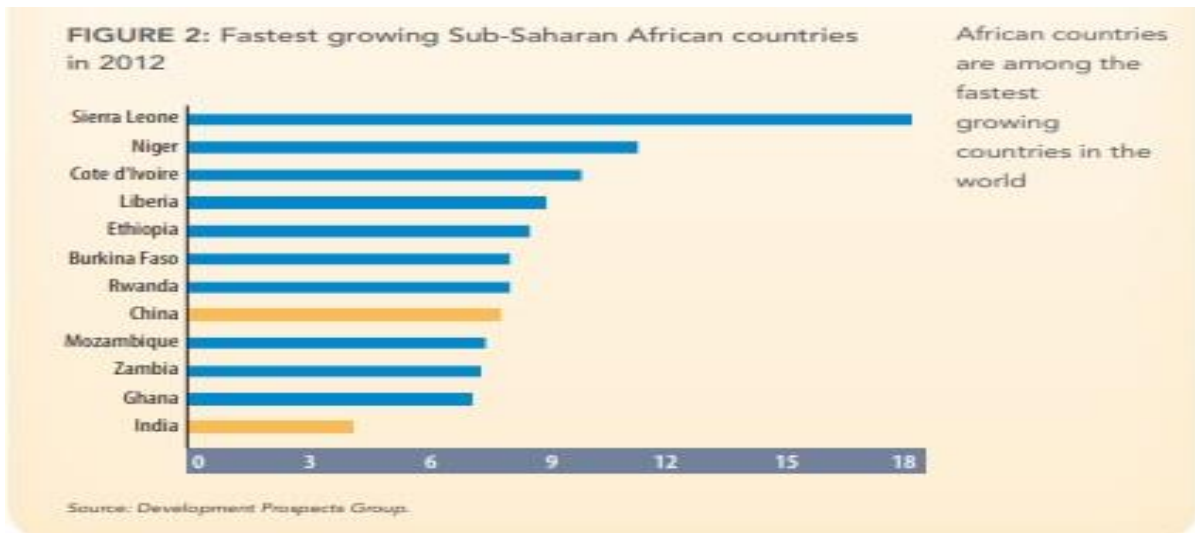


Figure 4. 1: Fastest Growing Economies in SSA (2012)

Source: World Bank (2013, p.3)

In comparison to the rest of Africa, Kenya has experienced tremendous growth, with GDP continuing to increase at an average of 5% per year (Euler Hemes). Figure 4.2 below shows volatile GDP growth between the years 2000-2012, but a more consistent growth from 2012 to date, overtaking the rest of Africa’s average GDP growth. It is expected that Kenya’s economic growth will continue, as regional integration within the East African market and the rest of Africa deepens. In addition, Kenya’s exports will continue to increase, as trade with the neighbouring countries Uganda and Tanzania increasing more than 23% s.

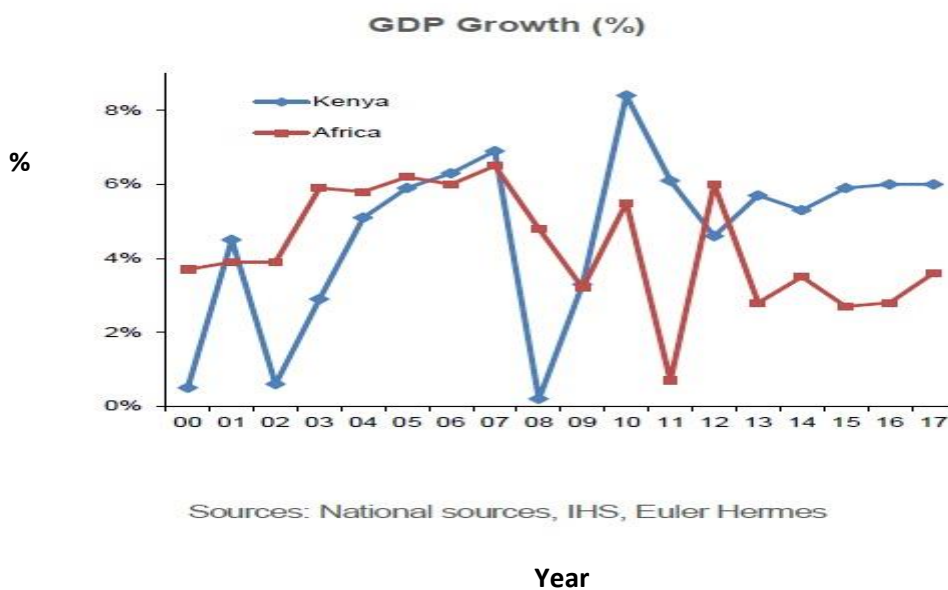


Figure 4. 2: Kenya’s GDP Growth (%) compared to Africa (Average) 2000-2017.

4.2: An Overview of the Kenyan Economic Environment

The Kenyan economy is one of the most advanced in East Africa and is ranked among the top 10 fastest growing countries in SSA. Kenya's GDP growth is expected to average about 5%, with an expected growth of 6.1% in 2016-2017. That would make it the 5th-fastest growing economy in the top 10 SSA countries, outperforming major African peers such as Ghana, Nigeria, South Africa and Angola (Africa Development Bank, 2018). Kenya's economic performance has been underpinned by sectors such as agriculture, construction industry, financial services real estate, storage, and transport. Agriculture is Kenya's largest economic growth sector, contributing about 30% to the country's GDP (Deloitte, 2016).

In 2014, Kenya joined the top ten African economies, after a rebase of its GDP, leading to an additional 25% increase (KNBS, 2017). In addition, Kenya unveiled the Vision 2030 development blueprint plan in 2007, intended to make Kenya "a globally competitive and prosperous country, with a high quality of life by 2030" (Vision 2030, p. vii). The strategic plan included both short-term and long-term development goals that sought to achieve a "rapidly industrialising middle-income country by the year 2030". The emphasis was on three key 'pillars'; namely political, economic and social. The three 'pillars' represent the main benchmarks for transforming the whole economy.

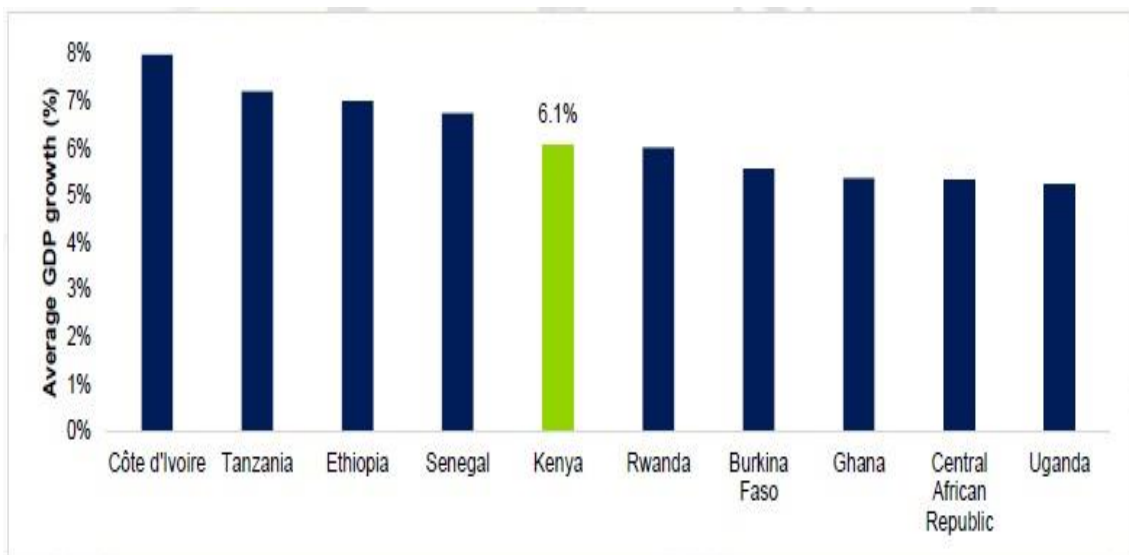


Figure 4. 3: Average Real GDP growth of SSA's ten fastest-growing economies (%) 2016f-2017f. (f represents the fiscal year).

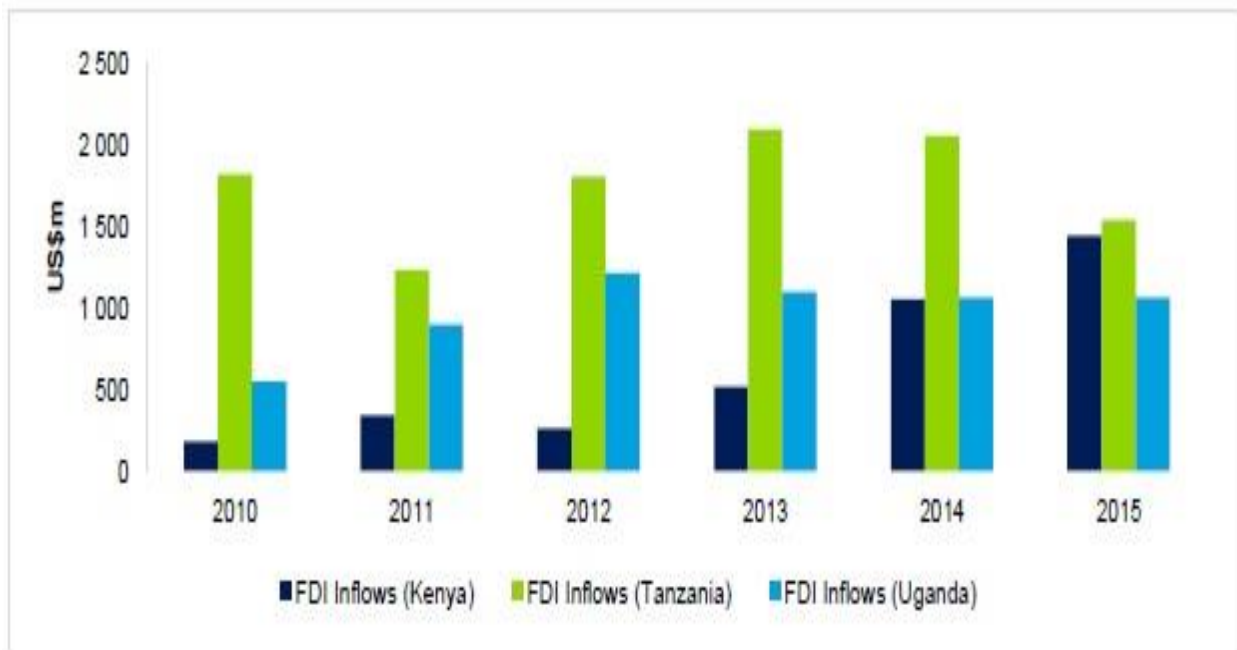
Source: Deloitte (2016)

The ‘economic pillar’ is focused on improving ten major industries, including agriculture, financial services, manufacturing, business process outsourcing (BPO), wholesale and retail trades, and tourism. The social ‘pillar’ seeks to invest in people, with an emphasis on education and training, water and sanitation, health, housing and urbanisation and the environment. It also plans to invest in gender youth groups, sports and culture and marginalised communities (including people with disabilities). Finally, the ‘political pillar’ is focused on transforming the country’s political governance systems, including key areas such as the rule of law, democracy and public service delivery, transparency, accountability, electoral and political processes, peace building and conflict management. Furthermore, Kenya has witnessed ground-breaking major flagship projects within the Vision 2030 mandate, with a focus on infrastructure development, such as the Standard Gauge Railway (SGR), Mombasa Port Development Project, and the Geothermal Development Project, amongst others.

Kenya is classified as a lower middle-income country with an expanding middle class, currently estimated to be about 44.9% of the population (Deloitte, 2016). This is expected to grow at an annual rate of about 5%, giving rise to increased consumption in the retail and housing sectors, the automobile industry, banking and mobile services, as well as domestic tourism. According to the recent World Bank report on ‘Ease of Doing Business’, Kenya was ranked 6 out of 109 countries, indicating an improvement of about 19 places (Schwab, and Sala-i-Martin, 2018). The improvement as regards the ease of doing business is credited to the government’s efforts to improve transparency and reduce the processes of registering a business by enacting several Acts in 2014. These included making changes to the Company Act, Insolvency act, and the Special Economic Zones (SEZ) Act, amongst others (Deloitte, 2016).

As a result of a strategic location that opens economic links with the rest of the world, economic growth, market size and ongoing changes to improve the business environment, and its status as the regional financial centre, Kenya has attracted several multinational organisations. Examples include IBM, Google, KFC, Liberty, Radisson Hotels, Volkswagen and they are expanding in local and regional markets. The increased foreign investment interest in Kenya saw a rise in FDI since 2010, although Kenya has lagged her regional neighbours. Some of the top investor countries in Kenya include China, Belgium, India, Israel, Japan, , , Mauritius, Netherlands, South Africa, UK and and USA. The investors have

targeted mainly the hydrocarbon explorations, the auto industry, infrastructure, logistics, ICT and agricultural sectors (Deloitte, 2016).



Source: UNCTAD, 2016

Figure 4. 4: FDI In-flows to Kenya, Tanzania and Uganda in US \$m (2010-2015)

As per figure 4.4 above, the FDI in-flows to Kenya were least in 2010, whereas, they had increased significantly by 2015. Likewise, FDI inflows for Tanzania were initially increasing, but had decreased by 2015. The FDI inflow in Uganda also increased initially, and then levelled off up to 2015 (Deloitte, 2016).

4.3: An Overview of the Role of Industrial Clusters in Developing Economies (Kenya)

Although, there is limited published research and data on industrial clusters in Africa (MaComick, 1998) the clustering of business activities in the economy opens opportunities for economic and efficiency gains that individual enterprises can achieve (Rosenfeld, 2002; Rocha, 2004; Memili *et al.*, 2015). The idea of industrial clusters is designed to capture the aggregate firm contributions and gains in the economy (Wennberg and Lindqvist, 2008; Basco, 2015). However, in some economies such advantages do not really arise due to clustering of firms. Industrial clusters are vehicles that influence economic growth in the regions that are in a developing phase (Rocha, 2004). While geographical industry clusters

have been part of the Western world, their influence and sophistication has changed over the last decades. Western economies have seen a shift in their production chains as global supply chains have become more fragmented and geographically dispersed, moving to emerging and developing economies. Therefore, emerging and developing economies are benefiting from industrial clusters because of cheap labour, availability of raw materials and specialisation of producers (McComick, 1998; 1999).

Prior studies investigating the origin, development and collective efficiency of clusters in Africa argue that they enable businesses to overcome inefficiencies and challenges (McComick, 1998; 1999; Zeng, 2008). MacCommick suggested that only two out of the eight clusters in Kenya had the internal structures and wider market access that generally go with the successful industrial districts (p.1). Generally, Firms in developing countries like Kenya, as reported by Gereffi and Lee (2016), found the location of their economic activities and actions concentrated in specific geographical locations or industry sectors. Similarly, Dannenberg and Nduru (2015) suggested that the clustering of economic activities plays an important role in facilitating trade in sectors of the economy in Kenya. For example, an increase in the number of suppliers as a result of industrial clusters might provide raw materials for the horticultural sector. Furthermore, a few the clusters emerged in remote business sectors in Kenya, including a soapstone cluster in Kisii, a textile cluster in Kitengela, and a honey cluster in Kitui (Mageto, 2012). In addition, the extent of activities in industry clusters in developing economies depends on their social integration and economic contribution to the economy (Oyelaran-Oyeyinka, & McCormick, 2007). The following are some of the key facts on industrial sectors and clusters in the Kenyan economy.

4.3.1: While industrialisation, agriculture and commerce are the pillars of wealth creation in many countries across the globe, these sectors in Kenya have lagged behind due to the relatively high cost of doing business there. This is as a result of poor infrastructure, limited access to funding, poor institutional frameworks, limited research and innovations, and in adequate managerial, technical and entrepreneurial skills to support the growth of these sectors (Ministry of Industrialisation, 2010, p. 1).

4.3.2: The agricultural, manufacturing, trade, tourism, transport and communication, and financial services sectors account for over 80% of Kenya's private contribution to total GDP (Africa Development Bank, 2013, P. 5).

4.3.3: According to the Kenya Economic Development Report (2010), the main industrial towns include Nairobi, which accounts for 48.8% of all employees, followed by Mombasa (6.1%), Nakuru (6.0%), Thika (4.7%), Machakos (3.7%) and Kiambu (3.5%). The rest of the businesses are centred in other, smaller towns.

4.3.4: Initially, the emergence and development of industrial clusters was spontaneous (Oyelaran-Oyeyinka, & McCormick, 2007). This was then followed by strong and conscious policy development by the government. In recent times, Kenya's government has spearheaded the 'Industrial Cluster Policy' in line with vision 2030. This has a focus on growing emerging clusters, based on performance, the spatial concentration of economic activities, networked data and parallel government policies (Mageto, 2012)

4.3.5: In Kenya, micro, small, and medium enterprises (MSMEs) covers most of businesses operating in the industry sectors. Although most of the micro enterprises operate in the informal sector, the MSMEs account for most of the new job and wealth creation (KNBS, 2016).

4.3.6: According to the KIPPRA Report (2017, p 14), the manufacturing sector is mainly composed of MSMEs (95%), contributing only 20% of manufacturing GDP, whilst medium to large firms (less than 5% of firms) contribute 60% to GDP.

Prior studies have focused on whether African industrial clusters have similar characteristics as those from Western countries as well as if they are able to respond to opportunities and shock from the environment (McComick, 1998; 1999), clustering of small firms in LDCs (Nadvi and Schmitz, 1994), innovation systems within industrial clusters (Oyelaran-Oyeyinka and McCormick, 2007), and the growth of knowledge and technological clusters (Zeng, 2008). However, there is a dearth of studies investigating the FBs involvement within African industry clusters in comparison to NFBs. Similar studies around the world (e.g. Berghoff, 2006; Cuccunelli and Storai, 2015; Stough et al., 2015) established that family firms exude different behaviours and strategies that influence their enagement within industrial clusters. Therefore, to extend theoretical conceptualisation of the mediating effects of industrial clusters between entrepreneurship and regional development, this study investigates the mediating effects of firm involvement within clusters on the strategic behaviours and regional development, with a focus on FFs and NFFs in Kenya. The next context evaluates some of the constraints facing buinesses that might enhance or restrict their clustering or benefits from collective efficiency.

4.4: Constraints Facing Business Growth in Developing Economies, with a Specific Focus on Kenya

Oyelaran-Oyeyinka (2017) offered different typologies for exploring constraints affecting new, small, and innovative businesses in Kenya, Nigeria, Uganda and Zimbabwe. Focused on Kenya, the author now discusses the threat posed by large organisations and their culture to SMEs. Large organisations (some of which are parastatals) seem to enjoy a monopoly, which can threaten small business operations and independence of customers. Furthermore, the socio-cultural diversity and depth witnessed in some of the countries has an impact on entrepreneurship and businesses operations. In fact, some of the restrictions that emerge because of the deep-rooted cultures extend to economic, governance and political institutions in developing countries. The social effect of restrictions was referred to as the major constraint arising due to lack of innovative preparation and capacity. This was also supported by Oseh (2013), who concluded that lack of innovation and technological adaptation were the main hindrances for business growth in Kenya.

Gereffi, and Lee (2016) talked of the implications of expanding or reducing barriers and supporting businesses, and identified competition, changes in tax policies, lack of budget funds, problems associated with openness in investigations, administration and depreciation as important problematic factors for business owners in Kenya. In addition, Kenyan entrepreneurs face other major challenges, including complex tax structures, excessive competition, corruption and weak institutions (Murithi *et al.*, 2019).

There is also an obvious logical discrepancy between the high number of SMEs that recognise funding as the main requirement, and the banks that cause small business lending to remain low. The latter is due to a lack of low interest rate loans (Oyelaran-Oyeyinka, 2017). Many small entrepreneurs in Kenya start with a small amount of capital and manage to develop their business with only infrequent investments from external funders. The high level of competition, and the rapid development of the need for labour and other resources make it difficult to substantiate creativity and growth.

The development of small or large enterprises depends substantially on environmental conditions (Khanna *et al.*, 2016). Consequently, Skoneczna *et al.* (2018) found that many small businesses have discovered how to finance rapid development from their own funds and non-banking sources. The lack of access to credit, calls for the use of exceptionally

favourable odds, such as large capital injections from external investors which is a primacy of start-ups and small businesses in Western economies. Small-scale development would accelerate if external financing became more affordable in Kenya. High rates of interest and a desire to pay in excess of market premiums show that there is considerable demand for loans.

Additionally, the KNBS report confirmed that MSMEs face several challenges that affect their growth, ranging from unfavourable macro-economic environments, to administrative barriers and red tape, with the biggest obstacle being a lack of access to financial services (2016, p. 3). Another report, on the ‘development of micro, small enterprises for employment creation and poverty alleviation’ corroborated the findings of previous studies, as it identified major problems as access to information, labour laws, trade licences, and forward and backward linkages (Mamman *et al.*, 2015). In addition, Kithae, Gakure and Munyao (2012) identified the unavailability of businesses premises and accessible cheap loans, plus inconsistent legal and political systems as some of the challenges facing SMEs in Kenya.

Given the large proportion of MSMEs in the informal sector, and their significance, the Kenyan government, with private partnerships, has developed policy changes that would contribute to the development of business support systems (Oyelaran-Oyeyinka, & McCormick, 2007). It is worth noting that the Kenyan Government and private sectors, through industrial associations such as the Micro and Small Enterprise Authority (MSEA), have invested in building capacity to support MSMEs. This has enabled Kenya to be at the forefront, not only of attracting trade and investments, but also in an improvement to the 18th position in the ‘Ease of Doing Business Report’ by the World Bank (2018).

Since most of the firms in the private sector (including those operating in the informal economies) are centred on families (or households), there is a significant gap in understanding the impact of the contextual and institutional environment on their business growth (especially in the Kenyan economy). Therefore, it was imperative for this study to investigate the effects of strategic behaviours on a firm’s performance, and its mediating role in regional development. The next section reviews the role of family businesses in developing economies, particularly in Kenya.

4.5: A Justification for the focus on Family Businesses in Developing Economies

Ahmed and Uddin (2018) suggest that a family enterprise is the most common ownership pattern in most economies outside the Anglo-American sphere, and its impact on the regional

development is seen as critical. The absolute financial contribution of family businesses to GDP in Kenya was more than 59% (World Bank, 2013). Family businesses, by their nature, are pioneers, who involve themselves in business responsibilities, long-term key placement and corporate autonomy (Mwai et al., 2018). Khanna *et al.* (2016) argued that a significant improvement in the monetary sphere of a country means a complete transition of the entire economy from a traditional natural society to a developed mechanical and self-sufficient economy. Such a change, Skoneczna *et al.*, (2018) agree could be achieved if family businesses are developed through the organisation of human and capital assets. Indeed, Neshamba (2004) emphasised that to achieve meaningful economic development, small-scale businesses, the majority of which are family businesses, should be encouraged through the provision of capital and human resources.

Several studies have showed that the family business model is indeed one of the most popular in the world, including the USA (Shanker and Astrachan, 1996), the UK (Westhead and Cowling, 1998; Westhead and Howorth, 2007), and Nigeria (Osunde, 2017). Similarly, family firms are an integral part of the Kenyan economy (PricewaterHouse Coopers, 2014). Family businesses continue to perform well, but it is becoming increasingly difficult to maintain the higher level of performance. Starting with the early works on family firms and its improvement, scholars have often recognised that family businesses can impede economic progress if they depend on family and paternalism, which cultivates inefficiency (Kelly *et al.*, 2008). From a sample of Kenyan family enterprises, that study concluded that founder centrality has a negative effect on management team congruence and firm performance. Thus, it becomes clear that family firms should be an important research focus in relation to the development of the economy, especially in countries like Kenya.

There is no guarantee that specific family businesses are suitable for each type of activity needed for regional development. However, for businesses, industries, and many types of economic-related activities, family businesses in Kenya are unexpectedly better placed to contribute to economic development. This is because they combine different sociological and cultural qualities to overcome institutional voids (Murithi *et al.*, 2018). Empirical evidence from family firms in emerging economies has shown that top level managers (TLMs) are more likely to develop strong social capital with managers from other firms, communities, and political leaders, which increases their community involvement (Acquaah, 2012; Mani, and Durand, 2018). Therefore, family businesses in Kenya are centrally placed as regards current ownership and productivity status. Given that family firms are widespread, and also

correspond to greater diversity than non-family firms in terms of financial returns and contextual effects, this study has explored the impact of family firms on regional development for the following reasons:

4.5.1: Family businesses are the backbone of Kenyan economic and social development with prominent medium and large family-run businesses contributing substantially to GDP, employment opportunities and wealth creation. It is estimated that family businesses account for 60-80% of all employment in Kenya (National Baseline Survey, 1999; Waweru, 2014).

4.5.2: Family businesses are present in all sectors of the economy, with some of the renowned family businesses controlled by political families. For example, these have included President Kenyatta’s family - Brookside Dairy, Heritage Hotels, Commercial Bank of Africa and Media Max; former President Moi’s family - Kenya Time Network, Maritime, Signon Freight, Kabarak University; and former Prime Minister Odinga’s family – Spectra International, and East Africa Spectre. Others include Keroche Industries, Mulei Supermarkets, Comcraft Industries, and Bidco.

4.5.2: PWC report for private firms, 95% of Kenyan family firms that predicted growth were confident of achieving it, with 32 % aiming for aggressive growth over a five-year period, while another 56% expected steady growth (2014, p.6).

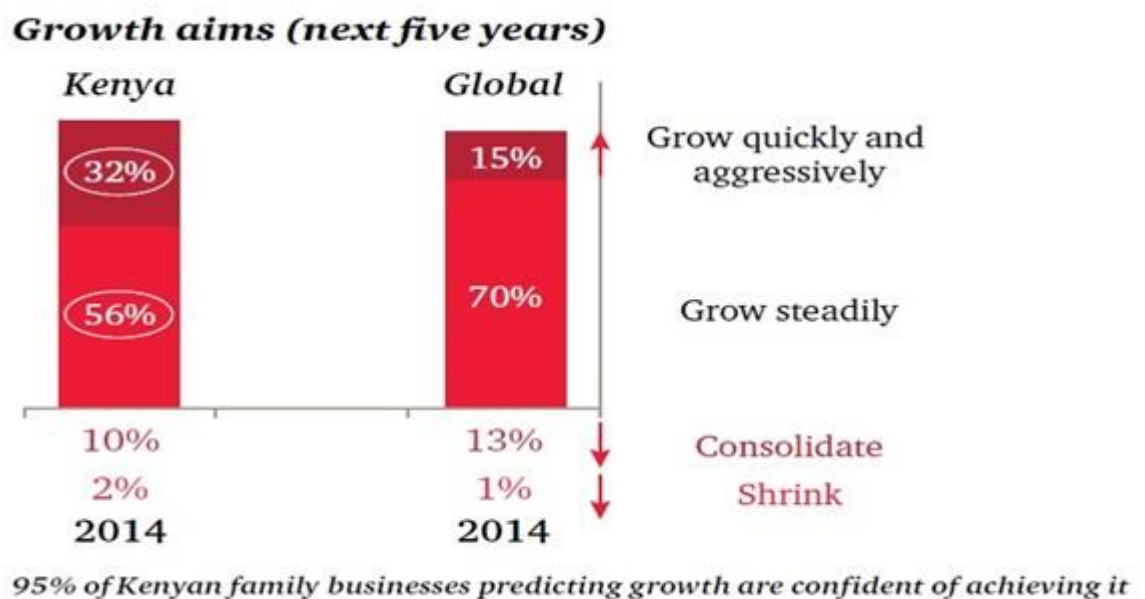


Figure 4. 5: The growth prospects of family firms in Kenya compared with global firms

Source: PricewaterHouse Cooper Report (2014).

4.5.3: Although 47% of family firms stated they wanted to pass management on to the next generation, only 23% reported that they had a succession plan (PwC, 2014). Indeed, one of the major challenges affecting family business globally, and particularly in Kenya, is succession. Some businesses (mostly of Asian origins) have transitioned to the third generation e.g. Sarit centre, Chandaria Industries, whilst others (mostly indigenous businesses) face conflicts among siblings. For instance, Tuskys, Kirima Family Estate, and Karume estates all have faced generational conflicts.

4.5.4: Contrary to family firms in Western economies, family businesses in Kenya (and SSA in general) are faced with unique ownership, management, governance and succession structures. These mirror the highly collectivist culture (Hofstede, 2001) and are expected to influence the firm growth, inter-cooperation or involvement in industrial clusters. This is because socio-cultural institutions have an impact on family firm logics (Murithi *et al.*, 2019).

4.5.5: Indeed, as opposed to Western countries, where the nuclear family is the majority owner, Kenyan family firms have members from the extended family, and communities that influence business behaviour and performance (Khavul *et al.*, 2009). Thus, family involvement is expected to influence their contribution to regional development.

4.6: A Rationale for Empirical Research in Developing Economies, especially Kenya

In this study, empirical research became an important aspect of the investigation into the effects of firm level behaviours on regional development. According to Schickinger *et al.*, (2018), empirical studies help to evaluate the research phenomenon. Such research allows for the statistical analysis of selected research phenomena. Empirical studies are abundant in the developed countries like the UK and the USA (Skoneczna *et al.*, 2018). However, limited empirical studies exist in developing countries, because of institutional and financial constraints. Similar studies conducted in the SSA countries have suggested difficulties in empirical data collection because of poor infrastructure (Acquaah, 2007; Bruton *et al.*, 2008; Farrington, 2009). Additionally, empirical research requires more resources than using secondary data. These include time and money, as researchers must collect data from different sources. This is because there are no available databases (Khayesi *et al.*, 2014; Venter, 2003). Such factors contribute to the view that the African continent is a “parochial dinosaur” (Boyacigiller and Adler, 1991) that presents a challenge to management and entrepreneurship researchers (Zoogah *et al.*, 2015). However, this researcher believes that

developing economies, like Kenya, presents a unique context. This can be explored by scholars in the fields of management, entrepreneurship, family business and regional development fields, and can test the relevance of existing theoretical and conceptual frameworks.

The rationale for the empirical enquiry of this study, with a focus on increasing knowledge on the role of family (and non-family) firms in regional development, is based on the notion that Kenya has attracted multinationals and Vision 2030. Kenya has become the regional headquarters for major multinationals such as Google, General Electric, IBM, Samsung, and Proctor & Gamble. In addition, Vision 2030 was fronted as a very ambitious development strategy, with a focus on improving the political, economic and social pillars. This is in line with the government transformation agenda to make Kenya a middle-income nation by 2030 (Mwenzwa, and Misati, 2014). Further Kenya has continued to be the leading economy in the East Africa region. However, despite all these developments, the country faces political instability, economic uncertainty and security risks that impede business growth. Although SMEs are engines of economic development in both developed and developing economies, there is limited empirical evidence on the impact of private enterprises (in family firms) on regional development.

As a developing economy, Kenya's political, economic, and culture differs from those of Western economies (Bruton *et al.*, 2008; Zoogah *et al.*, 2015; Vershinina, *et al.*, 2017). The weak political and institutional environments encourage informal economic activities, as opposed to Western economies with more formal participation (Khavul *et al.*, 2009; Murithi *et al.*, 2019). This also encourages the emergence of family businesses (governance), which enables enterprises to navigate the complex formal and informal domains (Waweru, 2014; Murithi *et al.*, 2019). Like other countries in SSA, Kenya has a unique socio-cultural landscape, deep rooted in traditions and cultural contexts, that influence wider management and entrepreneurial practices (Vershinina *et al.*, 2017; Amaeshi and Idemudia, 2015; Zoogah *et al.*, 2015; Zoogah and Nkomo, 2013). In particular, the 'harambee spirit', which is embedded in the national culture, enables or constrains entrepreneurial behaviours in Kenya (Vershinina *et al.*, 2017). Therefore, Kenya presents a unique context in which to explore the differences between FFs and NFFs' contributions to regional development.

The justification for the empirical study focusing on family (and non-family) firms in Kenya is based on:

4.6.1: Although management literature has recognised that sub-Saharan Africa, and Kenya, possesses unique political, economic and social attributes, there is little information available on how family firms navigate the complex institutional and cultural environment to contribute to regional environment (Murithi *et al.*, 2019). Therefore, there is a need to offer empirical evidence on the effects of strategic behaviours on firms and their contribution to regional development.

4.6.2: The nexus between political families, with the entrepreneurial and management systems of family firms in Kenya, provides an opportunity to determine the effects of a firm's entrepreneurial orientation, decision-making and social capital on regional development.

4.6.3: The positive growth prospects outlook of Kenyan family firms, as presented in the PwC (2014) report, as compared with family firms worldwide, provides an opportunity to explore their impact on regional development.

4.6.4: Although industrial clusters are considered key drivers of regional development, there is minimal understanding of how they moderate the relationship between firm activities (at the micro level) and regional outcomes (at the macro) in SSA and Kenya.

4.6.5: Despite the family form of organisation being prevalent in developing economies, such as Kenya, there is a dearth of studies investigating how the strategic behaviours of FBs differ from NFBs, and the extent to which they impact on regional development.

4.6.6: The disconnect between the societal, collectivist, and cultural backgrounds of most SSA countries breeds extended family ownership, and results of management conflicts in family firms is evident.

4.7: Chapter Summary

This chapter has provided an overview of the economic environment in developing economies, with a focus on Africa. Further, a review is provided based on the Kenyan context, with a brief overview of the impact of the clustering of firms. Furthermore, a brief justification for the emphasis on family businesses was provided. Finally, a rationale for the empirical study was provided, showcasing Kenya as a unique context, to gain new insight into the role of FFs and NNFs in regional development. The next chapter presents the research methodology adopted for the study.

CHAPTER 5: RESEARCH METHODOLOGY

5.0: Introduction.

This chapter sets out the methodological choices concerning the data collection and analysis processes used for this study. It begins by examining the ontological and epistemological interpretations in section 5.1. Further discussion on the consideration and implementation of philosophical perspective for the study follows in section 5.2. The research approach and research design, as well as justification for the choices made, are presented in section 5.3. The other contents of the chapter in sections 5.4, 5.5 and 5.6, reflects and explores on research methods, data collection, and data analysis techniques respectively. The data collection methods used in the study, and sampling techniques, are presented in sections 5.7 and 5.8. Finally, the justification for the web survey, and the ethical consideration for the study, are discussed in sections 5.9 and 5.10, followed by the chapter summary in sec 5.11. The next section outlines the philosophical foundations of this study.

5.1: Philosophical Underpinning of the Study

This section explores the ontological and epistemology considerations for this study. Generally, ontology is the study of being, and it refers to the reality of things (Crotty, 1998: 10). Thus, it is “concerned with the nature of reality” (Saunders *et al.*, 2012, p. 130). According to Saunders *et al.*, 2012, the two dominant approaches of ontology that influence researchers' assumptions within the social sciences field are ‘objectivism’ and ‘subjectivism’. Objectivism is concerned with the existence of things (social entities) – the “existence of a reality external to and independent of social actors”. Subjectivism, however, is concerned with “social actors' perceptions and consequent actions”. That is, it asserts that social phenomena are created from the perceptions and consequent actions of social actors’ (ibid, p. 132). Critically, if you think about it, the only way a living researcher can escape all subjectivism is to be dead. That is a bit of a hindrance to conducting any viable research. Detaching your own brain from itself is physically impossible, that is why true objectivism is an illusion or false assumption, and that in practice, there are only varying degrees of subjectivism (Polkinghorne, 2004). This gives rise to the ‘social constructionism’ approach which stipulates that, social interactions between actors (researchers or respondents) is on a continual state of revision. Therefore, the best way to conduct research is to study the factors of the situation or thing being investigated. In order to ‘understand what is happening or even

the reality occurring behind what is happening' (Ibid). Thus, the best that can be hoped for is for the researcher to aim for 'impartiality' when conducting research.

Every research philosophy is underpinned by its own ontological assumptions (Bryman, 2016). Generally, researchers tend to adopt either of the ontologies, but do so implicitly and in most cases are not able to articulate the assumptions they use (Blaikie, 2007). Therefore, most often the ontological assumptions are embedded in the theoretical ideas that are used to guide the research, and in the research strategies and methods that are adopted. Ideally, Blaikie presents six subcategories of ontologies developed to help understand the range of ontologies that influence researchers' philosophical underpinnings. These categories include shallow realist, conceptual realist, cautious realist, depth realist, idealist and subtle realist. For the purpose of clarity, the researcher's ontological approach leans towards what Blaikie refers to as "depth realist", which was first captured by (Bhaskar, 1978). The depth realist ontological position sees reality as consisting of three domains, concerning what can be observed to an underlying domain of causal structures and mechanisms. This is suggestive of the idea of ontological depth, and of a stratification of reality that is independent of our knowledge of it (Bhaskar, 1989: 63).

The aim of the depth realist ontology is to explain observable phenomena with reference to underlying structures and mechanisms causing it (Blaikie, 2007, p. 16). This is in line with recent calls by some family business researchers. For instance, Basco (2015) argued that studies should investigate the effects of family ownership on the firm's behaviours, and the consequences of this on regional development. In order to achieve this aim, "studies should go beyond the ontological view of family firms (Jansen and Basco, 2014), and should capture the essence and nature of family firms within the territory, and their relationships with regional dimensions that boost or hinder regional growth and development (Basco, 2015, p. 1). As previously mentioned, epistemology concerns the relationship between researchers and the 'things' of which they seek to have knowledge of. Therefore, investigators or observers tend to give meaning to these 'things' in one of three different ways, based on objectivism, subjectivism or constructionism ideologies (Bryman, 2016: Blaikie, 2007). Objectivist view 'things' as having intrinsic meaning. That is, objectivists tend to believe in 'facts' that can be assessed and established using measurement. They believe that, "if you can't measure it, it doesn't exist!" and that the role of the researcher is to discover the meaning that already exists in them. Therefore, if different observers looked at the same 'things' they should be able to discover the same meaning, the same truth about the 'things' under study (Blaikie,

2007). On the other hand, subjectivists argue that ‘things’ do not make contributions to their meaning, the observer imposes it. Therefore, as there is no interaction between the ‘thing’ and the observer, the ‘thing’ does not play any part as to the meaning the observer gives it. Thus, ‘things’ may be given different meanings based on the observer’s understanding (Bryman, 2016). However, that is clearly not correct, as even just recognising a table as a table gives it meaning. Thus, to some extent there is intrinsic meaning that ‘things’ have which could be reinterpreted based on the observer’s ascribing their own interpretations of the ‘thing’.

It is because of these assumptions that the constructionist rejects both views. Constructionists argue that in response to objectivism, meaning is not discovered in things, but rather it is constructed by the researcher. Further, in response to subjectivism, the process of creating knowledge is constrained by the very nature of ‘things’ themselves, as their meaning is based on the observer’s engagement with them, and what is already known (Blaikie, 2007; Crotty, 1998).

Generally, the ontological position informs the researchers’ epistemological assumptions during research. Blaikie (2007) argued that the relationship between ontology and epistemology is determined by the nature of the questions, and that the choice of one affects the choice of the other. Blaikie postulates six epistemological schools of thought namely, constructionism, conventionalism, empiricism, falsification, neo-realism, and rationalism. The epistemological assumption of this study based on the ‘depth realist’ ontological position is best associated to the epistemology of neo-realism. The neo-realists reject the empiricist’s model of explanation and advocate that explanations can be achieved by establishing regularities, or constant conjunctions, within phenomena or between events (Blaikie, 2007: 22). The neo-realism position indicates that establishing regularities is just the beginning of the process. What is required is for the study to locate the structures or mechanisms that have produced the pattern or relationships. In addition, Blaikie state that mechanisms are nothing more than the tendencies or power of ‘things’ to act in a particular way. The capacity of a ‘thing’ to exercise its powers, or likelihood that it will, would depend on whether or not the circumstances are favourable (2007, p. 22).

This study sought to establish the underlying strategic behaviours as reported by the top-level managers within the FBs (compared to NFFs) contributed to firm’s differentiated impact on regional development. The researcher believes that TLM’s strategic activities influence the

firm performance and involvement within industrial clusters and can influence regional development. Given the contradictory findings which prior studies showing that FBs outperform NFBs contributing more to regional development (Anderson and Reeb, 2003), while others reporting family involvement erodes the value of the firm negatively affecting their impact on RD (Villaronga and Amit, 2006), while others showing no significant differences, it was apparent for the researcher to not seek to establish causality but further query the underlying structures and mechanism that enhanced or constraints FBs impact to regional development. As this study links a micro phenomenon (firm-level strategic behaviours) to macro phenomena (regional development outcomes), the ontological position adopted allowed the researcher to investigate the structures and mechanisms which causally generates observable phenomena, and the description which enables to explain them (Blaikie, 2007). Further, this will allow the researcher to demonstrate the independence of an event and its associated structures or mechanisms. This study sought to go beyond just demonstrating causality (establishing regularities) by attempting to establish the nature and essence of the ‘thing’ being studied (i.e. family and non-family firms). Therefore, this enables the researcher to extend the field beyond the ontological differences between family and non-family firms. Also, to be able to use empirical data (the pattern model of explanation) to establish the mechanisms, or patterns, that have produced the relationships observed between the two types of firm ownership, and their impact on the regional economy in developing countries.

In order to conduct the research effectively, based on the depth realist ontology and neo-realism epistemological assumptions, the next section discusses the philosophical perspective for the study.

5.2: Philosophical Perspectives

Generally, despite the complexities involved in the choice of the research philosophy, it is important for social researchers to have some basic understanding and be able to explain the philosophy underlying the design and implementation of their study (Denscombe, 2010). According to Saunders *et al.* (2012), there are two major research philosophies that are used in both natural and social sciences, namely positivism and interpretivism. As expected, the two philosophies are said to be mutually exclusive and completely opposite to each other. However, due to their weaknesses and strengths in application to social research, several other philosophies emerged. Some of the additional philosophies include pragmatism, critical

realism, and post-positivism, amongst others (Blaikie, 2007; Creswell, 2014; Saunders, *et al.* 2012).

Before explaining the philosophical underpinning of this study, it is important to briefly provide an overview of the meanings, scope and applicability of these competing philosophical positions. Hence, the following section briefly presents the meanings, arguments and the strengths as well as shortcomings of these research philosophies.

5.2.1: Positivism

Proponents of the positivist philosophy advocate that “factual, real and trustworthy knowledge on research can only be gained through observation, the use of the senses and scientific measurements” (Saunders *et al.*, 2012). It is expected that researchers should be objective and detached from the subject of study, and without letting personal feelings or social values to influence the questions pursued, or the outcomes and analysis of the findings (Denscombe, 2010). However, as noted by Bryman (2016), it is near to impossible for a researcher in the social science to be impartial and objective, as the nature of research in this field is based on common and central themes such as ‘organisations’ and ‘culture’. Although positivists maintain that it is possible to remain objective despite the notable concerns raised, Philips and Burbules (2000) have argued that social researchers “cannot be positive about their claims of knowledge when studying the behaviour and actions of humans” (cited in Creswell, 2014: 7).

To resolve this pitfall of the positivist approach, another branch of philosophy, referred to as post-positivism emerged (Crotty, 1998). The next section explores this philosophy further.

5.2.2: Post-positivism

According to Creswell (2014), post-positivist holds a deterministic philosophy in which causes may determine the effects or outcomes (p. 7). This paradigm is also referred to as critical rationalism and adopts the position that the natural and social sciences differ in their content, but not in the logic behind their methods. Further, this philosophy asserts that apart from establishing the regularities and patterns (as found in positivism), there is a need to “identify and evaluate the causes that influence outcomes” (Blaikie, 2007, p. 113). Post-positivist still follows a reductionist approach to gathering knowledge (i.e. reducing ideas into small, discrete sets to test, such as the variables that comprises hypotheses and research

questions). However, they go beyond this to examine carefully and measure the objective reality that exists 'out there' in the world. Like the positivist philosophy, the post-positivist view holds that there are laws and theories that govern the world, and that these need to be tested, verified and refined so that we can understand the world (Creswell, 2014: 7). However, this may be considered an illusion, that is, when the researcher is doing the examining and measuring, they can never totally escape their own subjectivism.

Ontologically, the post-positivist philosophy is aligned with that of the positivist approach, which considers the nature of reality to exist objectively independent of the social actors. However, some differences between the two emerge regarding epistemological assumptions. These are concerned with the questions 'what constitutes knowledge?', 'what is knowledge?', 'what is the real source of knowledge?' and 'what are the limits to knowledge seeking?' Epistemologically, post-positivism differs from positivism in that "statements can be verified by observation before being accepted as meaningful" (Crotty, 1998: 30). Thus, post-positivists argue that the creation of scientific knowledge is not entirely isolated from human interaction (i.e. that scientific knowledge cannot be entirely isolated from the character of human knowledge).

Crotty also noted that "what is emerging in this line of thought is the picture of scientists actively constructing scientific knowledge rather than passively noting laws that are found in nature" (1998: 31). In addition, according to Creswell (2014), "the knowledge that develops through the post-positivist lens is based on careful observation and measurement of the objective reality that exists 'out there' in the world. Thus, developing numeric measures of observation and studying the behaviour of individuals becomes paramount for post-positivists" (p. 7). That paradigm was considered appropriate to answer the research questions identified in chapter 1 and 2, and so was adopted in this study.

5.2.3: Interpretivism

Social theorists and researchers advocating this approach typically use a qualitative methodology. Whereas positivists, and to some extent post-positivists, begin with a theory and collect data to test a derived hypothesis to support or refute the theory (Creswell, 2014), interpretivists rely on broadly constructed questions that enable them to inductively develop a theory or pattern of meaning. This approach enables them to immerse themselves in the world of their subjects to gain as much information as possible about the participant's views of the situation being studied. This is with the aim of interpreting their meanings. In contrast

to the positivist, who focus on the external explanations of human behaviours (Bryman, 2016) and steer away from getting involved with the respondents. Interpretivists acknowledge that their values play a role in their interpretations of social roles of human behaviours (Saunders *et al.*, 2012). Therefore, interpretivists believe that it is worthwhile attempting to explore the thoughts, feelings and emotions of respondents, and that these can have meaning, and may provide significant insight (Bryman, 2016; Creswell, 2014; Saunders *et al.*, 2012), as opposed to ‘the external forces that have no meaning for those involved in that social action’ (Bryman, 2016, p.16). However, they should still try and remain ‘impartial’ in their questioning.

5.2.4: Pragmatism

Although pragmatism has been commonly used by social researchers it has not particularly been applied as much as the other three philosophies have (positivism, post-positivism and interpretivism). This is because proponents of pragmatism are mainly not obsessed with the purity of their ontological or epistemological approach, but rather with solving the problem at hand (Bryman, 2007; Denscombe, 2012). Hence, they are consistently concerned with the practicality of the methods used to collect data and usefulness of the outcomes (Denscombe, 2012; Creswell, 2014).

Social researchers applying the pragmatism approach to their research need to be careful as it’s often misunderstood to mean ‘anything goes’ (Saunders *et al.*, 2012). That is, researchers applying the pragmatism approach can simply apply any research methods to evaluate the research problem. However, that is not the philosophical meaning of pragmatism. Therefore, the ontological assumptions of pragmatism assert that “social reality can be treated as being ‘out there’, and external to individuals; though at the same time, social reality can be regarded as ‘in the mind’ and something that is socially constructed” (Denscombe, 2012, p.129). Thus, pragmatist researchers will tend to adopt a stance based on the approach that is likely to prove more useful than the other, rather than taking a decision from the onset that guides their ideologies regarding research approaches and designs.

5.2.5: Philosophical choice for the study

After reviewing the major paradigms underpinning social research, the researcher’s philosophy in this study is more aligned to the post-positivist stance to inform the research

design and methods. As argued by Blaikie (2007), this philosophy makes no distinction between observational and theoretical statements. That is, all observations are theory-dependent, and occur within a 'horizon of expectations' (p. 116). The main idea that anchors the philosophy is that the logic of explanation is based on a critical approach, in which hypotheses are postulated and tested but not rejected as is the case with positivism. Hence, the primary aim of this study was to extend understanding of the causal relationships by exploring the underlying factors that influence the extent to which family firms impact regional development, as compared to non-family firms. The findings were interpreted in the context of the previous literature on entrepreneurship, family firm behaviours and regional context.

Following the ontological and epistemological positions of the researcher, it was essential to collect participants' perspectives because knowledge is considered tentative, it exists but has to be discovered. Hence, the study did not seek to establish causation by proving hypothesis, but by showing the existing of causal relationships between strategic behaviours within FBs, and regional dimensions such as firms' performance, involvement in industrial clusters and regional development outcomes. Further, the researcher's stance was guided by the research questions raised, and to collect empirical data to establish the relationships that existed between firm level strategic behaviours and regional level outcomes. There was a need to establish the underlying structures and mechanisms that enable the firms to behave differently and how they influenced the regional outcomes (Blaikie, 2007). Therefore, the focus was on the powers or tendencies that enable family firms to act in a certain way, and the factors that may moderate or mediate these tendencies, depending on the contextual factors and expected outcomes. So, the emphasis was more on understanding and providing an explanation, rather than simple prediction by establishing causal effects. The next section discusses the research approach and design for the study.

5.3: Research Approach

This refers to the 'logic of enquiry' that enables researchers to generate new knowledge about a phenomenon by asking a specific research question. These are styles of reasoning that portray the researcher's thinking regarding the combination of social research and theory for a study (Blaikie, 2007; Bryman, 2016; Saunders *et al.*, 2012). Generally, there are three major research approaches used in natural science, namely deductive, inductive, and reproductive, whilst abductive strategy is mainly used within the social sciences (Blaikie, 2007). These four

research approaches differ in various ways based on their ontological and epistemological assumptions, starting points, steps or logic, use of concepts and theories, styles of explanations and understanding, and their status of the end products (Blaikie, 2007, p. 56).

5.3.1 Justification for the Choice of the Research Approach for the Study

The choice of either deductive, inductive, reproductive or abductive approaches depends on the emphasis of the research, time and practicality (Saunders *et al.*, 2012). For instance, a topic which focuses on an area with a wealth of literature makes it easier to develop a hypothesis and define theoretical framework and lends itself to deductive approach. In most cases this can only be achieved when one has a true random sample, which is a pre-requisite. Whereas, a topic with much of the knowledge and literature concentrated in one context, but far less in another, lends itself to abductive approach. For instance, a set of observations such as in medical diagnosis where a doctor observes some symptoms in a patient may lead to possible causes and diagnosis based on their prior knowledge of symptoms and diseases. Therefore, it is essential for the researcher to be aware of the requirements and constraints that are associated with the choice of a research approach. Considering the research questions presented in chapter two (section 2.9), the preferred approach is deductive. The research logic is underpinned using theory to formulate hypotheses that were then subjected to statistical testing to confirm or reject them. So, based on the literature review in chapters two and three, the researcher was able to develop a theoretical framework and research hypotheses. Afterwards possible explanations based on the relationships were provided based on the existing literature. The next section presents the research design for the study.

5.3.2: Research Design

According to Denscombe (2012), research design is a “blueprint” or plan for research that specifies the steps taken from the beginning to the end. Bryman (2016) describes a research design as “a framework for the generation of evidence that is chosen to answer the research question (s) in which the investigator is interested” (p. 39). Therefore, it is the logic or layout of an enquiry that outlines the choices and priorities the researcher gives to a range of dimension of the research process. The research design outlines the framework that the researcher uses when evaluating social research to answer the study’s research questions. The design should take into consideration the quality of research, nature of research, the time frame applied, type of data required, proposed sources of data, the methods used for

analysing the findings, risk factors and ethical issues involved in the research (Bryman, 2016; Denscombe, 2012; Saunders *et al.*, 2012). However, for purposes of clarity, research design should not be confused with research strategies. Yin (1989, p. 9) clarified that the research design pertains to choices that deal with logical problems (more methodological and systematic), but not logistical problems. The latter would consider material, human and possibly financial problems facing the researcher in carrying out the research. In this study, the researcher has considered a range of choices and possibilities to determine the research design, as summarised in table 5.1 below.

Table 5. 1: Factors and alternatives considered under research design

Factors considered	Alternative possibilities for considerations
Criteria for quality evaluation	Reliability, Validity, Replicability
Time frame	Cross-sectional (snapshot) e.g. survey Longitudinal (e.g. panel study, cohort study)
Nature of research (Theory)	Explanatory (theory testing) Exploratory (theory building)
Type of data required	Quantitative e.g. numbers, measurements, statistics), or Qualitative (words and pictures) or Mixed method (both numbers and words)
Number	The depth of research (small number, specific cases) e.g. case study or Breadth (large numbers, general) e.g. survey
Environment	Controlled research e.g. comparative, experiment or natural environment e.g. ethnography, case study, historical research.

Source: Adapted from Denscombe (2012)

5.3.2.1: The Quality of Research and Time Frame

The researcher must be transparent about the choices made to ensure that appropriate procedures and methods are followed when collecting research data, as this determines the success or otherwise of the study. So firstly, the researcher ensured that the data collected through the survey questionnaire process was reliable and valid. This was to guarantee that the process of data analysis produced findings that could be generalised to the population of interest. To do so, the researcher stipulated the procedures used in detail (see chapter 6 for

comprehensive discussion on the analysis techniques used) to ensure that conclusions drawn from the findings were valid (Bryman, 2016).

Secondly, the researcher made sure that the study matched the expected time frame for data collection. A cross-sectional research design was deemed appropriate, as it provided a 'snapshot' of the phenomenon being investigated, rather than a longitudinal design. This was because the researcher was not interested in tracking changes over a long period of time (Denscombe, 2012; Saunders *et al.*, 2012). Thus, because of the limited resources and time availability, data was collected during a specific period between June and September 2017.

5.3.2.2: The Nature of Research

Referencing the extant literature, the researcher must decide on the content of the research. Saunders *et al.* (2012) stated that the research questions and the objectives will define the nature of the research, as descriptive, exploratory or explanatory. An exploratory research design is mainly applied where the researcher is not sure of the precise nature of the problem and wishes to clarify an understanding of the problem. Whereas, the descriptive design is where the researcher seeks to gain a clear picture of the phenomenon being investigated i.e. events, persons or situations. The explanatory design is focused on studying a situation or a problem to establish possible relationships between variables (Saunders *et al.* 2012).

Although the three represent alternative research designs regarding the relationship between research and theory, researchers can decide to combine for example the descriptive and explanatory designs, which is known as 'descripto-explanatory'. For instance, in business and management research, it is possible to utilise a descriptive design as a precursor to explanatory design (Saunders *et al.*, 2012). However, the choice of the research design must be appropriate for the research questions being investigated (Denscombe, 2012). Thus, the primary aim of this study was to establish the differences between the two types of firms (family and non-family), and their influence on regional development. Therefore, an explanatory research design was adopted to try and establish the underlying relationships between the various identified variables. As already mentioned, statistically correct causal relationships can only be determined using a controlled experiment and a true random/probability sample, as both are pre-requisites. Both are unusual in opinion research in the social sciences. Tests of association and/or independence between variables can still be used, but they do not establish actual causality.

Consistent with the research philosophy, approach and design, the study was carried out with the purpose of establishing possible underlying relationships between the variables, in order to provide explanations for such relationships (Saunders *et al.*, 2009). From the researcher's perspective, the study rests largely on the existing literature, which was used to construct the research hypotheses. Therefore, the explanatory design was appropriate to establish the relationship between the structural characteristic variables of firms and those of regional development outcomes.

5.3.2.3: The Type of Data Collected

Another important decision that the researcher was expected to make regarding the research design was the type of data to be collected. There are three major designs that could be considered, namely quantitative, qualitative and mixed method. As the researcher intended to establish whether there is a relationship between firm level strategic behaviours and regional level factors, quantitative data was collected. Quantitative data lends itself to statistical analysis, which is useful for detecting patterns (Bryman, 2016). This allowed the researcher to analyse the relationships between relevant variables to determine any correlation, moderation or mediation effects. As such, qualitative data would have been inappropriate, as it is more concerned with collecting detailed data in form of words and pictures, rather than numbers. However, qualitative data can help researchers to interpret the situation, and can help gain an in-depth understanding of how different types of firms impact on regional development in relation to their ownership structure, behaviours and performance (Saunders *et al.*, 2012).

Additionally, the mixed method design, which incorporates the application of both quantitative and qualitative data would have been useful. This is because it recognises the weakness of the quantitative and qualitative designs in answering research questions (Creswell, 2014). Recently, there has been an increasing tendency to utilise mixed method design among researchers (Denscombe, 2012), and also a call for investigating the influence of contextual and geographical space on the relationship between types of firm (family and non-family) using mixed methods (Stough *et al.*, 2015). However, such a design would be challenging to accomplish within the time frame and limited resources available for this study, as well as the difficulty found of accessing respondents relevant to the study.

5.3.2.4: The Depth of the Research

The researcher also had to make a choice concerning the depth of research required, as well as the environment in which the data collection for the study was undertaken. The prevalent designs identified by the extant literature include experiential design, cross-sectional (survey) design, case study design, comparative design, natural design, historical design, philosophical design (Bryman, 2016; Denscombe, 2012; Kirshenblatt-Gimblett, 2006; Saunders *et al.*, 2012). From these research designs that are discussed in prior literature, this study adopted a cross-sectional survey design. According to Bryman, a cross-sectional survey design "entails the collection of data on a sample of cases at a single point in time in order to collect a body of quantitative or quantifiable data with two or more variables (usually more than two), which are examined to detect patterns of association" (2016, p. 53).

A cross-sectional design allowed the researcher to examine the variation in strategic behaviours between family and non-family firms in relation to their contribution to RD, and within family firms at a specific point in time. Therefore, the study evaluated the factors causing that variation (i.e. entrepreneurial orientation, the decision-making process, bridging social capital, family involvement, the involvement of firms within an industrial cluster, and firm performance). It also required the systematic collection of quantifiable data. That enabled the researcher to achieve a 'consistent benchmark' in order to determine any variation between variables and any associations between them (Bryman, 2016, p. 53). However, the cross-sectional survey design has been criticised, as it lacks the internal validity to establish the direction of causal influence present in the experimental design (Denscombe, 2012). Although researchers can establish a causal relationship it is difficult for them to determine whether this implies a causal relationship with certainty (Bryman, 2016). However, it is possible to draw certain causal inferences even though they might not have similar validity level as those found in experimental designs. This is because one can test for independence of variables and associations between variables but does not necessarily imply causality. The next section examines the research strategies applied in the study.

5.4: Research Methods and Techniques

The choice of the research methods is informed by the researcher's philosophy, research approach, design, strategies, and vice versa (Bryman, 2016; Creswell, 2014; Kumar, 2014; Saunders *et al.*, 2012; Blaikie, 2007). The main research methods are classified into three categories quantitative, qualitative and mixed methods.

Quantitative methods are used to gather primary data using structured questionnaires, observations, and structured interviews (Saunders et al., 2012). Whereas, qualitative methods gather data through semi-structured interviews, focus groups and ethnography (Bryman, 2016). Whilst the mixed methods involve the collection of data using both qualitative and quantitative methods (Creswell, 2014). Researchers utilising mixed methods in the collection of data can overcome the deficiencies attributed to both quantitative or qualitative methods, and leverage on their separate strengths (Creswell, 2014). However, upon consideration of the nature of the research questions, the limited time frame and logistical challenges encountered during the pilot study, the researcher settled for a quantitative survey that allowed wider access to respondents in different geographical locations at a specific point in time.

Therefore, in this study, the researcher opted to use a self-administered, structured questionnaire to collect data. Because of the time and resources available to the researcher, the survey questionnaire was deemed appropriate, as it would collect a range of responses from a large population scattered across a wide geographical area (Kumar, 2014; Saunders *et al.*, 2012). Further, it provided the researcher with the opportunity to be flexible in the way the questionnaire was administered, which might be through mail, a telephone call, collective administration, or online. However, a questionnaire might encounter problems in terms of the level of education of the respondents, and a low response rate compared to the semi-structured interviews (Kumar, 2014). Despite these shortcomings, the questionnaire allows some level of anonymity of the respondents, even though the quantitative survey questionnaire is administered face-to-face, by 'phone and/or using self-completion (on-line or personally distributed). Thus, it is the anonymity of the respondent that is important, and not that of the researcher.

The research questions presented in this study required the application of a survey approach. This was to investigate the underlying relationships between the constructs identified in the literature, in order to determine the influence of strategic behaviours on the firms' impact on regional development outcomes (Blaikie, 2007). According to Stough *et al* (2015), the entrepreneurship literature could be used as a basis for a quantitative approach to study how different types of firms (i.e. family and non-family) might influence regional performance dynamics (Basco, 2015; Stough *et al.*, 2015). In addition, some studies have utilised quantitative methods that seek to establish the relationship between family firms and regional

economic and social development outcomes (e.g. Block and Siegel, 2013; Cuculelli and Storai, 2015; Memili *et al.*, 2015).

5.4.1: The Link between the Research Objectives and Research Methods

The research questions were instrumental in determining the research methods used during data collection and analysis. According to Blaikie (2007), the nature of the research questions determines whether quantitative, qualitative or mixed methods are applied. Therefore, research questions and objectives are critical in establishing the linkages between the theoretical and empirical frameworks used.

5.5: Data Collection and Analysis Techniques

This section focuses on the sampling, sample selection and ethical considerations.

5.5.1: Population of the Study

In Miller's reflective article, after twenty-eight years since the publication of a seminal paper on EO in 1983, he noted that:

Researchers should be very clear about the scope of their sample and ensure that its boundaries are well understood. It is important to understand the sources of heterogeneity within data, and to consider how these might influence the conclusions of the study. Scholars must battle against low response rates and take care to know their response and their industries (2011, p. 887).

Miller's statement implores researchers to make a considerable effort to define conceptually the scope of their sample in clear and simple terms. Similarly, several scholars have advocated that researchers should clearly define the purpose of the survey to determine the appropriate sample that is representative of the target population (Bryman, 2016; Denscombe, 2012; Oakshott, 2012; Saunders *et al.*, 2009). According to Argyrous (2005), a population is a set of all possible cases and should specify the point in time and geographic region where relevant. The population for this study consists of privately held small, medium and large enterprises (SMLEs), both family and non-family firms. This is similar to other studies such as Cruz and Nordqvist (2012) in the USA, Naldi *et al.*, (2007) in Sweden, and Pittino and Visintin (2010) in Italy. Respondents were from businesses registered, domiciled or operating in Kenya at least for a minimum of five years prior to the data collection.

Table 5. 2: Summary of the research objectives, questions, methods analysis techniques used

Objectives	Research Questions	Research Hypothesis	Research method and analysis techniques
<p>To systematically review the literature for the link between family firms and regional development from a bottom up approach.</p>	<p>RQ1: What is the relationship between family firms and regional development?</p>		<p>Literature review</p>
<p>To identify factors that contribute to the strategic behavioural differences between family firms influence regional economic development compared to non-family firms</p>	<p>RQ2: How do firm level strategic behaviours affect family firm impact on regional development compared to non-family firms?</p>	<p>H1: In non-family firms, entrepreneurial orientation has a stronger positive influence on firm performance compared to family firms.</p> <p>H2: Family firms have a stronger positive relationship between EO and firm involvement in industrial cluster compared to non-family firms.</p> <p>H3: Family firms have a stronger positive relationship between EO and regional development compared to non-family firms.</p> <p>H4: In family firms, participation in strategic decision-making within the firm has a stronger positive effect on firm performance, as opposed to non-family firms.</p> <p>H5: In family firms, participation in strategic decision-</p>	<p>7-point Likert scale survey measuring the entrepreneurial orientation, participation in strategic decision-making, bridging social capital at the firm-level.</p> <p>Descriptive analysis to determine the validity and reliability of the factors.</p> <p>EFA to identify the manifest variables using the factor reduction method. Further analysis using CFA</p>

		<p>making within the firm has a stronger positive effect on firm involvement in industrial clusters, as compared to non-family firms.</p> <p>H6: In family firms, participation in strategic decision-making within the firm will have a stronger positive effect on the firm's influence on RD, as opposed to non-family firms.</p> <p>H7: In family firms, bridging social capital will have a stronger positive effect on firm performance, as compared with non-family firms.</p> <p>H8: In family firms, bridging social capital will have a stronger positive effect on firm involvement in industrial clusters, as compared with non-family firms.</p> <p>H9: In family firms, bridging social capital will have a stronger positive effect on the firm's impact on regional development, as compared with non-family firms.</p>	
--	--	---	--

<p>To determine the role of firm involvement in industrial clusters on the relationship between firms and regional development.</p>	<p>RQ 3: What is the effect of firm involvement in industrial clusters on the firm's contribution to regional development?</p>	<p>H10: Firm involvement in industry clusters mediates the effect of the relationship between firm strategic behaviours and regional development in both family and non-family firms.</p>	<p>7-point Likert scale survey instruments measuring the extent to which firm participation in economic activities within the industrial clusters.</p> <p>EFA and CFA</p> <p>Mediation using Barons approach</p>
<p>To determine the role of firm performance on the relationship between firms and regional development.</p>	<p>RQ4 What is the effect of firm performance on a firm's contribution to regional development?</p>	<p>H11: Firm performance mediates the effect of the firm Strategic behaviours influence on regional development in both family and nonfamily firms</p>	<p>7-point Likert scale survey instrument measuring the extent to which firm performance compared to other competitors in the industry.</p> <p>EFA and CFA</p> <p>Mediation analysis using Barons approach</p>
<p>To evaluate the effect of family involvement on the differences between family and non-family firms' contribution to regional development.</p>	<p>RQ5: How and to what extent does family involvement in the business affect contribution to regional development compared to non-family firms?</p>	<p>H12: The level of family involvement in the firm moderates the effect of strategic behaviours on regional development in such a way that firms with higher level of family involvement have a stronger influence compared to firms with a lower family involvement.</p>	<p>7-point Likert scale survey instruments measuring the extent to family involvement in the firm, creation of dummy variables.</p> <p>Moderation determined using CFA</p>

In order to obtain a comprehensive database consisting of a population of firms in Kenya, the researcher approached the Kenya National Bureau of Statistics (KNBS). This is the principal agency of the government, responsible for collecting, analysing and disseminating statistical data in Kenya (KNBS, 2017). Despite making considerable efforts to obtain access to a comprehensive database of enterprises operating in Kenya from KNBS, there was no success. However, the researcher found a recent publication of a comprehensive and expanded baseline survey, 'The 2016 National MSME Survey', conducted by KNBS on MSMEs in Kenya. In total, 50,043 MSMEs were sampled for the survey, targeting licenced enterprises, with a further 14,000 households also targeted, which are largely unlicensed. Although this was the first comprehensive survey conducted in Kenya on MSMEs (KNBS, 2017), the researcher could not gain access to any comprehensive list of registered businesses operating in Kenya. This was despite consistent efforts to reach KNBS, the Kenya Institute of Public Policy and Analysis (KIPPRA), and the Ministry of Industry, Trade and Cooperatives (MITC).

When the total population of interest is not known, studies have utilised existing databases that have either collected primary or secondary data from existing businesses (e.g. Chang *et al.*, 2008; Block and Spiegel, 2013; Chrisman *et al.*, 2012; Khayesi *et al.*, 2014; Backman and Palmberg, 2015; Cucculelli and Storai, 2015; Memili *et al.*, 2015). For instance, Block and Spiegel used data contained in the OECD REGPAT database, while Memili *et al.* (2015) used primary information collected by the Small Business Development Centre (SBDC) programme in the USA.

Similarly, the researcher opted to use existing databases maintained by credible industry associations working with enterprises either on a membership basis or voluntary participation. Therefore, the researcher approached the following organisations: Kenya National Chambers of Commerce and Industry (KNCCI), Kenya Private Sector Association (KEPSA), Association of Family Business Enterprises (AFBE) and Kenya Association of Manufacturers (KAM). After several attempts to communicate with these organisations through letters and physical visits, some of organisations were willing to share their membership list. Others cited confidentiality, which limited the access to a wider population. However, the researcher was able to use established networks and the use of online platforms to collect information about firms from these associations, which formed the sampling frame for the study. These firms were obtained from the following organisations websites and

publications. The websites were publicly accessible and can provide data based on requirements.

Table 5. 3: A summary representing organisations used to generate a sampling frame

Organisation	Brief Description
Kenya National Chambers of Commerce and Industry (KNCCI)	The membership is composed of micro, small, medium and large enterprises.
Kenya Private Sector Association (KEPSA)	Its membership consists of both individual firms, corporate bodies and private sector associations in all sectors of the economy, including trade associations.
Kenya Association of Manufacturers (KAM)	KAM membership constitutes 40% of manufacturing value-added industries in Kenya, comprising of small, medium and large enterprises. Established in 1959.
Association of Family Business Enterprises (AFBE)	Members only association specifically run by and for family-owned businesses in Kenya. Formed in 2015
Kenya's Top 100 Survey	This is an initiative by KPMG Kenya and Nation Media Group that surveys and ranks top 100 medium-sized companies since 2008

5.5.2 Sampling Frame and Sample Selection

A sample is a subset or portion drawn from the larger population of interest (Argyrous, 2005; Bryman, 2016; Saunders *et al.*, 2009). To obtain a reliable sample, the researcher compiled a sampling frame that contained a detailed list of cases from which the researcher could draw the suitable sample (Saunders *et al.*, 2009). As it is not always possible to obtain a representative sample (Edwards *et al.*, 2007; Saunders *et al.*, 2009), the researcher tried to ensure that the list was reliable, accurate and contained current information as regards potential respondents. For the purposes of this study, the following table provides the sampling frame used, which was obtained from the membership of registered companies from the listed organisations.

Table 5. 4: Sampling Frame

Associations	Number of Firm Members	Registration year
KNCCI	353	
KAM	923	1959
Top 100 SME Survey	900	2008
AFBE	60	2014
KEPSA (corporate members only)	691	2003
Total	2927 (after collating 2,486)	

In the absence of a comprehensive sampling frame consisting of all registered enterprises in Kenya, a pre-requisite for selecting a probability sample, the researcher opted to generate a sampling frame from existing databases of registered industry associations (Saunders *et al.*, 2009). However, Edward *et al.* (2007) cautioned that using existing databases could be faced with potential problems, as they are not always absolute, and may be inaccurate or outdated. Similar studies have also utilised existing databases owing to the difficulty in establishing the precise size of the population especially from Africa (e.g. Venter, 2003). For instance, Venter (2003) noted that there were no existing records to establish the size of family businesses in South Africa. Furthermore, there were no existing records differentiating family businesses from non-family businesses in South Africa or most other African countries (Floren, 2002, p.70; Venter, 2003, p.220).

In addition to establishing database, a comprehensive Google Search was conducted to identify respondents in the firms (similar to Ensley and Pearson, 2005). The membership lists were obtained from the organisations' websites in the case of KAM, KPMG Top 100SME Survey for the years 2008-2016, published quarterly magazines (KEPSA, KNCCI), and AFBE. After which, the list was collated together in an Excel sheet and duplications were eliminated. Further, the researcher was careful to ensure that the contact details were up to date. The final list contained a total of 2,486 firms.

5.5.3: Sampling and Sampling Techniques

In the absence of a census, sampling provides an alternative that can be used by researchers to answer the research questions. According to Barnett (2002) using sampling makes it

possible to attain higher accuracy like that of a census. Also, the nature of the research questions informs the decisions on the possible use of sampling techniques to obtain a representative sample of the targeted population.

According to Saunders *et al.*, (2012) in cases where no suitable list is available, researchers wishing to use probability sampling can compile their own list upon which a suitable sample can be drawn. Therefore, the researcher used existing databases from the industry organisations identified in table 5.6 to develop a sampling frame for selecting participants in the study. In the process, educational organisations and business membership organisations such as Federation of Kenyan Employers (FKE), East Africa Grain Council (EAGC), and Institute of Public Certified Accountants of Kenya (IPCAK) were eliminated from the database. These were deemed to consist mostly of other associations and educational institutions as well as organisations domiciled outside the country which, were not part of the focus of the study.

After the sampling frame was generated consisting of 2,486 firms, probability sampling technique was used to generate a sample. It is argued that they are unbiased methods, as they forestall arbitrary and subjective selection bias (Saunders *et al.* 2012). Their advantages are that they allow the researcher to (1) select samples randomly, (2) with equal or known chance of any of the cases to be selected, (3) calculate sample size and sample error and (4) generalise across the population (Bryman 2016; Saunders *et al.*, 2012).

The forms of probability sampling techniques include simple random, systematic, stratified random and multi-stage sampling. In this research, systematic sampling technique was used to select a suitable sample at regular intervals from the sampling frame. The systematic sampling techniques was used to generate a list of 1,544 top level managers from small to large firms. Therefore, in the absence of a comprehensive list of registered firms in Kenya, the researcher believed that this sample would help to answer the research questions raised and to meet the objectives of the study (Saunders *et al.*, 2012).

Generally, the researchers determine the sample size for studies and is always seen as a compromise that will have an impact on the accuracy of the study. According to Saunders *et al.* (2009), the choice of the sample size is governed by the confidence levels needed for the data, the margin of error a researcher can tolerate, the type of analysis that will be conducted and the size of the population from which the sample is drawn. In this study, a representative sample size was determined using an electronic calculator.

Estimates from the ‘National MSME Survey’ conducted by KNBS established that there were approximately 1.56 million MSMEs licenced by the county governments and about 5.85 million unlicensed businesses that were identified from the households (KNBS, 2016). Further, the number of registered companies in 2015 was estimated to be 310,000 (Omondi, 2015). From these figures, the researcher estimated a proxy population of about 2 million registered firms in Kenya. Therefore, following similar studies a sample size of 267 cases was determined at a confidence level of 95% (0.95), and a confidence interval of 6%. Figure 5.1 below shows the result obtained using the online calculator.

Find Out The Sample Size

Result

You will need to measure 267 or more samples.

Confidence Level:	95%	
Confidence Interval:	6	%
Population Proportion:	50	% Use 50% if not sure
Population Size:	2000000	Leave blank if unlimited population size.


Calculate 

Figure 5. 1: An estimation of the sample size for the study

Source: <https://www.surveymonkey.co.uk/mp/sample-size-calculator>

5.6: Sample Description

The survey obtained a total of 410 questionnaires. Upon verification of the completed questionnaires the researcher eliminated questionnaires with more than 10% incomplete data (for more details in chapter 6, section 6.1.3). The final sample consisted of responses from 307 (approx. 75%) TLMs from businesses firms that range from micro (15%), Small (22.5%), Medium (33.2%) to large firm s (29.0%). Additionally, the age of the firms was diverse ranging from firms that have operated for more than 20 years (37.4 %%), 10-19 years (23.1%) to less than 10 years (39.4%). Firm industries are also varied from manufacturing (25.1%), agriculture and horticulture (6.2%), Food and beverages (6.85%), telecommunications (12.1%), utilities and energy (6.5%), Business and support services (7.8%), Advertising and <marketing (6.2%) and others. The geographic distribution of sales ranged from county level (7.2%), national (30.9%), East Africa region (32.9%), Africa (10.7%), and Global (17.6%x). As indicated the sample is diverse with different firm sizes, ages and geographically distributed.

Although the researcher used a systematic sampling method that was rigorous and suitable the study does not claim to be completely random as most of the firms either operated or were located within the Nairobi region or its outskirts with the Northern part of Kenya having no representative in the sample. However, because of the rigorous sampling technique applied and the representation of firms of different sizes, years of operation and sales distribution, the findings should have a high degree of generalisability (Miller, 2011).

5.7: The Research Instrument Development

The primary data collection for the study was carried out using a survey research strategy that was aligned with the post-positivist philosophy and quantitative approach adopted for the study. According to Saunders *et al.* (2012), the survey strategy is common in business and management studies, as it is suitable for answering research questions such as ‘what?’, ‘where?’, ‘who?’ ‘How much?’ and ‘how many?’ Therefore, to collect data that was useful to investigate the role of family firms in regional development, and for answering the research questions, a self-administered, structured questionnaire was developed and distributed via survey monkey to the potential respondents.

The research instrument employed in the present study was established following literature review, which identified some of the constructs and variables that were used to generate the study’s hypotheses (see **appendix 2a**). The researcher conducted a pilot study using a conveniently selected sample to determine the reliability and validity of the instrument, as recommended (Denscombe, 2012). After the data was analysed, the instrument was revised to reflect some of the changes highlighted during the pilot phase. It is worth noting that the questionnaire consisted of variables that were adopted from previous quantitative studies (e.g. Kellermanns and Eddleston, 2004; Acquah, 2007; Casillas and Moreno, 2010), whilst some emerged from the qualitative studies that had proposed areas that required more extensive study (e.g. Rosenfeld, 2002; Niu, 2009; Basco 2015; Stough *et al.*, 2015).

Table 5. 5: Research Instrument Dimensions

Constructs Used	Dimensions	Assumptions	Sources
Entrepreneurial orientation	Innovativeness, Risk-taking, pro-activeness, Competitive aggressiveness and Autonomy	Entrepreneurial orientations differ between family and nonfamily firms (Zellweger <i>et al.</i> , 2012)	Casillas and Moreno, (2010), Lumpkin and Dess (1996), Miller (1983)
Decision-making strategy	Strategic decision-making through teamwork participation, interactive, regular consultation with employees, free and open exchanges.	“Strategic decisions are made through consensus-seeking versus individualistic or autocratic processes by the formally responsible executive” (Covin <i>et al.</i> , 2006: 59)	Eddleston and Kellermanns (2007), Kellermanns and Eddleston (2004)
‘Bridging social capital’	TLM personal and social relationships with top level managers from other firms, community leaders, and political and government officials.	‘Bridging social capital’ always leads to positive outcomes (Gedajlovic <i>et al.</i> , 2013)	Acquaah, (2012), Acquaah (2007)
Firm involvement in industry clusters	Individual firms’ effect on research and development, forward integration, knowledge spill over, partnerships, promoting new ventures, shared vision, and technological enhancement.	Family firms involved in an industry cluster will have a direct or indirect influence on the cluster environment (i.e. the nature and types of social networks and capital) (Johannisson, <i>et al.</i> 2007; Naldi <i>et al.</i> , 2013)	Rocha (2004), Rosenfeld (2002)
Firm performance	Growth in sales, net worth, profitability, ability to fund growth, and market share	Firm performance (and growth) will differ between family and nonfamily firms (Mazzi, 2011)	Kellermanns and Eddleston, 2006; Kellermanns <i>et al.</i> 2008
Regional development	Gross Development Product (GDP), Employment opportunities, and Wealth creation	Family firm is a unique economic actor that can influence regional factors and processes differently from non-family firms (Basco, 2015; Stough <i>et al.</i> , 2015)	Basco (2015), Stough <i>et al.</i> (2015), Thurik, Wennerkers and Uhlaner (2002).
Family Involvement	Self-identification of the firm as either family or non-family firm, ownership, management, Generations, trans-generational transfer	“family members are involved in the business through ownership, management, and participation of members, of different generations that gives them the ability and willingness to influence the strategic direction (e.g. adoption of goals that meet purely family needs) (Chrisman <i>et al.</i> , 2012, p. 271)	Eddleston and Kellermanns, (2007), Chua <i>et al.</i> (1999), Westhead and Cowling (1998).

The instrument consisted of five main sections that requested the respondent's demographic information and firm characteristics, firm strategic behaviours, firm involvement within the industry clusters, firm performance and perceived contribution to regional development. A seven-point Likert scale was employed, and each potential respondent was required to indicate whether they 'agreed' or 'disagreed' with the statements, based on the interpretation of 1= strongly disagree and 7=strongly agree. During the pilot stage it was apparent that when two borrowed scales were used in the same measurement instrument, face validity issues regarding the theoretical constructs became apparent, as they were not recognised when the scales were used separately (Hair *et al.*, 2006). The research instrument used in data collection is attached in the appendix (see appendix 2b).

One of the key dimensions that required more attention was the dependent variable 'regional development'. Despite prior studies on family businesses establishing their effects on RD (e.g. Basco, 2015; Memili *et al.*, 2015; Stough *et al.*, 2015), there are limited empirical studies that investigate FBs behaviours on regional dimensions. To operationalise the effect of FBs behaviours on regional development, this study adopted Basco's suggestion that follows the development perspective by Stimson *et al.* (2006). According to Stimson *et al.* (2006) regional development is the application of economic processes and resources available to a region that resultants in sustainable development and desired economic outcomes for a region (Basco, p. 3). This is in line with Bishop *et al.* (2009) arguments that "direct effects of individual firms to employment, output and productivity growth is reflected in their investments in resources and development capabilities) (pg 56). Family influence on the firm can occur in different areas such as decision making (eg management and governance structures) which will affect the distribution of resources and capabilities, opportunity pursued, and social relationships developed. Thus, family businesses become possible actors who can alter the capital resources which has an influence regional processes (interact) and factors (resources) which affects regional development (Basco, 2015; Stough *et al.*, 2015). According to Stough *et al.*, family businesses embeddedness within the socio-economic structures can influence regional environment. In order to capture firms, impact on regional dimensions, the study draws from variables found in existing literature (Basco, 2015; Stough *et al.*, 2015); Thurik, Wennerkers and Uhlener, 2002). The TLM perspectives were sought from a 7-liket scale to rate the items from very significant to very marginal (appendix 2b)The introduction section included important details of the researcher, including name, contact details and brief description, informing the respondents that their participation was voluntary.

Further information concerning the purpose and objectives of the survey, and potential contribution was provided. Finally, the researcher assured the respondents of confidentiality and anonymity to encourage participation, as it was noted during the pilot phase that some SMEs founders and managers were either concerned or secretive about providing essential data, especially those belonging to family-owned businesses (Santiago, 2000).

5.8 Pilot Study

A pilot study is a small-scale study conducted to test for the clarity and accuracy of the questions to minimise any potential problems that the respondents may encounter when completing them (Saunders *et al.*, 2012). Prior to using the questionnaire to collect data, it is recommended that the researcher conduct a pilot test of the instrument to assess the questionnaire's validity and reliability. Further, this can help to develop and provide conceptual clarity to the research design (Yin, 2003). According to Bell (2010), it is always important to test the instrument to determine whether the questionnaire will successfully collect the intended data.

Specifically, Bryman (2016) advised that the significance of piloting a self-administered questionnaire cannot be overemphasised, as the interviewer will not be present to clear up any confusion emerging from an actual field study. Saunders *et al.* (2009) suggests that the size of the sample for conducting a pilot depend on the research question(s), objectives, size of the project, the time and money resources available, and how well the questionnaire is designed (p.451). Generally, the recommended minimum number for a pilot study done by researcher is 10 (Fink and Kraus, 2009), whilst for large surveys it's between 100-200 responses (Dillman, 2009).

In addition, when conducting a pilot study, it is important that the sample used was not the same as the one that would be employed in the main study (Bryman, 2016). Further, Bryman suggested that the researcher ought to select a small set of respondents who have similar characteristics as the members of the population from which the main sample will be taken (2016, p. 261). From this understanding, a pilot study was conducted in September to November 2016, targeting a purposively selected sample generated from a database held by Strathmore Enterprise Development Centre (SEDC). The researcher established contact with the SEDC programme director and negotiated access to their database of registered members.

A self-administered closed-end questionnaire was distributed using research assistants recruited and trained in data collection, as the firms were dispersed in different locations. The pilot study generated 42 responses, but after inspection of the questionnaires, only 35 were found to be usable. From the analysis, it was determined that most of the questions were clear, and any emerging issues were corrected. Further, the length of the questionnaire was of concern, but this was shortened, as some sections were refined.

Indeed, the pilot phase was of importance to the study as it was the first time the researcher had engaged in the exercise of data collection in the identified context. The research identified potential logistical problems in distributing questionnaires to respondents and the provision of data. Firstly, the researcher realised a level of scepticism by respondents regarding completing the questionnaire, especially as regards disclosing financial information. The questions were refined to improve the completion rate. Secondly, there were difficulties in accessing potential respondents when distributing the physical questionnaires. Therefore, the researcher opted for a web-based survey distributed through survey monkey, rather than postal or physical distribution, to increase the response rate (Bryman, 2016; Saunders *et al.*, 2012).

5.8.1: Validity of the Pilot Instrument

The question of validity cuts across all types of academic research (Oliver, 2010), and is considered the most important criteria (Bryman, 2016). According to Hair *et al.* (2006) validity is the degree to which a measure accurately represents what it is supposed to measure (p.8). Denscombe (2012) stated that validity concerns the accuracy of the questions asked, the data collected, and the explanation offered. This requires the researcher to demonstrate that the data collected, and the analysis is “firmly rooted in the realms of things that are relevant, genuine and real” (Denscombe, 2012, p. 14). To test the validity of the variables designed to measure the constructs, exploratory factors analysis (EFA) and structural equation modelling (SEM) were used.

The EFA for the pilot data revealed that the items measured the expected constructs. The manifest variables had a KMO of 0.68, a chi-square 237.630, and $df = 105$ with a significance of >0.05 . Further, six latent factors were extracted with eigenvalues of more than 1.0, as shown by the scree plot (Figure 5.2). The first factor, which is EO, explaining 30.25%, industrial cluster involvement = 21.549%, firm performance = 16.265%, decision-making = 14.063%, firm social capital = 10.302%, and RED = 7.572%. Whilst the component

correlation matrix reported that the factors were not highly correlated (see table 5.6) (Hair *et al.*, 2006, Ho, 2006).

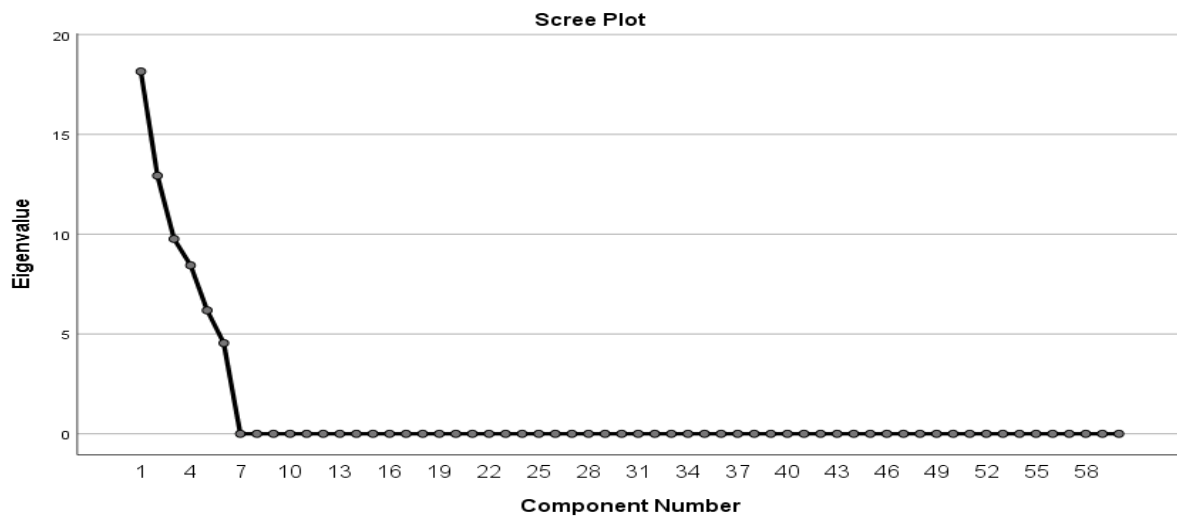


Figure 5. 2: Scree Plot for the six latent factors extracted

Source: SEM

Table 5. 6: Represents the Component Correlation Matrix for the six latent factors extracted from EFA

Component	1	2	3	4	5	6
1	1.000	-.105	.064	.153	.170	.225
2	-.105	1.000	-.057	.034	.110	-.004
3	.064	-.057	1.000	-.002	.070	.037
4	.153	.034	-.002	1.000	-.014	-.045
5	.170	.110	.070	-.014	1.000	.336
6	.225	-.004	.037	-.045	.336	1.000

Extraction Method: Principal Component Analysis.
 Rotation Method: Promax with Kaiser Normalization.

Source: SEM

5.8.2: Reliability of the Pilot Instrument

According to Denscombe (2012), reliability relates to the methods of data collection and the concern that they should be consistent and not distort the findings (p.144). Reliability is concerned with the determination of whether the observed variable measures are the true

value and free from error (Hair *et al.*, 2006). Bryman (2016) stated that there is three test that could be used to test reliability, namely stability (test-retest), internal reliability and inter-rater reliability. The first measures (whether a measure is stable over time) was covered, as the measures used in this study were adopted from existing research instruments that have already been tested. Internal reliability, which is concerned with checking whether the indicators that make up the scale were consistent, was measured using Cronbach's alpha. This had a coefficient value ranging from 0-1 (Bryman, 2016, Saunders *et al.*, 2012, Zuleta and Coatales, 2004).

Likewise, using the indicators generated from the pilot questionnaires, the Cronbach's alpha reliability coefficient was determined to be above the required value of 0.6 minimum reliability threshold for five of the constructs (see table 5.7 below), indicating that the reliability requirement was met satisfactorily (Hair *et al.*, 2006; Ho, 2006). However, the firm entrepreneurial orientation construct was below the minimum value. Therefore, this necessitated evaluation, and it was determined that the semantic design used to collect data was not suitable for the context, and thus items were taken from Casillas and Moreno's (2010) instrument, which measured entrepreneurial orientation.

Table 5. 7: The Latent Constructs and their Cronbach Reliability Coefficient after adjustments

Construct	No. of items	Cronbach's Alpha
Entrepreneurial orientation	28	.88
Decision-making strategy	5	.765
Firm social capital	13	.830
Firm involvement in industry clusters	15	.720
Firm performance	5	.932
Regional economic development	12	.878

After the pilot exercise, the initial questionnaire was evaluated, and data analysis, conducted to determine its validity and reliability. After the exercise, several changes were implemented to reflect the observations. The final instrument used for collecting data contained 67 items

that included nominal, ordinal and scale data (See Appendix 2). The next section justifies the use of web-based survey for the data collection.

5.9: Justification of the Web-Based Survey

After the pilot study phase, the researcher observed that to gain access to potential respondents to distribute a physical copy of the self-administered questionnaire would be difficult. There were also cost implications and time constraints (Saunders *et al.*, 2012) owing to the wide geographic distribution of firms and poor infrastructure. For instance, those respondents who collected the questionnaire with a promise to return them often failed to do so, despite reminders. Therefore, based on these factors, the researcher considered alternative methods to distribute the questionnaires for a higher response rate and cost efficiency. Based on recommendations from other researchers in the field and experience, the researcher settled on a web-based questionnaire. The web-based questionnaire was hosted using Survey Monkey from June 2017 on the following link.

<https://www.surveymonkey.com/r/The-Role-of-Small-Medium-and-Large-Firms-in-Economic-Development>

If potential respondents have access to the internet and use it regularly, it would be best to reach them via web-based surveys (Sills and Song, 2002; Cooper *et al.*, 2010). Further, in comparison to the postal survey, the web-survey was considered to have several advantages: namely, (1) more cost efficient, (2) a wider outreach (potentially accommodating a large sample size) (3) enables immediate feedback after completing the questionnaire, (4) ensures confidentiality and anonymity to respondents and (5) allows respondents to open and close questionnaires when convenient. However, web-surveys are suitable for those with access to the internet and are ‘technology savvy’ (Smith, 1997; Witmer, Colman and Katzman, 1999). Therefore, this could potentially exclude some respondents willing to contribute. Further, there was potential for multiple responses from individual respondents (Sheehan and Hoy, 1999).

The primary data for the study were collected using an online questionnaire distributed through Survey Monkey between June and October 2017. The researcher had access to the online questionnaire and all login details to ensure data protection. During the period of data

collection, the researcher was able to send weekly reminders to those not yet responding to increase the response rate. Overall, out of the 1544 questionnaires sent out, a total of 410 responses were received (26.6%) and evaluated for suitability for the purposes of this study. Of these, 74.87% were considered appropriate for data analysis (n=307).

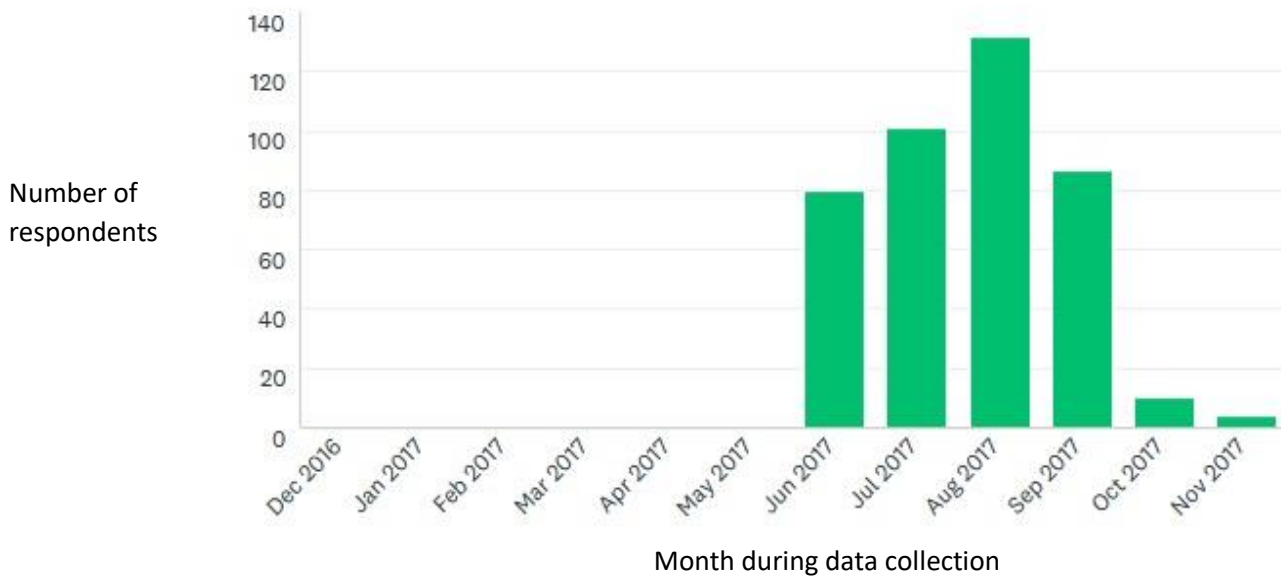


Figure 5. 3: Responses rates for the period of June-October

Source: Survey Monkey

5.10: Limitation of the Research Design and Analysis

This section presents the limitations of the study design and how these have been addressed. Firstly, the lack of comprehensive studies or research data from Kenya made it difficult even to determine the proportion of family and non-family firms, as there was no information publicly available to distinguish between firms owned by a family and non-family firms. This made it difficult to develop a sampling frame. However, the challenge was overcome by collecting demographic data on firms and conducting a factor analysis that identified the main latent variables related to the constructs used in the study.

Secondly, the difficulty in finding a complete database of all the firms in the population had an impact on the time constraints experienced by the researcher, as it delayed data collection and analysis. In the quest to make the study as empirically sound as possible, the researcher embarked on a comprehensive search and construction of a database of registered businesses. That could then be used for data collection, and to increase the extent to which findings could be generalised.

Thirdly, the researcher experienced challenges in building trust with identified associations and potential respondents. Prior scholars have always argued that respondents, particularly family firm owners and managers, required time before they could trust the researcher with family information or business practices. This was evident during the pilot study phase, as some of the respondents appeared guarded when approached for information on firm ownership and business performance. Hence, the use of a web-survey to collect data.

Fourthly, the researcher faced bureaucratic processes, which are a norm in developing economies. Hence, data collection was delayed after the researcher realised that additional research clearance was required from the National Commission for Science, Technology and Innovation (Nacosti) before being allowed to collect data. This came with a condition to further introduce themselves to the District Education Officer to check identity.

Finally, in order to overcome researcher's subjectivity during the course of the study several measures were taken. First, the dopted philosophical stance, postpositivism' advocates for objectivity during research. The principle of postpositivism is that researchers should remain distanced from the phenomena under investigation (Allen, 2017). Thus, the researcher was aware of the impostance of steering away of subjectivity from the onset. Secondly, the study uses already established constructs and variables from tested research instruments to collect data from the respondents (Bryman, 2016; Saunders eta l. 2012). It was also imperative to use a different sample for the pilot testing of the instrument used in this research. As Bryman suggested, researchers should use a different sample that has similar characteristics which helps overcome barriers and inherent problems. Finally, the researcher ensured that all data collected was statistically tested following a stringent regime as outlines in chapter 6 (sec 6.2).

5.11: Ethical Issues Considerations

As this study involved interaction with human participants, ethical issues were of importance, and were considered and complied with throughout the study. Generally, ethics refers to the moral conduct of the researchers when conducting research (Denscombe, 2012). This research was conducted following the research and ethics code provided by De Montfort University (2015), and the Social Research Association 'Ethical Guidelines'. Prior to acceptance of the candidature, research clearance was submitted to the research ethics committee of the Faculty of Business and Law (BAL) and accepted in April 2015.

Furthermore, the researcher sought approval from Nacosti, and a research licence was granted in September 2016.

In addition, in the 'Introduction' section of the questionnaire, the researcher informed the respondents explicitly of their voluntary participation in filling out the questionnaire and their consent was sought. The researcher also assured potential respondents of anonymity and confidentiality, guaranteeing that the information provided would not be shared with third parties or their identity disclosed in the analysis of the data (Bryman 2016; Saunders *et al.*, 2012). Finally, all research instruments collected were stored in a secured cabinet for the pilot study, and in the main study, the only researcher had secured access to the Survey Monkey password.

5.12: Chapter Summary

This chapter has presented the research philosophy, approaches, research design and data collection and analysis methods used for this study. Considering the nature of this research, the selected approach was deductive. The research logic was underpinned using theory to devise hypotheses, which would be subjected to statistical testing to confirm or reject them. The explanatory design was established to evaluate the relationship between underlying variables effecting the influence of family firms on regional development outcomes. The study has adopted the post-positivist stance to inform the research design and methods. By undertaking a pilot study, and using systematic random sampling, the study ensured the data collected were valid, reliable and to a greater extent generalizable. Appropriate research ethical procedures and guidelines were followed in the research process. The next chapter discusses the data analysis process followed in this study.

CHAPTER 6: DATA ANALYSIS PROCESS AND TECHNIQUES

6.0: Introduction

This chapter sets out the data analysis process and techniques used in the study. Particular focus will be on the structural equation modelling (SEM) analysis techniques used to ensure that the data collected was suitable for quantitative analysis. The first section, 6.1, outlines the step by step procedure followed when using SEM, as recommended by Hair *et al.* (2006). The description of the sample (section 6.3) includes distribution and a test for normality for the two independent groups. Section 6.4 presents the test for the validity and reliability of the items utilised in the research instrument, and the factors extracted. The chapter summary is presented in section 6.5.

6.1: Process of Data Analysis for the Study

The quantitative data collected was analysed using statistical package for the social sciences (SPSS) to present descriptive and inferential statistics. The exploratory factor analysis (EFA), and confirmatory factor analysis (CFA), were applied using structural equation modelling (SEM) techniques, which were also used for analysis in other entrepreneurship studies (e.g. Eybers, 2010; Randerson, 2012). For purposes of clarifying the procedures undertaken when applying SEM analysis techniques, this study followed the step by step process in decision-making proposed by Hair *et al.* (2006, p. 734). The six stages are as follows:

1. Defining individual constructs
2. Developing the overall measurement model
3. Designing a study to produce empirical results
4. Assessing the measurement model validity
5. Specifying the structural model
6. Assessing structural model validity.

6.1.1: Defining Individual Constructs

In the first step of SEM, the research focused on defining the individual constructs that determine a firm's influence on regional development. Thus, EFA analysis determined the main constructs extracted from the survey data. The observed variables were coded and

inputted in statistical software to conduct factor reduction aimed at extracting the minimum number of factors, by:

- (1) Identifying a representative number of variables from the much larger set of variables to be used in the subsequent multivariate analysis,
- (2) Creating an entirely new, much smaller set of variables to partially or entirely replace the original set of variables (Hair *et al.*, 2006, p.106).
- (3) EFA was important to uncover latent dimensions underlying the data set (Hair *et al.*, 2006). Despite the fact that the variables used in the current study were drawn from already established research instruments, it was the first time that they were being used together in a single questionnaire. Hence, EFA was deemed important given the intent to establish the underlying relationship between the latent variables (Ho, 2016).

Factor analysis relies on estimates of the factors, and the contributions of the variables to the factor loadings, as a basis for identifying variables for subsequent analysis (Steinmetz, Davidov, and Schmidt, 2011). Several tests to determine the convergent and discriminant validity were conducted on the 43 observed variables, after which a pattern matrix was obtained consisting of 34 variables. After the EFA, a total of six latent constructs were extracted, as shown in table 6.1. Details can be seen in Appendix 4.

Table 6. 1: Six Latent constructs identified after EFA

No.	Latent Construct	Component average	Cronbach Alpha
1	Firm entrepreneurial Orientation	0.724	0.890
2	Firm decision-making strategy	0.824	0.883
3	Firm ‘bridging social capital’	0.776	0.772
4	Firm involvement in industrial clusters	0.763	0.869
5	Firm performance	0.864	0.928
6	Regional Development	0.795	0.897

6.1.2: Development of the Overall Measurement Model

The second stage of data analysis estimated several inter-relationships to determine how the firm level strategic behaviours (i.e. ‘entrepreneurial orientation’, ‘decision-making strategy’, and ‘bridging social capital’) influenced the firm’s impact on regional development. Once these relationships were specified, both the exogenous and endogenous constructs were identified to develop the model for analysis. Subsequently, a visual diagram was developed to show the path diagram, indicating how the constructs impacted on one another (Hair *et al.*, p.725). Table 6.2 below presents three exogenous constructs and three endogenous constructs that are specified in the measurement model.

Table 6. 2: The exogenous and endogenous constructs presented in the model.

Exogenous Constructs	Endogenous Constructs
Firm Entrepreneurial orientation	Firm involvement in industry clusters
Firm decision-making strategy	Firm performance
Firm ‘bridging social capital’	Regional economic development

The three exogenous factors (i.e. EO, decision-making, and ‘bridging social capital’) reported some degree of interaction among them that would give rise to their inter-relationships (correlations among the exogenous constructs). While using SEM analysis techniques, specifically CFA, the exogenous factors were directly compared to determine their multi-collinearity. This was because the researcher expected that top level managers in the firm would coordinate and follow consistent planning and execution of the three exogenous factors identified in the model (Hair *et al.*, 2006).

After specifying the measurement model, the researcher adopted the competing equivalent model structure, whereas a single model (i.e. set of relationships) was specified and then identified alternative formulations of the underlying theory (Hair *et al.*, 2006). Firstly, the model, as per figure 6.1, showed that firm entrepreneurial orientation, firm decision-making strategy and firm ‘bridging social capital’ have direct relationships with regional development outcomes. Secondly, the three firm level strategic behaviours also have an indirect influence on regional development through the mediating effects of firm involvement in industry clusters and firm performance. However, different models could propose alternative relationships based on direct, indirect or even moderating effects using the

constructs, which will then be competing models for the original model designed (Hair *et al.*, p733).

The competing model strategy has two advantages when compared to the other two strategies (i.e. confirmatory and model development). By adopting the competing equivalent model, the researcher was able not only to confirm that the model fits the data, but also to test against other alternative models. That would not be the case using a confirmatory modelling strategy. Not only did it enable the empirical testing of the model, but also allowed for model re-specification, and the ability to generalise the results obtained. Again, that would not be the case with the model development strategy (Hair *et al.*, 2006; Ho, 2006).

6.1.3: Designing the Study to Produce Empirical Results

When designing the empirical study, the following factors were considered (Hair *et al.*, 2006): namely, (1) the type of data analysed (covariance versus correlations), (2) missing data and (3) sample size. With reference to the type of data in correlational input for SEM, the estimated coefficients obtained are already standardised. Thus, they are not scale dependent. The estimated value falls within the range of -1.0 to +1.0, which makes it easier to identify inappropriate estimated values, compared to the use of covariance. Despite this advantageous characteristic of correlational computation, Hair *et al.* (2006) argued that correlational input does not have any real advantage over the standardised results obtained using covariance. In fact, “researchers must consider the choice of correlations versus covariance, primarily based on interpretive and statistical issues” (p. 738).

Statistically, Hair *et al.* (2006) suggested that when the hypotheses are concerned with questions related to the scale or magnitude of values (e.g. comparing means), then covariance must be used. This is because the information is not retained using correlations. Furthermore, any comparisons between samples require that covariance be used as input, giving them a distinct advantage over correlations based on their statistical properties. Therefore, following the suggestions by Hair *et al.* (2006), this study used covariance whenever possible, as “covariance matrices provide the researcher with far more flexibility due to their relatively greater information content” (p. 738). Therefore, AMOS software was chosen for both measurement and structural model analysis in this study, and for the testing of hypotheses. This provided far richer content due to the relative advantages derived from using covariance matrices, as compared to correlations and their information content.

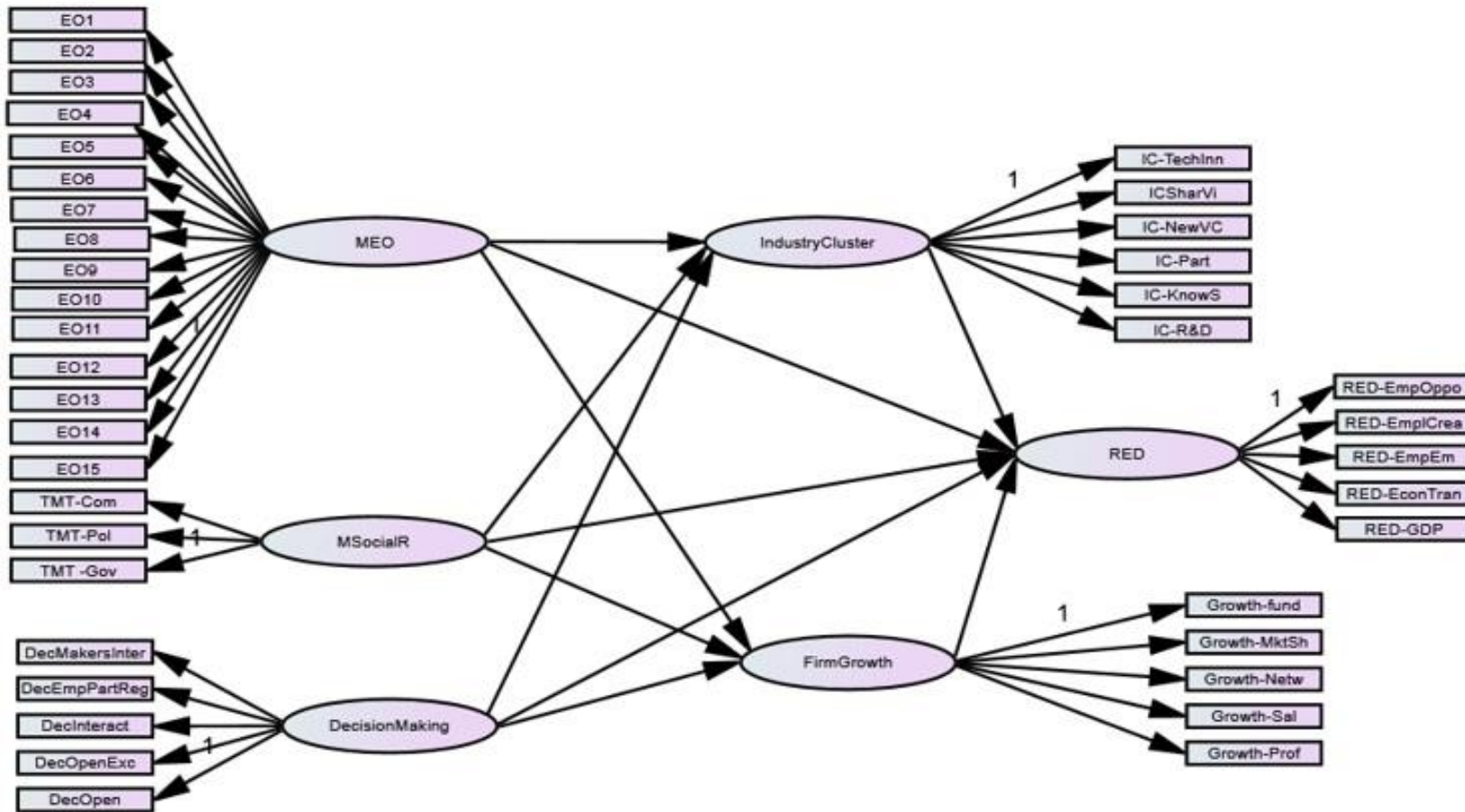


Figure 6. 1: Structural Model for the Firm impact on regional development with manifest variables

Source: Developed by author using AMOS

With reference to missing data, the researcher ensured that only fully completed questionnaires were used ($n=307$), as missing data complicates the testing of SEM models. This is because of the effects they have on the sample size. Generally, the three main approaches to address the missing data are: 1) complete case (Listwise), 2) the 'all-available' approach (pairwise deletion), and 3) model-based imputation techniques (ML/EM).

The data was screened to identify the questionnaires with more than 10 per cent of missing information. These records were then deleted from the sample, and a second assessment was carried out to ensure that missing data was random. After the screening of data, a complete case (Listwise) technique was used for the analysis. This was because the χ^2 showed minimal bias under most conditions, and when effective sample size is known. It was easy to implement using any programs, as compared with the 'all-available' and 'model-based' methods. The factor loadings for the observed variables was high (>0.6), and sample size was large (> 250).

Thus, the study was able to overcome shortcomings based on the increased likelihood of non-convergence, and bias in estimating relationships among factors (Hair *et al.*, 2006; Ho, 2006; Schreiber, *et al.*, 2006). Furthermore, it is worth noting that AMOS only provides modification index output when complete data are input into the program (Ho, 2006). Hence, the researcher sought to utilise only those questionnaires with complete data.

In addition, SEM requires a larger sample relative to other multivariate techniques, as some of the statistical calculations used in SEM are unreliable when using relatively small samples. Although it is no longer required to have samples sizes above 300, some researchers have argued that larger samples generally produce more stable solutions that are likely to be replicable (Hair *et al.*, 2006; Ho, 2006). For this study, a total of 410 questionnaires were received, but upon examination of the quality of data and extent of missing data, 307 questionnaires representing 20% of the sample (1544) were used to minimise complications when testing the SEM models (Hair *et al.*, 2018). This is within the range of 150-400 suggested as a sample size by Hair *et al.*, (2006). This is especially so when using maximum likelihood estimation (MLE), which is the most common SEM estimation procedure. MLE methods are more sensitive to sample sizes of >400 , in which case, almost any difference could be detected, meaning goodness-of-fit measures suggest poor fit (Tanaka, 1993; Hair *et al.*, 2006).

Furthermore, when determining the required sample size, average error variance (AVE) was considered as a more relevant indicator. Models containing multiple constructs within communalities below 0.5 (i.e. standardised loading estimates <0.7) require larger sample sizes for convergence and model stability, and more than two item factors (Enders and Bandalos, 2001; Hair *et al.*, 2006). Thus, in this study, only factors with communalities above 0.5 were retained during the EFA (**See Appendix 4**)

Finally, the researcher considered several other issues concerning model structures, estimation techniques and analysis programme used. Hair *et al.*, (2006) argued that the most important part of SEM analysis is the identification and communication of the theoretical model. Therefore, a research framework was identified, and later a free parameter model was specified, and the path diagram input into the AMOS software. The Maximum Likelihood estimation technique was also used to estimate the structural model, as it is more efficient and unbiased when assumptions of multivariate techniques were met. This is as compared with ordinary least squares (OLS), weighted least squares (WLS), generalised least squares (GLS) and asymptotically distribution free (ADF) techniques. Although there are several computer programs available that could be used to conduct the SEM analysis, (i.e. LISREL, CALIS, and EQS), AMOS was chosen based on its user-friendliness, convenience and availability, as an extension of SPSS. However, the program for analysis should not be selected on user-friendliness at the expense of theoretical judgement, and researcher control is essential to SEM (Hair *et al.*, 2006).

6.1.4: Measurements Criteria used for Assessing Model Validity

To assess the measurement model validity for this study, the main question was “is the measurement model valid?” The model validity was determined by goodness-of-fit (GOF), and specific evidence of construct validity (Thompson and Daniel, 1996). According to Hair *et al.* (2006, p. 745), the GOF indicates how well the specified model reproduces the covariance matrix among the indicator items (i.e. the similarities of the observed and estimated covariance matrices). Three alternative GOF measurements can be used: namely, absolute measures, incremental measures and parsimony of fit measures.

For this study, several measures were used to determine the validity of the measurement model (see table 6.3 below). The Chi-square (χ^2) test was used in SEM to quantify the differences between observed and estimated covariance matrices (Hair *et al.*, 2006; Ho,

2006). A Chi-square (χ^2) test was used to test the resulting differences in the covariance matrices ($S - \sum k$). The researcher tested the hypothesis that there was no difference between matrices (i.e. low χ^2 values). That would support the model as representative of the data. Chi-square was used when determining small χ^2 value (and a corresponding larger p-value), which indicated no statistically significant differences between the matrices, and supported the theory used to specify the model (Hair *et al.*, 2006). Furthermore, the degrees of freedom (df) representing the amount of mathematical information available to estimate the model parameter was co-opted. Although sample size doesn't affect the 'df', it does influence the use of chi-square as a GOF measure (Ho, 2006). Thus, the recommended ratio χ^2 : df is ≤ 3 (Scholderer *et al.* 2004).

Mathematically, the Chi-square equation is

$$\chi^2 = (N-1) (\text{Observed sample covariance matrix} - \text{SEM estimated covariance matrix})$$

$$\chi^2 = (N-1) (S - \sum k)$$

While, 'degrees of freedom' is

$$df = \frac{1}{2} [(p)(p+10)] - k$$

Other measures adopted were root mean squared approximations (RMSEA) < 0.06 (or up to 0.08), which considers the error of approximation in the populations (Ho, 2016). This was adopted as the main measure for the model fit, as recommended by Scholderer *et al.* (2004) and Blunch (2013).

Another model fit measure considered was the standardised root mean square residual (RMR), where the suggested fit should be ≤ 0.80 for an adequate relative fit index (Deng *et al.*, 2005). The comparative fit index (CFI) ≥ 0.95 , and the Tucker-Lewis index (TLI) ≥ 0.95 , were also used to check the appropriateness of models when testing for group invariance (Hair *et al.*, 2006; Schreiber *et al.*, 2006). However, it should be noted that these conditions were not met all the time (Ho, 2006). The analysis for group invariance was conducted by establishing the baseline models for the specific subgroups in the sample collected (Hair *et al.*, 2006; Byrne, 2008).

Table 6. 3: A Summary of Measures of GOF used in the study.

Measures for model fit		General rule for acceptable fit if data is continuous
Chi Squared	χ^2	Ratio of χ^2 to $df \leq 2$ or 3, useful for nested models/model trimming.
Degrees of Freedom	df	
Root mean squared approximations	RMSEA	< 0.06 (or up to 0.08)
Standardised RMR	SRMR	≤ 0.80
Comparative fit index	CFI	≥ 0.95
Tucker-Lewis index	TLI	≥ 0.95
Increment Fit Index	IFI	≥ 0.95

6.1.5: Specification and Assessment of the Structural Model Validity

The structural model denotes the specification of relationships between the constructs, based on the proposed theoretical model. Simply, the model specifies the relationships that exist between the independent and dependent constructs. This aides in developing hypotheses to be tested. For this study, the researcher developed a structural model that utilised both the complete set of constructs and indicators, both in the measurement and as the structural model.

To assess the structural model's validity, a number of processes were followed when validating, though there were differences between the two models (Hair *et al.*, 2006; Ho, 2006). When validating the structural model, alternative or competing models were compared, using the competitive model approach. Next, during the structural model development, emphasis was placed on the estimated parameters for the structural relationships, as they provided direct empirical evidence relating to the hypothesised relationships depicted in the structural model. This was as opposed to the measurement model, in which the focus is on the model fit. Furthermore, in addition to using the Chi-square to test GOF for the structural model, the researcher used two absolute indices (χ^2 : $df \leq 3:1$, RMSEA, SRMR), one incremental index (CFI, TLI), one goodness-of-fit indicator (TLI) and one badness-of-fit indicator (RMSEA) (Hair *et al.*, 2016; Ho, 2006). The next section presents the statistical analysis of the demographic data, test for normality and validity as well as reliability of the data.

6.2: Statistical Analysis of the Respondents Demographic Data

6.2.1: Normality test

For testing the normality of the data, the two measures used to determine the distribution were skewness and kurtosis. Whereas kurtosis was used to determine the height of the distribution, skewness was used to describe the balance of the distribution; whether it was unbalanced and lop-sided to either right or left, or centred and symmetric (Hair *et al.*, 2006, p. 80). Based on the summary in table 6.4, demographic data regarding the respondents position, age, gender and education levels showed a normal distribution, as they were within the required ± 2.58 (at 0.01 level of significance), while respondents' ethnicity was skewed to the left (+3.765). The respondents' position (-0.856), however, and gender (-1.002) indicated a platykurtic (flatter) distribution, whilst respondents' age (+0.247), education (+10.865) and nationality (+13.745) denoted a leptokurtic (peaked) distribution. Respondents' education and nationality were highly peaked, because most of the respondents reported that they had an undergraduate degree, whilst in terms of nationality, they were mainly Kenyans.

Table 6. 4: Descriptive data on respondents' demographics.

Respondents	Median	Mode	Std. Deviation	Variance	Std. Error of Skewness	Kurtosis	Std. Error of Kurtosis
Position	4.00	1	2.784	7.751	.393	-.856	.277
Age	3.00	2	.949	.901	.742	.247	.277
Gender	2.00	2	.448	.201	-1.002	-1.002	.277
Education	5.00	5	.975	.951	-2.587	10.865	.277
Nationality	1.00	1	.934	.873	3.765	13.745	.277

6.3: Description of the Sample

This section shows a summary of measures of distribution for 34 manifest variables extracted from the total of 43 underlying variables used for data collection. This was to determine the effects of firm level strategic behaviours on regional development. Several tests were conducted to ensure that the data collected was fit for statistical analysis (Hair *et al.*, 2006). It

is worth noting that all multivariate techniques rely on underlying assumptions, both statistical and conceptual, which substantially affect their ability to represent multivariate relationships. This study is based on statistical inferences, and so the assumptions of multivariate normality, linearity, independence of error terms, and equality of variances in dependent relationships must all be met. However, Hau and Marsh (2004) stated that all these assumptions are rarely met within a single study, especially when studies using ordinal data are employed in multivariate analysis.

6.3.1: Distribution (Normality) Tests

The rule of thumb is based on the notion that skewness and kurtosis tests are required as a basic descriptive statistic for variables computed using SPSS. This was applied to the manifest variables used to infer the relationship between the strategic behaviours of family (and non-family) firms and regional development. The skewness and kurtosis Z-values (Table 6.5) normal Q-Q-plots were used to examine normality, as well as the histograms in figure 6.2. These indicated that the data was a little skewed and kurtotic for some variables but did not differ significantly from normality estimates. Most of the variables were deemed to be normally distributed. Therefore, this indicated that the data were approximately normally distributed and suitable for statistical analysis.

Table 6. 5: Results for multivariate normality test

Variable	Mean	SE	Variance	Standard deviation	Skewness	Kurtosis
EO-IProc	5.02	.098	2.931	1.712	-.822	-.310
EO-ROri	4.22	.100	3.075	1.754	-.280	-.875
EO-RExp	5.03	.091	2.522	1.588	-.961	.156
EO-REnv	4.97	.092	2.591	1.610	-.809	-.153
EO-PPos	5.07	.089	2.453	1.566	-.920	.149
EO-PIIntroP	4.51	.097	2.917	1.708	-.489	5.10
EO-CAIdeas	5.10	.092	2.579	1.606	-.940	.279

Family Business and Regional Development

EO-CAPost	4.34	.097	2.899	1.703	-.325	-.863
EO-CAComp	4.88	.095	2.744	1.657	-.741	-.244
DecMakersInter	5.18	.083	2.132	1.460	-1.779	1.982
DecEmpPartReg	5.12	.086	2.296	1.515	-1.624	1.240
DecInteract	3.99	.094	2.739	1.655	-.347	-1.116
DecOpenExc	4.72	.085	2.227	1.492	-1.210	.411
DecOpen	4.87	.085	2.202	1.484	-1.414	.972
TMT-Com	3.90	.107	3.505	1.872	-.037	-.816
TMT-Pol	3.42	.105	3.369	1.836	.184	-.900
TMT -Gov	4.50	.098	2.937	1.714	-.281	-.389
IC-R&D	4.68	.098	2.942	1.715	-.725	-.386
IC-NewVC	4.85	.089	2.415	1.554	-.721	-.193
ICSharVi	4.50	.098	2.924	1.710	-.528	-.740
IC-TechInn	5.09	.091	2.554	1.598	-1.001	.170
IC-KnowS	5.32	.084	2.185	1.478	-1.265	1.201
IC-Part	5.28	.080	1.987	1.409	-1.015	.530
Growth-Prof	4.86	.078	1.881	1.372	-.282	.190
Growth-Sal	4.93	.079	1.919	1.385	-.273	-.066
Growth-Netw	4.91	.077	1.826	1.351	-.191	.071
Growth-MktSh	4.73	.080	1.989	1.410	-.285	.189
Growth-fund	4.54	.085	2.216	1.489	-.124	-.016
RD-GDP	4.20	.091	2.552	1.597	-.188	-.481
RD-EconTran	4.21	.088	2.396	1.548	-.134	-.268

RD-EmpEm	4.42	.089	2.421	1.556	-.251	-.366
RD-ComEmp	3.74	.101	3.159	1.777	.000	-.769
RD-EmpIcrea	4.06	.098	2.928	1.711	-.110	-.630
RD-EmpOppo	3.88	.101	3.137	1.771	.005	-.741

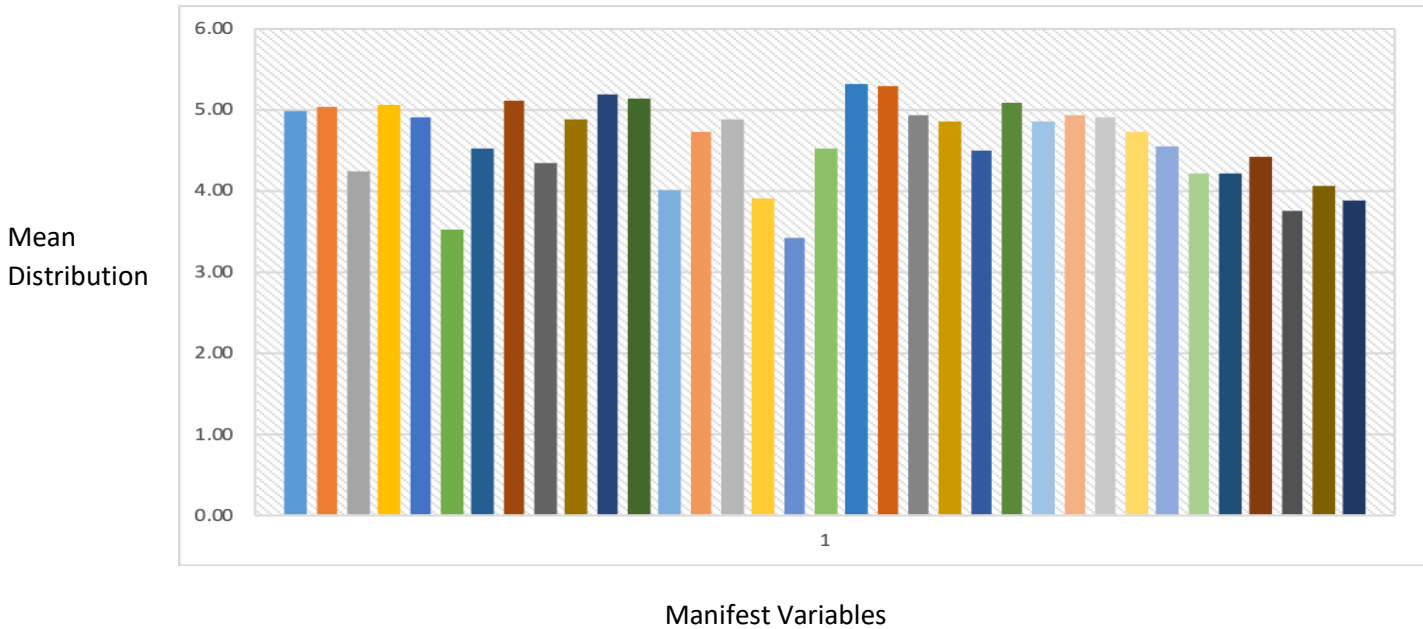


Figure 6. 2: A graphical mean distribution of the 34 manifest variables

Source: SPSS

6.3.2: Test for Multivariate Normality

Before the CFA was conducted, the items were tested for multivariate normality as recommended by Byrne (2013). Table 6. 6 below shows the univariate output with the kurtosis values, positive values ranging from 0.050 to 1.162 and negative values range from -0.289 to -1.081. Based on the assumption that that large positive values indicate that the variables reflect a significant positive kurtotic while large negative values reflect a significant negative kurtotic, the values did not report a substantial kurtotic (Kline, 2005). However, “regardless of whether the distribution of observed variables is univariate normal, the multivariate distribution can still be multivariate nonnormal” (Byrne, 2013, p. 104). Therefore, a further examination of the index of multivariate kurtosis and its critical ratio (CR) both appear to point at a multivariate nonnormal distribution. The CR is 37.978 which is >5 (Bentler, 2005). Although, this finding affects the multivariate interpretation based on the

ML estimation method, alternative estimation using Asymptotic distribution free (ADF) performs poor with sample sizes below 1000. Recent studies suggested that at the very least the sample sizes should be greater than 10 times the number of estimated parameters, where if the condition is not met, the results from the ADF method generally cannot be trusted (Raykov and Marcoulides, 2000 cited in Byrne, 2013, p. 105). Therefore, as the sample size was 370, ADF method of estimation could not be realistically used. Despite this, Byrne argues that one can continue to base their analysis on ML method of estimation as alternative methods for small samples (such as Satorra-Bentler robust method) unfortunately the method is not available in AMOS. Thus, researchers can rely on the overall goodness of fit tests and selected parameter statistics for the model.

Table 6. 6: Assessment of Multivariate Normality

Variable	min	max	skew	c.r.	kurtosis	c.r.
EO10	1.000	7.000	.138	.986	-1.081	-3.867
EO12	1.000	7.000	-.486	-3.478	-.711	-2.543
EO13	1.000	7.000	-.935	-6.690	.255	.911
EO15	1.000	7.000	-.737	-5.274	-.260	-.930
EO14	1.000	7.000	-.323	-2.312	-.869	-3.107
EO6	1.000	7.000	-.278	-1.991	-.880	-3.149
EO7	1.000	7.000	-.805	-5.757	-.170	-.609
EO5	1.000	7.000	-.956	-6.837	.134	.480
EO8	1.000	7.000	-.916	-6.549	.127	.456
EO9	1.000	7.000	-.865	-6.185	-.236	-.844
PerProf	1.000	7.000	-.281	-2.010	.168	.600
PerSales	1.000	7.000	-.272	-1.945	-.085	-.303
PerfNetw	1.000	7.000	-.190	-1.361	.050	.180
PerFund	1.000	7.000	-.124	-.885	-.036	-.128
PerMkt	1.000	7.000	-.284	-2.032	.166	.594
IndCl1	1.000	7.000	-.721	-5.158	-.399	-1.428
IndCl3	1.000	7.000	-1.259	-9.004	1.162	4.156
IndCl4	1.000	7.000	-1.010	-7.222	.502	1.796
IndCl6	1.000	7.000	-.717	-5.132	-.210	-.750
IndCl7	1.000	7.000	-.526	-3.759	-.747	-2.672
IndCl5	1.000	7.000	-.894	-6.392	.281	1.004

Variable	min	max	skew	c.r.	kurtosis	c.r.
IndCl8	1.000	7.000	-.996	-7.126	.148	.530
RD1_GDP	1.000	7.000	-.187	-1.338	-.492	-1.761
RD2_EcoT	1.000	7.000	-.134	-.957	-.283	-1.013
RD3_EmEmp	1.000	7.000	-.250	-1.788	-.380	-1.358
RD4_Com	1.000	7.000	.000	.002	-.776	-2.775
RD5_EmpCre	1.000	7.000	-.110	-.785	-.639	-2.287
RD6_EmpOpp	1.000	7.000	.005	.034	-.748	-2.676
RD7_WeaDiv	1.000	7.000	.193	1.382	-1.035	-3.700
Multivariate					213.727	44.157

6.3.2: Statistical test of Normality for Family and Non-family Firms

In addition to examining the normality probability plot for the manifest variables, it is also generally recommended to use statistical tests to assess normality when data is collected from two independent groups (Hair *et al.*, 2006). The two most used tests are Shapiro-Wilks and a modification of the Kolmogorov-Smirnov test. The null hypothesis states that the data are normally distributed, and this is only rejected when there is statistically significant differences between the two groups ($p < 0.05$). The Shapiro-Wilks and Kolmogorov-Smirnov tests were conducted to determine the differences for the independent variables and dependent variables for each construct at the level of significance ($p = 0.05$) (Hair *et al.* 2006; Ho, 2006). The examination of the manifest variables using the Kolmogorov-Smirnov test (as sample size was larger than 50) indicated that the variables are non-normally distributed, as the level of significance was statistically significant ($p < 0.05$) (See Appendix 4a) (Doane and Steward, 2011; Razali and Wah, 2011; Cramer and Howitt, 2004; Shapiro and Wilks, 1965). Therefore, the null hypothesis was partially confirmed, and the data established to be non-normally distributed which required the application of non-parametric test.

To determine whether the distribution of the data for the two independent groups (family and non-family firms) was similar, a Levene's test for equality of variances was conducted using the thirty-four manifest variables that examined the mean variance. The results indicated that the variance of the means of some of the variables were statistically significant ($p < 0.05$), whilst in most of the variables, there were no statistically significant differences (see Table 6.6). For instance, all the variables tested for 'decision-making within the firm' had all the

variables reporting statistically significant differences. For EO, three out of nine variables were significant. Whilst social capital, firm growth, firm involvement in industrial clusters and regional development did not report statistically significant differences.

Table 6. 7: Levene’s test of the means of family and nonfamily firms

Variables	Family Business		Nonfamily Business		t-test	Outcome
	Mean	SD	Mean	SD	t-test (sig.)	
EO-IProc	4.85	1.806	5.14	1.640	.048	Stat. Significant
O-RExp	4.91	1.628	5.11	1.559	.332	Not Significant
EO-ROri	4.07	1.844	4.32	1.687	.119	Not Significant
EO-REnv	4.59	1.701	5.23	1.494	.021	Stat. Significant
EO-PPos	4.92	1.611	5.16	1.532	.229	Not Significant
EO-PIntroP	4.42	1.831	4.58	1.622	.053	Not Significant
EO-CAIdeas	4.78	1.819	5.31	1.409	.002	Stat. Significant
EO-CAPost	4.21	1.768	4.43	1.656	.417	Not Significant
EO-CAComp	4.74	1.780	4.98	1.565	.052	Not Significant
DecPart	4.85	1.733	5.39	1.199	.000	Stat. Significant
DecEmpPartReg	4.85	1.690	5.30	1.360	.000	Stat. Significant
DecRegInte	3.97	1.869	4.01	1.497	.000	Stat. Significant
DecInteractive	4.42	1.813	4.93	1.191	.000	Stat. Significant
DecOpenExch	4.60	1.752	5.06	1.243	.000	Stat. Significant
TMT-Com	3.96	1.814	3.85	1.914	.203	Not Significant
TMT-Pol	3.37	1.778	3.46	1.877	.348	Not Significant
TMT -Gov	4.35	1.624	4.61	1.769	.079	Not Significant

IC-R&D	4.52	1.718	4.80	1.709	.773	Not Significant
IC-KnowS	5.10	1.497	5.46	1.452	.926	Not Significant
IC-Part	5.17	1.469	5.36	1.367	.950	Not Significant
IC-NewVC	4.63	1.590	5.00	1.515	.208	Not Significant
ICSharVi	4.37	1.755	4.58	1.678	.391	Not Significant
IC-TechInn	4.90	1.622	5.22	1.572	.356	Not Significant
Growth-Prof	4.80	1.385	4.90	1.365	.694	Not Significant
Growth-Sal	4.98	1.428	4.89	1.358	.860	Not Significant
Growth-Netw	4.80	1.426	4.99	1.297	.859	Not Significant
Growth-MktSh	4.73	1.380	4.73	1.434	.577	Not Significant
Growth-fund	4.46	1.559	4.60	1.441	.398	Not Significant
RD-GDP	4.22	1.606	4.19	1.596	.670	Not Significant
RD-EconTran	4.10	1.561	4.28	1.539	.583	Not Significant
RD-EmpEm	4.20	1.572	4.57	1.532	.633	Not Significant
RD-ComEmp	3.77	1.798	3.72	1.768	.932	Not Significant
RD-EmplCrea	3.98	1.701	4.10	1.721	.518	Not Significant
RD-EmpOppo	3.93	1.758	3.85	1.784	.440	Not Significant

Furthermore, to test whether or not there were any differences between the median values of the two independent groups, a Mann-Whitey test was conducted. The Mann-Whitney test is considered the alternative to t-test when the dependent variable is not normally distributed (Saunders *et al.*, 2012; Bryman, 2016). The null hypothesis is that there are no differences between the median values of the two independent groups. An assumption associated with the Mann-Whitney test is that the distribution of the data is the same (homogeneity of variance), and not necessarily normally distributed data (Bryman, 2016). An evaluation of dependent variable using Mann-Whitney test presented in table 6.7 indicated that there were no

statistically significant differences between the medians of the two independent groups as the p values were >0.05 . Thus, it is confirmed that the data between the two groups is normally distributed.

Table 6. 8: Mann-Whitney test for the dependent variable

Test Statistics^a

	RD-GDP	RD-EconTran	RD-EmpEm	RD-ComEmp	RD-EmplCrea	RD-EmpOppo
Mann-Whitney U	11092.500	10871.500	10133.500	11065.500	11027.000	10907.500
Wilcoxon W	27928.500	18621.500	17883.500	27901.500	18777.000	27743.500
Z	-.348	-.649	-1.652	-.379	-.431	-.591
Asymp. Sig. (2-tailed)	.728	.516	.099	.705	.666	.555

a. Grouping Variable: Type of business

Further, upon examination of the six latent constructs used in the study (see Table 6.8), there were no statistically significant differences on the distribution of data for both family and nonfamily groups ($p>0.5$).

Table 6. 9: Mann-Whitney test for the six latent constructs used in the study

Test Statistics^a

	Industry Cluster	Decision Making	TMTSocap	RD	FirmGrowth	EO
Mann-Whitney U	9871.000	10434.000	11078.000	10942.000	10974.000	10072.000
Wilcoxon W	17621.000	18184.000	18828.000	18692.000	27810.000	17822.000
Z	-1.933	-1.195	-.351	-.529	-.487	-1.669
Asymp. Sig. (2-tailed)	.053	.232	.725	.597	.626	.095

a. Grouping Variable: Type of business

6.4: Validity and Reliability of the Data Set

This section focuses on answering the question as to whether or not the data is suitable for multivariate statistical analysis. Firstly, Hair *et al.* (2006) has emphasised that sample size plays a significant role in achieving statistical significance. For smaller sample sizes, the sophistication and complexity of multivariate techniques may easily result in either, (1) too little statistical power for the test to realistically identify significant results, or (2) too easily 'over fitting' the data, such that the results are artificially good because they fit the sample yet provide no generalizability. Similarly, the same effects can occur for larger samples, which could make the statistical test overly sensitive (p 24).

To overcome these challenges, the recommended sample size is one hundred or larger, and whereas sample sizes exceed four hundred respondents, the researcher must examine all significant results to ensure that they have practical significance. This is due to the increased statistical power from the sample size. Furthermore, the sampling adequacy is to have at least five times as many observations as the number of variables to be analysed, and the more acceptable sample size would be ten to one. The study utilised a sample size of 307 questionnaires, which was greater than the hundred suggested in the literature and had a sample adequacy ratio of 6:1 (Hair *et al.*, 2006; Ho 2006). Therefore, based on this assumption, the data was deemed suitable for factor analysis technique, which was employed for this study.

Establishing the validity and reliability of the data can essentially reduce the measurement errors. For this study, several statistical analyses were conducted to establish that the measures accurately represented what they were supposed to measure, and whether the observed variables measure the true value, and are error free (Hair *et al.*, 2006). To justify factor analysis, a high communality and sufficient inter-correlation between the variables is required. According to Ho (2006), to conduct factor analysis, there should be at least 33% of significant inter-correlation of manifest variables. In addition, in the measures of sampling adequacy (MSA), values must exceed 0.5 for both individual variables and the overall test. Hence, Kaiser-Meyer-Olkin (KOM) should be above 0.6, which is considered as the least value for a reasonable factor analysis. Additionally, sufficient correlation should - exist statistical significance of (sig. >0.50) - while the total variance explained should be at least 60% (Hair *et al.*, 2006).

6.4.1: EFA: Assessment of Convergent and Discriminant Validity

EFA is a statistical technique used in identifying, assessing and refining manifest variables. It was the appropriate technique for analysing the variables that were collected to estimate the relationships between the constructs to determine the extent to which family firms contributed to RD. The sampling adequacy was tested using Bartlett's test of sphericity in table 6.9, which tests "the hypothesis that the correlation matrix is an identity matrix: that is, all the diagonal items are 1 and all of-diagonal terms are 0". (Ho, 2006, p2818). Ho (2006) pointed out that the criterion is to reject the hypothesis if the test value is large and the level of significance is >0.05 . The test value was 6059.186, and the p value was below the required 0.05 level of significance at 561 degrees of freedom (df). Therefore, the hypothesis that the correlation matrix is an identity matrix was rejected. Furthermore, the KMO measure of sampling adequacy was .905 which is higher than the recommended 0.6 (Hair *et al.*, 2006, Ho, 2006).

Overall, all the minimum rules that are required for EFA were met, including those suggesting that the manifest variables exceed the 0.5 required communalities (Hair *et al.*, 2006). Further, the correlations matrix shown in Appendix 4 reveals that there was a high correlation between the thirty-four manifest variables, and examination of the matrix disclosed that 66% of the variable were highly inter-correlated.

Table 6. 10: A Summary of the Validity tests using KMO and Bartlett's Test

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.905
Bartlett's Test of Sphericity	Approx. Chi-Square	6059.186
	df	561
	Sig.	.000

In determining the methods for factors extraction using EFA, several factor extraction methods were considered. According to Hair *et al.* (2006), these methods include principal component analysis (PCA), Principal Axis factoring (PAF), Maximum likelihood, alpha factoring and image factoring. Although the choice of the factor analysis is important, as it

has an implication in the factor extraction, most approaches have similar results with large samples (Gorsuch, 1990, Mulaik, 1990; Hinton and McMurray, 2017). PCA is used when the objective is to summarise most of the original information (variance) in a minimum number of factors for prediction purposes. However, common factor analysis is used to identify underlying factors or dimensions that reflect what the variables share (Hair *et al.*, 2006).

Thus, in order to determine the **convergent validity** of the EFA, the data was subjected to PCA to obtain the minimum number of factors needed to account for the maximum proportion of the total variance (Pett *et al.*, 2003). Promax was adopted as the rotation method, as it was suggested as the most appropriate method for research involving human behaviour (Pett *et al.*, 2003). Initially, no factors were dropped, but after examination of the factors using a threshold factor loading of 0.5 or greater (considered as practically significant) and eigenvalues of >1 (Kaiser's rule, 1970; Hair *et al.*, 1995), those that had a communality factor below 0.50 were dropped. The total number of variables were reduced from 43 to 34, as indicated in the table 6.9 below, column 1 (communalities). This revealed that the variables had a high shared common variance between them, which is within the range recommended by Hair *et al.*, (2006) (**appendix 5b**).

The next step was to examine the **discriminant validity** of the factors extracted to determine their suitability for EFA. Several extraction rules and approaches were used (Williams, Onsman, and Brown, 2010). Firstly, an examination of the pattern matrix was conducted to ensure that the factor loading was above 0.5 and that there were no cross loadings of factors. In addition, the factor loading within a single latent variable was averaged to determine if this met the required 0.7, as indicated in the (**appendix 5d**). Secondly, the table of total variance explained was examined to determine the total amount of variance explained by the extracted variables, which was 66.509% (**appendix 5c**) (i.e. above the recommended 50-60% for social research (Bryman, 2016). Finally, the component correlation matrix was examined for any latent factors that share a majority of variance above 0.7, where the highest value was 0.564. Hence, no factors were highly correlated (**appendix 5f**).

Table 6. 11: A Summary of the Exploratory Factor Analysis, Communalities, Factor Loadings, Eigen Values and Variance explained

Latent Factors	Indicators	Communalities	Factor Loadings	Eigen Values	Variance Explained (%)
Firm entrepreneurial orientation	Designs its own unique new processes and methods of production (EO-IProc)	0.499	0.668	11.338	33.346
	strong tendency for high-risk projects (EO-ROri)	0.533	0.827		
	Experimentation and original approaches to problem solving (EO-RExp)	0.582	0.75		
	Bold, wide-ranging acts are necessary to achieve the firm's objectives (EO-REnv)	0.68	0.906		
	Bold posture to maximise the probability of exploiting opportunities (EO-PPos)	0.625	0.754		
	First business to introduce new products/services (EO-PIntroP)	0.559	0.649		
	Strong tendency towards the firm being ahead of others in introducing novel ideas or products (EO-CAIdeas)	0.665	0.713		
	Adopts a very competitive 'undo-the-competitors' posture (EO-CAPost)	0.52	0.62		
	Very aggressive and intensely competitive (EO-CAComp)	0.598	0.625		
Firm decision-making strategy	Decision-making is participative (Dec-Makers Inter)	0.613	0.726	1.622	4.771
	Top decision-makers in our firm interact with all employees on an informal basis (Dec Emp Part Reg)	0.645	0.794		
	Participates in strategic decision-making on a regular basis (Dec-Regul)	0.623	0.783		
	Decision-making in our firm is interactive (Dec-Inter)	0.837	0.924		
	Free and open exchange of ideas among employees about any strategic issues (Dec-Open Exc)	0.758	0.891			1.396	4.105
Firm 'bridging social capital'	Establishing sustainable relationships with community leaders (TMT-Com)	0.737	0.841		

	Establishing sustainable relationship with political leaders (TMT-Pol)	0.776	0.892		
	Establishing sustainable relationships with government agencies & officials (TMT –Gov)	0.546	0.594		
Firm performance	Growth in profitability (Growth-Prof)	0.816	0.921		
	Growth in Sales (Growth-Sal)	0.816	0.893		
	Growth of net worth (Growth-Netw)	0.835	0.917	4.041	11.884
	Growth in Market share (Growth-MktSh)	0.75	0.771		
	Ability to fund growth from profitability (Growth-fund)	0.693	0.82		
Regional development	Firm contributes to Gross Development product (RD-GDP)	0.717	0.83	2.311	6.797
	Firm plays a role to meeting the economic transformation agenda for the region (RD-EconTran)	0.769	0.841		
	Employees are well informed about our economic transformation agenda (RD-EmpEm)	0.692	0.806		
	Firm allocates a % of income for community activities (RD-CompEm)	0.633	0.863		
	Firm has created a substantial number of new positions (RD-ComEmp)	0.702	0.775		
	The firms have added substantial number of employees to our firm (RD-EmpOppo)	0.608	0.656		

6.4.2: Reliability Test Using Item-Specific Measures and Cronbach’s Alpha Test

Besides the statistical tests conducted to determine the validity of the extracted factors, the reliability (or internal consistency) of the set of test items was statistically tested using the item-specific measures obtained from the EFA and overall reliability (Bryman, 2016; Hair *et al.*, 2006; Mitchell and Jolly, 2004; Saunders, 2012). Firstly, the items’ reliability was assessed by examining the item-to-total correction and the inter-item correlations (correlations among items) (Hair *et al.*, 2006). According to Robinson, Shaver and Wrightman (1991), the item-to-total corrections should exceed 0.5 whilst their item correlation should exceed 0.3. These two conditions were met when, both the communalities and pattern matrix tables were examined (See Appendix 5). Secondly, Cronbach’s Alpha was

used to determine the internal consistency of the entire scale in measuring the concepts. It captured the estimated average of all the correlated coefficients of the measured items in the test. In this case, the Cronbach's Alpha for all the 34 items that were extracted using the EFA was determined. The analysis indicated a Cronbach's Alpha coefficient of 0.935, which was higher than the recommended value of 0.6 (Ho, 2006).

Table 6. 12: Reliability for the thirty-four variables

Reliability Statistics

Cronbach's Alpha	N of Items
.935	34

Next, to confirm that the reliability criteria of ($\text{Alpha} > 0.6$) for each of the latent variables that were extracted from EFA, representing the six constructs identified, reliability tests estimating the Cronbach's Alpha coefficient's values were conducted. The results were all above the recommended 0.6. Based on Table 6.12 below, the items used to collect data on the manifest variables were highly correlated to each other, and also to the summated scale score (Hair *et al.*, 2006). This indicated that internal consistency and internal reliability were achieved, which demonstrated the appropriateness of the measured variables used in the research instrument.

Table 6. 13: Reliability Test for the six constructs

Latent Construct	Number of Items	Cronbach's Alpha
Firm Entrepreneurial orientation	9 items	0.890
Firm decision-making strategy	5 items	0.883
Firm social capital (bridging)	3 items	0.772
Involvement in Industry Clusters	6 items	0.869
Firm performance	5 items	0.928
Regional development	6 items	0.897

The table above shows a summary of the Cronbach's Alpha coefficients for the six constructs. The first, entrepreneurial orientation, shows a Cronbach's alpha of $0.890 > 0.6$. This demonstrates that the nine items loaded on the latent factor were reliable for measuring the same construct – the entrepreneurial orientation dimension of the firm. Similarly, the other

five latent factors indicated a Cronbach's alpha coefficients >0.6 : specifically, decision-making dimension (5 items =0.883), social capital dimension (3 items=0.772), firm involvement in industry cluster dimension (6 items=0.869), firm growth dimension (5 items=0.928), and regional economic development dimension (6 items=0.897). So, the items used to collect data on the manifest variables were relatively highly correlated to each other, as well as to the summated scale score (Hair et al., 2006). Therefore, this indicated that internal consistency and internal reliability were achieved, which demonstrated the appropriateness of the measured variables used in the research instrument.

6.4.3: Results of the Six Factors Latent Variables from the EFA

Beyond testing for the distribution, interconnectedness, correlations and reliability of the data collected, through the observed variables from the research instruments, the results were summarised, as shown in table 6.1 above. This showed the underlying indicators for these manifest factors, their respective weights, the eigenvalues and the total variance explained. Furthermore, an examination of the scree plot, which shows the relationship between the eigenvalues (on the Y-axis) against the number of latent factors in their order of extraction (on the X-axis), revealed that six latent factors were identified. The Scree test determines the optimum number of factors that can be extracted before the amount of unique variance begins to dominate the common variance structure (Hair *et al.*, 2006, p. 120; Williams *et al.*, 2010). The Scree test figure below showed an optimum number of six component factors were extracted with an eigenvalue of ≥ 1 (Hair *et al.*, 2006).

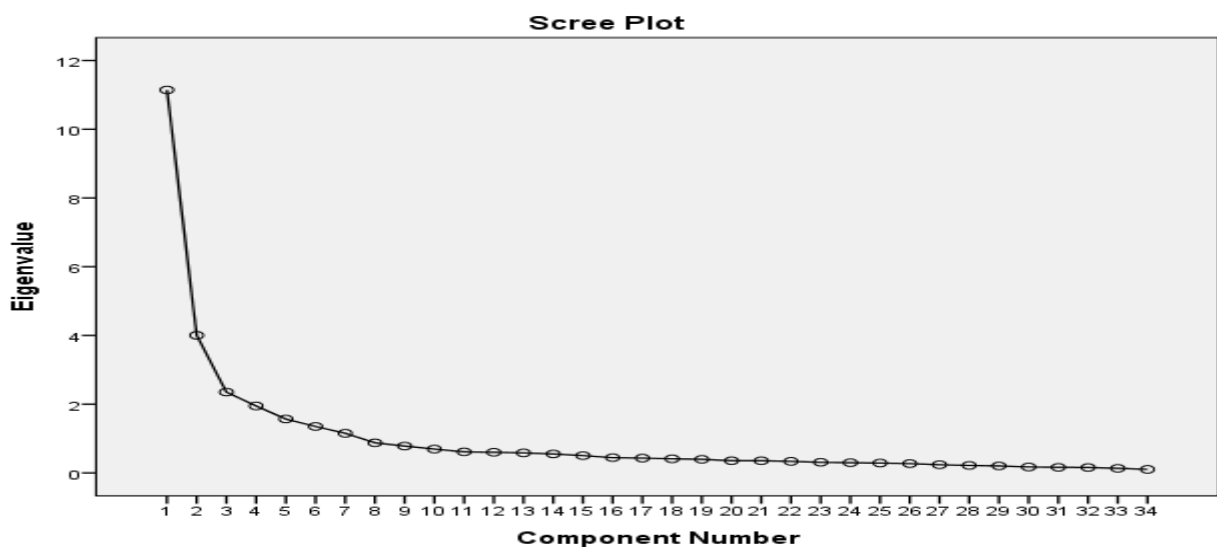


Figure 6. 3: Scree plot indicating the Eigenvalues of the relevant component factors

The rotated factor matrix table (6.13) below shows the six factors extracted after the principal component analysis, using Promax (Oblique) rotations. An examination of the matrix indicated that nine observed variables loaded significantly onto factor 1, six observed variables loaded onto factors 3 and 4, five variables loaded onto factors 2 and 5, and three variables loaded onto factor 6. Furthermore, the variables that loaded significantly on the six factors identified in the matrix had an average of more than 0.7, as recommended by Gaskin (2012). Consequently, though the variables indicated some cross-loadings across other factors, none of these cross-loadings was significant (± 0.3 and above). Therefore, it could be concluded that the individual variables used in the research instruments measured the same constructs, as they were highly correlated (Hair *et al.*, 2006; Ho, 2006).

Table 6. 14: Rotated factor matrix for the thirty-four items

Pattern Matrix

	Component					
	1	2	3	4	5	6
EO-REnv	.846	-.083	-.168	.070	-.057	.101
EO-ROri	.783	.071	-.238	-.035	-.077	.110
EO-RExp	.775	.007	-.085	-.083	.114	-.070
EO-PPos	.764	.003	-.103	.047	.055	.017
EO-CAIdeas	.710	-.016	.188	-.050	.071	-.011
EO-IProc	.660	-.006	.132	-.048	-.052	.041
EO-PIntroP	.648	.013	.214	-.084	.038	-.064
EO-CAPost	.629	-.056	.166	.115	-.052	-.107
EO-CAComp	.613	.120	.096	.083	.026	-.086
Growth-Netw	-.031	.925	.000	.004	.046	-.024
Growth-Prof	.014	.921	-.023	-.077	.026	.031
Growth-Sal	.044	.907	-.076	.010	-.063	.101
Growth-fund	-.053	.804	.063	.055	.059	-.092
Growth-MktSh	.047	.787	.071	.037	-.093	.060
RD-ComEmp	.029	-.247	.850	.023	-.011	.106
RD-GDP	-.054	.066	.846	-.163	-.018	.158
RD-EconTran	-.025	.026	.841	-.039	-.044	.150
RD-EmpEm	-.164	.057	.785	.154	.010	-.044
RD-EmplCrea	.116	.113	.747	.026	-.022	-.153
RD-EmpOppo	.073	.161	.664	.010	.042	-.128
IC-Part	-.122	.095	-.072	.812	-.110	-.036
IC-NewVC	.065	-.079	.002	.788	.041	-.013
IC-KnowS	-.070	.092	-.062	.786	.148	-.006

IC-TechInn	-.059	-.054	.179	.745	.030	.017
IC-R&D	.115	-.068	-.010	.731	-.094	.053
ICSharVi	.133	.006	.002	.703	.014	.062
DecInteractive	-.055	.014	.076	.006	.924	-.044
DecOpenExch	.002	-.012	.000	-.063	.888	.006
DecEmpPartReg	.070	-.055	-.103	-.020	.788	.052
DecRegInte	-.047	.015	-.010	.044	.783	.039
DecPart	.081	.033	-.020	.013	.726	.038
TMT-Pol	-.015	.056	-.027	-.008	.040	.861
TMT-Com	-.021	-.071	.151	.006	.039	.812
TMT -Gov	.081	.123	.053	.080	-.006	.605
Average of Items	0.714	0.869	0.789	0.761	0.822	0.759

Extraction Method: Principal Component Analysis.

Rotation Method: Promax with Kaiser Normalization.

a. Rotation converged in 6 iterations.

6.5: Summary of the Chapter

This chapter discussed in detail how the data collected was prepared, analysed and validated for statistical testing. The structural equation modelling techniques used for analysis were conducted followed the six steps recommended by Hair *et al* (2006) to ensure validity and reliability of the analysis, and the conclusions drawn from it. The chapter also described the process, procedures and criteria followed for data analysis using SEM. Finally, a factor reduction exercise was conducted, using principal component analysis, to identify, assess and refine the manifest variables. All conditions for measurement and the structural model analysis using CFA were met to a satisfactory level. The next chapter will present the findings and results generated from the analysis of the quantitative data for the study.

CHAPTER 7: FINDINGS AND ANALYSIS

7.0: Introduction

This chapter presents the findings and analysis of the quantitative data of the study. The chapter discusses the descriptive statistics, exploratory factor analysis, testing of the measurement and structural models with the aim of analysing whether the FFs contribute differently to RD, as compared with NFFs. The chapter is organised in eight sections.

The firms' characteristics are presented in section 7.1. Section 7.2 then shows the descriptive statistics for the latent factors identified from the EFA, and section 7.3 shows the descriptive statistics for the combined confirmatory factor analysis (CFA) of the measurement and structural models. In section 7.4, the structural model specification showing the path-analysis is explained. This is followed by the testing of hypotheses in sections 7.5, 7.6, and 7.7. The final section, 7.8, is a summary of the chapter.

7.1: Overview of the Demographic Differences between Family and Non-Family Firms

This section presents an overview of the descriptive findings, showing differences between FFs and NFFs.

7.1.1: Type of Business Ownership

Figure 7.1 shows the responses as regards the type of firm ownership. Respondents were asked to answer the question "which of the following best describes the type of ownership of the business?" Of the 307 firms included in the sample, 40.4% (n=124) of them self-identified as family firms, whilst 59.6% (n=183) self-identified as non-family firms. As stated earlier, family organisations are ubiquitous across the world, and therefore, the most common type of firm ownership. Although, this sample does not depict family firms as the majority in the economy, other studies have identified and used the same proportion of family firms in their analysis, such as Memili *et al.* (2015), with family firms representing 42.8%. The lower response rate from family firms can be attributed to several factors, which would be of concern to scholars utilising self-administered questionnaires across the field. Firstly, family owners and managers seem cautious of sharing ownership information regarding their firms. Secondly, family firms have a generally low response rate to unsolicited requests that might

expose their ownership or other related information. Thirdly, research questionnaires are frowned upon as an extra bit of work from a respondent’s perspective, being given a low priority and often getting forgotten. Finally, the response rate for self-completion, quantitative surveys has always been relatively low, in the range of 10-20% (Baruch, 1999; Sivo *et al.*, 2006). That could be even lower in a developing nation without an established mailing systems and infrastructures. Despite these challenges, the study findings did not report any bias when examining the multivariate relationships in the multivariate model (Rindfuss, *et al.*, 2015).

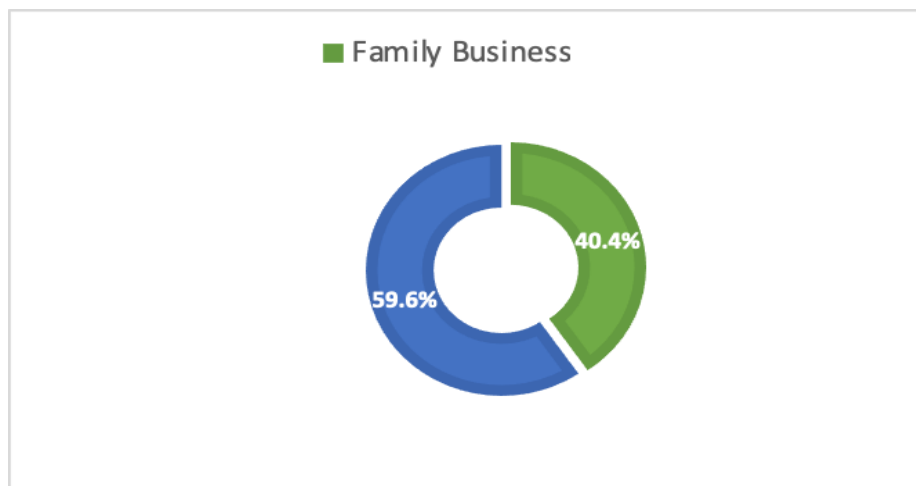


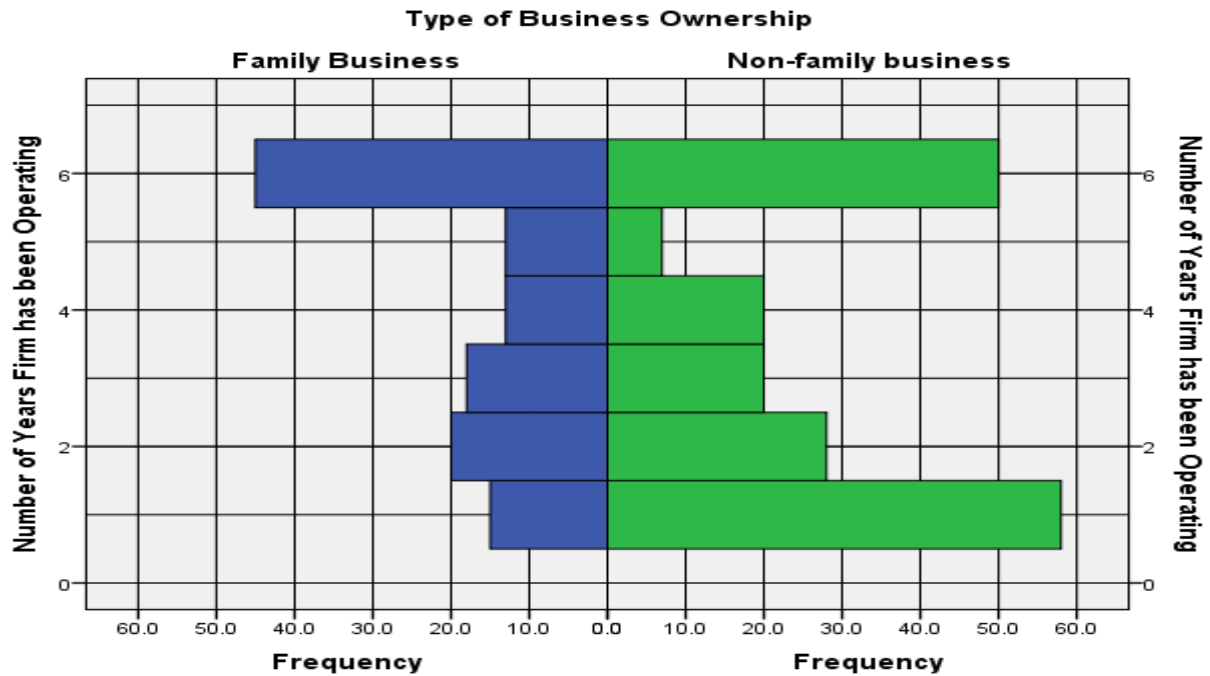
Figure 7. 1: Type of Business Ownership

Source: SPSS

The next sections compare the business profiles of the two subgroups, family firms (n=124) and non-family firms (n=183), based on the age, size, and sales distribution of the firm.

7.1.2: Type of Business Ownership and Age of the Firm

Figure 7.2 presents a comparison of the type of business ownership and the age of the firm. Whilst the majority of FFs in the sample have been operating for more than 25 years, the majority of NFFs have only been operating for less than 5 years. However, a few NFFs have operated for more than 25 years.



< 5 yrs.= 1	5-9 yrs. =2	10-14 yrs.=3	15-19 yrs.=4	20-25yrs.=5	Above 25yrs.=6
-------------	-------------	--------------	--------------	-------------	----------------

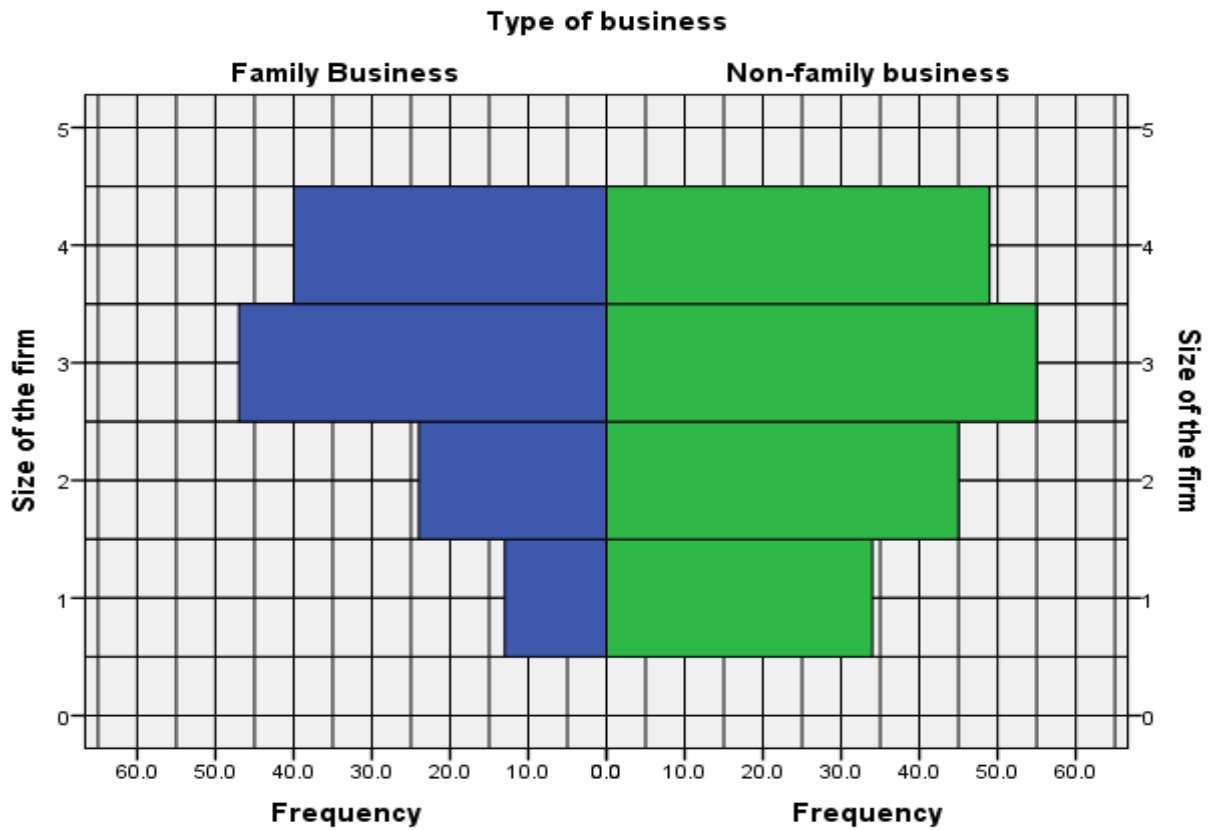
Figure 7. 2: Comparison between family and non-family firms, based on age of the firm

Generally, the data presented in figure 7.2 above showed that both types of firms were proportionally distributed, but that the majority of the FFs in the sample were older (had operated for more than 25 years), as compared with the proportion of NFFs. This finding indicated that older FFs constitute about 36.3 % of the total proportion of FFs in the sample. That is consistent with arguments that family firms have a lower transition rate, as only about 33.3% successfully transition to the second generation (Kets de Vries, 1993; Salmon, 2017). In addition to the size and wealth of the firm, the age of the firm is significant in determining its influence and prestige (O’Hara and Mandel, 2002). This has an implication for FFs behaviours and performance, based on the level of family involvement and a positive association with long-term business survival.

7.1.3: Comparisons of FFs and NFFs Based on Size of the Firm

Figure 7.3 illustrates the comparison between the two types of firms, and the size of the firm. As indicated, the majority of family firms are medium and large sized firms, which is similar

to non-family firms. However, there almost twice as many small, non-family firms compared to family firms in the sample.



Micro (0-9) =1	Small (10-49) =2	Medium (50-249) =3	Large (Above 250=4
----------------	------------------	--------------------	--------------------

Figure 7. 3: Comparison of the type of firm ownership and size of the firm between family and non-family Business

Based on the findings, the majority of the FFs are classified as either medium (50-249 employees) or larger (more than 250 employees), whilst NFFs seem to be proportionately distributed. This finding indicated that, because of their large size, they are likely to contribute more to RD. This is also consistent with previous studies suggesting that FFs are not only older but also larger (e.g. Salmon, 2017). Furthermore, given that FFs tend to be enduring and larger, they would tend to be more embedded in the regional environment, would positively influence their participation in industrial clusters.

7.1.4: Comparison between Family and Non-Family Firms’ Geographical Distribution of Sales.

Figure 7.4 below shows that the majority of both family and non-family firms targeted either the national or regional markets. However, a small proportion of both family and non-family firms targeted the county level market. There are twice as many as non-family firms as family firms that target African and Global markets.

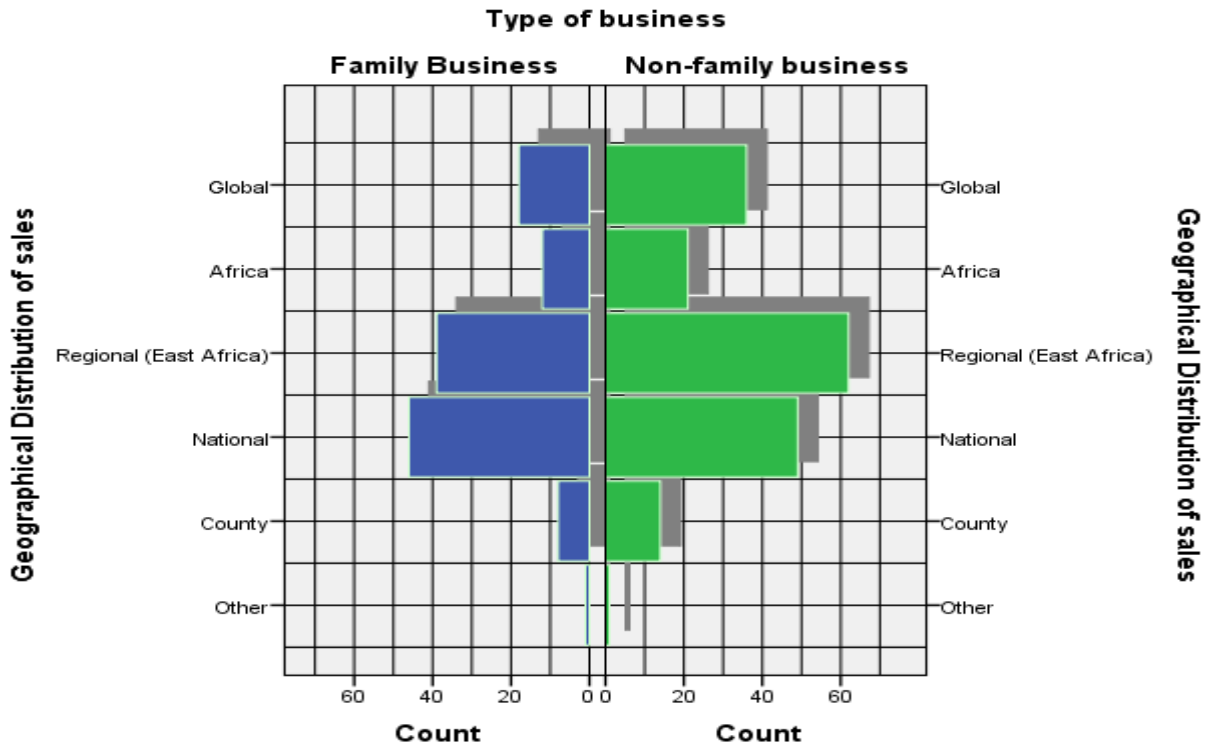


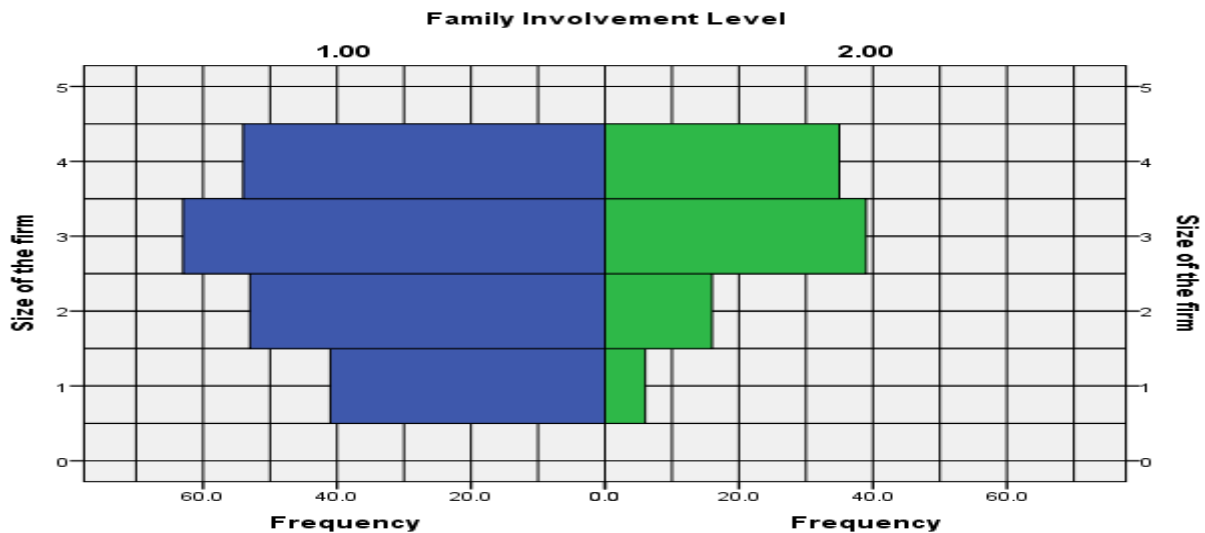
Figure 7. 4: Comparison of geographical distribution of sales between family and nonfamily business

The findings showed that a larger proportion of FFs focus on national and regional markets, showing their willingness to grow. However, there was a smaller proportion of FFs that focused on Africa and global markets, as compared with NFFs. This finding has implications for the kind of competitive strategies adopted by firms. Those that are focusing on African and global markets tend to focus on growth, and have to face different competitive environments as compared with firms that focus on national or county level markets.

7.1.5: Family Involvement in the Firm

Five variables were introduced in the questionnaire, as recommended by the existing literature (Westhead and Cowling, 1998; Chua *et al.*, 1999; Astrachan and Shanker, 2003). These were: 1) whether or not the CEO was a family member or not; 2) the number of senior managers in the firm (number of employees); 3) the percentage firm ownership; 4) family generations actively involved in the firm; and 5) whether or not there were plans to transfer ownership or management of the firm to family members (intra-family transfer).

After the data were collected, they were transformed, and later combined, to form a binomial classification based on whether the degree of family involvement in the firm was high (2), or low (1). Firms with high family involvement was defined by transforming the variables and multiplying them together to form a range of scores. Firms with at least a score of 3.0 were classified as firms with high family involvement (2), whilst those below 3.0 were classified as firms with low family involvement. Consequently, firms with high family involvement represented 31% (n=96), whilst those with low family involvement represented 69% (n=211).



Family involvement level

1=Low family Involvement	2=High Family Involvement
--------------------------	---------------------------

Size of the firm

Micro (0-9) =1	Small (10-49) =2	Medium (50-249) =3	Large (Above 250)=4
----------------	------------------	--------------------	---------------------

Figure 7. 5: An Analysis of Family Involvement and Size of Firm

As this Kenyan dataset is from a recent, valid and large-scale survey of privately-held firms, conducted during the study period to differentiate family from non-family firms, the researcher could not find a comparable dataset. Despite this, the findings were consistent with other studies from other parts of the world, which showed that when the level of family involvement in the firm is considered, the proportion of family firms reduces (Astrachan and Shanker, 2003). Approximately 33% of family firms that have passed to a second generation are older than their counterparts (Kets de Vries, 1993; Zahra, Hayton, & Salvato, 2004). Furthermore, the proportion of family firms show that majority are medium and large firms which is consistent with previous studies (Miller *et al.*, 2008). Therefore, differences on the age, size and proportion of family firms (based on the degree of family involvement) provides confidence that the sample is representative of the wider population of family firms and suitable for validation of the hypothesis.

7.2: Quantitative Findings of the EFA on the Six Latent Factors Obtained

This section discusses the quantitative findings on the six latent factors obtained from the EFA.

7.2.1: Firm Entrepreneurial Orientation

Table 7.1 below shows that the first set of variables loaded on factor 1, responsible for 33.346% of the variance in the model, is ‘firm entrepreneurial orientation’ (thereafter referred to as FEO). For this factor, 11 variables loaded significantly, but this was later reduced to a final nine variables after discriminant analysis. This set of variables reflects the entrepreneurial orientation of firms responsible for the highest variance in the factor model. The findings were consistent with the extant literature, which argued that the level of entrepreneurship within a region was considered to be the leading factor influencing economic and social development across the world (Audretsch and Thurik, 2000; 2001, Audretsch and Frisch, 2003; Audretsch, 2004; Memilli *et al.*, 2015; Stough *et al.*, 2015). Furthermore, the data from Kenyan firms has supported the proposition from prior research that firm level entrepreneurship exerts positive effects on regional competitiveness and growth, through areas such as knowledge spill-overs (Audretsch and Thurik, 2004). From the quantitative findings, the study confirmed that FEO is the leading factor responsible for firm level impact on regional development.

Table 7. 1: Findings of entrepreneurial orientation variables in family and nonfamily firms

No.	Items (variables)	Mean (Family)	Mean (nonfamily)	Median	Mode	Significance
1	EO-IProc	4.85	5.14	6	6	Stat. Significant
2	EO-ROri	4.91	5.11	4	5	Not Significant
3	EO-RExp	4.07	4.32	6	6	Not Significant
4	EO-REnv	4.59	5.23	5	6	Stat. Significant
5	EO-PPos	4.92	5.16	5	6	Not Significant
6	EO-PIntroP	4.42	4.58	5	6	Not Significant
7	EO-CAIdeas	4.78	5.31	5	6	Stat. Significant
8	EO-CAPost	4.21	4.43	4	6	Not Significant
9	EO-CAComp	4.74	4.98	5	6	Not Significant

Prior studies, that adopted EO dimensions to determine the level of entrepreneurship within a firm, defined firms as being either ‘entrepreneurial’ or ‘less entrepreneurial’ (Miller, 1983). This study operationalised five dimensions of EO, using 15 variables (Casillas and Moreno, 2010). From the 15 variables utilised, only nine items loaded. This captured ‘innovativeness’, ‘risk-taking’, ‘pro-activeness’, and ‘competitive aggressiveness’. Items representing the autonomy dimension referred to as the “independent action of an individual or team to bring forth an idea or vision and carrying it through” (Lumpkin and Dess, 1996, p140)] were not extracted from the EFA, despite the positive association of autonomy and entrepreneurial activities within firms (Miller 1983; Shrivastava and Grant, 1985, Lumpkin and Dess, 1996; Zellweger *et al.*, 2010). This was in line with Miller’s argument that activities associated with new entry firms, or start-ups, are separate from entrepreneurial orientation, which would be mainly concerned with firm level innovativeness, risk-taking and proactiveness. In general, the concept of firm level entrepreneurship is important, and should differentiate which orientations or strategies or activities impact on regional development.

The findings also reported significant differences between family and non-family firms on the three dimensions of ‘innovativeness’, ‘risk-taking’ and ‘competitive aggressiveness’. Family firms showed a lower tendency to design their own processes and methods, signifying low innovativeness, as compared with non-family firms. This was contrary to evidence from prior

research, which had indicated that family firms tended to be more innovative compared with non-family firms (De Massis *et al.*, 2016).

Additionally, the findings showed that family owners and managers rarely perceive bold and wide-ranging acts as necessary to achieve the firm’s objectives. Therefore, consistent with previous research, family firms are more likely to adopt a less proactive posture when reacting to the nature of the environment, as compared with family firms (Lumpkin and Dess, 2006). So, family firm owners and managers might be less likely to take risks (Gomez-Mejia *et al.*, 2007). Finally, family firms are less likely be at the forefront in introducing new ideas. That is supported by prior literature, which argued that rather than compete aggressively, family firms would prefer to be a ‘hidden champion’, as opposed to championing new ideas (Simon 1996a; Zellweger *et al.*, 2010).

7.2.2: Firm Performance

The second set of manifest variables, that loaded onto factor 2, and was responsible for explaining 11.884 % of the variance, was termed the ‘firm performance’ (FP) dimension as shown in Table 7.2 below. Five observed variables strongly loaded onto this latent construct. The underlying objective measures used have been tested in other studies (e.g. Eddleston and Kellermanns, 2007), and have been found to represent firm performance indicators (Love *et al.*, 2002; Eddleston and Kellermanns, 2007). For both family and non-family firms, the median and mode are the same. This finding revealed that both family and non-family firms reported a slightly above average firm performance, as compared with their industry competitors. Thus, both FFs and NFFs owners and managers were focused on growing their businesses.

Table 7. 2: Comparison between family and non-family firms focused on the firm performance construct

No.	Items (variables)	Mean (FFs)	Mean (NFFs)	Median	Mode	Significance
1	GrowthProf	4.80	4.90	5	5	Not Significant
2	GrowthSales	4.98	4.89	5	5	Not Significant
3	GrowthNetworth	4.80	4.99	5	5	Not Significant
4	GrowthMrk	4.73	4.73	5	5	Not Significant
5	GrowthFund	4.46	4.60	4	4	Not Significant

As indicated above, there were no significant differences observed on the individual variables between family and non-family firms. The findings were consistent with prior literature in that the use of traditional performance measures have not revealed the differences between family and non-family business performance (De Massis and Kotlar, 2013). Contrary to prior research studies, which indicated that family firm performance significantly differed from that of non-family firms (Anderson and Reeb, 2003), the study data indicated that this was not the case in the Kenyan sample. Neither do family firms consider themselves less profitable as compared with non-family firms. The literature has suggested that growing firms are more likely to have a positive impact on employment and revenue growth (Lee, 2006). The implication is that growing firms will have a positive impact on regional development by creating jobs, contributing to GDP and wealth creation (Memili et al., 2015; Valliere and Peterson, 2009). Therefore, the study set out to test the hypothesis that firm performance mediates the relationship between firm-strategic behaviours and regional development.

7.2.3: Regional Development

Table 7.3 below showed that the third set of variables loaded onto the dependent construct that measures the ‘regional development’ (RD) dimension, and that this was responsible for 6.797% of the variance. This was where the underlying indicators suggested were the areas where respondents perceived their firms contributed the most. These variables were suggested for capturing the firm level aggregate effects at the regional level (Audretsch and Thurik, 2002; Thurik *et al.*, 2002). According to Thurik *et al.*, 2002 “the accumulated results of firm performance affects economic development at the aggregate level” (p. 165). That was supported by the responses from the variables, as the overall results indicated that most of the owners and managers agreed that their firm’s contribution to regional development was satisfactory, with both the median and mode being four.

The findings indicated that the means of variables between family firms and non-family firms were slightly different, but that this was not statistically significant. This was consistent with the arguments that both types of firms were important to economic development, based on their specific strengths (Memili *et al.*, 2015). Further analysis has indicated that family firms produced slightly higher means as regards to contribution to revenue (GDP), and the creation of employment opportunities. Again, based on prior literature, there is evidence suggesting that family firms outperform non-family firms, which might translate into a superior

contribution to regional development (e.g. Anderson and Reeb, 2003; Villalonga and Amit, 2006). Furthermore, the findings were consistent with prior findings which indicated that family firms report higher employment and revenue over time. This would lead to more profitability compared to non-family firms (Lee, 2006). However, as the initial assessment of the individual variables did not show significant differences based on the normative self-identification criteria, classifying them as family and non-family firms, the study further tested for the level of family involvement with the use of five additional variables. These were drawn from family firms.

Table 7. 3: A comparison between family and non-family firms (self-reported) using the regional development dimension

	Items (variables)	Mean (Family)	Mean (non-family)	Median	Mode	Significance
1	RED-GDP	4.22	4.19	4	4	Not Significant
2	RED-EconTran	4.10	4.28	4	4	Not Significant
3	RED-Empow	4.20	4.57	4	4	Not Significant
4	RED-EmpEm	3.77	3.72	4	4	Not Significant
5	RED-ComEmp	3.98	4.10	4	4	Not Significant
6	RED-EmpOppo	3.93	3.85	4	4	Not Significant

7.2.4: Firm Involvement in Industrial Clusters

Table 7.4 presents the fourth factor, labelled as ‘firm involvement in industry clusters’ (FIIC), where six variables loaded significantly, explaining 5.606% of the total variance. Some scholars have suggested that industry clusters affect the ability of firms to contribute to regional development (Rocha 2004; Johansson *et al.*, 2007; Niu, 2009). According to Niu (2014) the extent to which firms are involved in activities within industrial clusters would have an influence on the overall economic development of the region. Therefore, consistent with prior studies, industry clusters would mediate the relationship between entrepreneurship and regional development (Rocha, 2004). Hence, the factors used in this study captured the extent to which firms participated in industry cluster activities, and how firm level strategies, such as innovations, decision-making, and building external networks within industry clusters, influenced regional economic development.

Table 7. 4: A comparison between family and non-family firm involvement within industrial clusters

	Items (variables)	Mean (family)	Mean (non-family)	Median	Mode	Outcome
1	Access to and sharing R&D	4.52	4.80	5	6	Not Significant
2	Knowledge Sharing	5.10	5.46	5	6	Not Significant
3	formal co-operation among cluster members	5.17	5.36	6	6	Not Significant
4	formation of new business ventures	4.63	5.00	6	6	Not Significant
5	planning for a shared vision	4.37	4.58	5	6	Not Significant
6	new and enhanced technologies and products	4.90	5.22	5	6	Not Significant

Though the means for the variables indicated differences between family and non-family firms, the comparison revealed no statistically significant differences. Generally, however, family firms generated lower means, as compared with non-family firms. This indicated that they were more likely to be involved in industrial cluster activities. Contrary to these findings, evidence from Italy has indicated that medium sized firms that have family ownership can benefit from being located within the Italian industrial districts, as opposed to non-family firms (Cucculleli and Storai, 2015). This indicated that the size of the firm (or age) could be used to differentiate between family and non-family firms in terms of their influence on industrial activities. Furthermore, Johannsson *et al.* (2007) suggested that to understand the network structure in industrial clusters, family firms should form the unit of analysis. This is because they are able actors who control significant amounts of resources capable of influencing regional dimensions. Therefore, the study considered the impact of size, age and level of family involvement in the firms. This was to determine their influence within clusters, and how this might impact on their contribution to regional development.

7.2.5: Firm Decision-Making Strategy

The fifth factor summarised in Table 7.5 is ‘firm decision-making strategy’ (FDMS) within the firm, which explains 4.771% of the total variance. Most of the respondents indicated that they ‘agreed’ with the questions regarding the level of participation and interaction during

decision-making within the firm, with a mode of 6. However, the median for item 3 was four, while item 4 and was five and item 1 and 2 was six.

Table 7. 5: A comparison of the descriptive statistics for the decision-making dimension

	Items (variables)	Mean (family)	Mean (non-family)	Median	Mode	Significance
1	Dec-MakersInter)	4.85	5.39	6	6	Stat. Significant
2	Dec- EmpPartReg	4.85	5.30	6	6	Stat. Significant
3	Dec-Regul	3.97	4.01	4	6	Stat. Significant
4	Dec-Inter	4.42	4.93	5	6	Stat. Significant
5	Dec-OpenExc	4.60	5.06	5	6	Stat. Significant

Overall, the findings revealed statistically significant differences between the means of family firms and non-family firms. In all items, family firms and non-family firms differed in their responses to decision-making strategy. The findings indicated that family firms generated lower means on the five variables, as compared with non-family firms. These findings contradicted expectations that owners and managers in family firms would adopt a participative strategy based on their ability to put the interests of the family first. Therefore, the data from this Kenyan sample does not support the assertions of the prior literature that family firms' top-level managers are more likely to involve others (whether family members or non-family members) in strategic decision-making.

The participation in the decision-making process of other managers (whether family or non-family) ensures that the decision-makers have more complete information, which could lead to higher quality decisions being made (Eddleston and Kellermanns, 2007; Kellermanns and Eddleston, 2004). Indeed, firms promoting information sharing through participative and inclusive strategies among the top managers, encourage cohesiveness and trust. That, in turn, promotes effectiveness in decision-making which is positively associated with strong firm performance.

Furthermore, the presence of 'familiness' within family firms should encourage top-level managers to involve others in making strategic decisions. That would affect the firm's regional impact, as compared with non-family firms. NFFs lack a controlling group having shared values, beliefs and culture, such as a controlling family group. However, the dataset has shown deviations from findings in the prior literature. This indicated potential

contradictions on ‘familiness’, though consistent with the argument that family firms can indicate unique behaviours, as compared with non-family firms. This is as a result of family involvement (Gomez-Mejia *et al.*, 2007).

7.2.6: Firm ‘Bridging Social Capital’.

Finally, the last latent factor indicated in the table 7.6 is the ‘firm bridging social capital’ (FBSC) dimension, which explained 4.105 % of the total variance. All the weights of the respective underlying factors were significant at the 5% level. Some researchers have argued that social capital affects economic development (Woolcook and Narayan, 1999). Furthermore, prior studies have suggested that social capital is prevalent in developing economies in Africa, the Middle East and Asia, because of the presence of collectivist cultures (Peng and Luo, 2000; Acquah, 2007). For instance, social capital between top-level managers and managers of other firms positively contributes to firm performance in China, showing a strong link between micro and macro level (Peng and Luo, 2000). In emerging and developing economies, social capital between a firm’s managers, the community, political leaders and government agencies is salient to its impact on strategic orientation and performance (Acquaah, 2007; Peng and Luo, 2000). Therefore, the ability of the firm’s top level managers to build personal and social networks with either community, political leaders, government leaders or agencies should have an impact on the firm’s involvement in industry clusters, firm growth and regional economic development.

The findings indicated that the dataset from Kenya was consistent with findings from Ghana (Acquaah, 2007) and China (Peng and Luo, 2000). Firms from Kenya indicated a strong ‘bridging social capital’ between managers of other firms, community leaders, political leaders and government agencies. Furthermore, Kenyan firms indicated a strong correlation with regional development outcomes. The comparison between the two types of firms on the three variables indicated the means were different (though not significantly different). Family firms produced a higher mean on their engagement with community leaders, which supports the findings that they were more likely to engage with community stakeholders (Cennamo *et al.*, 2012). However, non-family firms indicated higher engagement with political leaders and government agencies.

Table 7. 6: A comparison of the descriptive statistics for the ‘bridging social capital’ firm dimension

	Items (variables)	Mean (Family)	Mean (non-family)	Median	Mode	Significance
1	TMTCom	3.96	3.85	4	4	Not Significant
2	TMTPol	3.37	3.46	4	4	Not Significant
3	TMTGov	4.35	4.61	4	4	Not Significant

7.3.1: Descriptive Statistics of the Combined Data for Confirmatory Factor Analysis

Table 7.7 below shows the means and standard deviation (SD) of the aggregated data for both FBs and NFBs. Based on the application of multivariate analysis for the study, it was necessary to examine the mean and SD for the aggregated data. From the table below, the mean for the variables that were extracted from the EFA shows that it ranged from 3.42 to 5.32. This indicated that respondents were sufficiently engaged when filling in the questionnaires. Furthermore, examination of the SD indicated that the lowest value was 1.351, whilst the highest value was 1.872. This indicated that the standard deviation of the items was within ± 1.98 (Hair *et al.*, 2006). Thus, most of the respondents were aware of the relationships of the variables used to collect data. This was consistent with the theoretical and conceptual arguments identified from the extant literatures, and which were used to develop the structural model applied in the CFA.

Table 7. 7: Summary of the Mean and Standard deviation of the variables

	N	Mean		Std. Deviation
	Statistic	Statistic	Std. Error	Statistic
EO-IProc	307	5.02	.098	1.712
EO-RExp	307	5.03	.091	1.588
EO-ROri	307	4.22	.100	1.754
EO-REnv	307	4.97	.092	1.610
EO-PPos	307	5.07	.089	1.566
EO-PIIntroP	307	4.51	.097	1.708
EO-CAIdeas	307	5.10	.092	1.606
EO-CAPost	307	4.34	.097	1.703

EO-CAComp	307	4.88	.095	1.657
DecPart	307	5.18	.083	1.460
DecEmpPartReg	307	5.12	.086	1.515
DecRegInte	307	3.99	.094	1.655
DecInteractive	307	4.72	.085	1.492
DecOpenExch	307	4.87	.085	1.484
TMT-Com	307	3.90	.107	1.872
TMT-Pol	307	3.42	.105	1.836
TMT -Gov	307	4.50	.098	1.714
IC-R&D	307	4.68	.098	1.715
IC-KnowS	307	5.32	.084	1.478
IC-Part	307	5.28	.080	1.409
IC-NewVC	307	4.85	.089	1.554
ICSharVi	307	4.50	.098	1.710
IC-TechInn	307	5.09	.091	1.598
Growth-Prof	307	4.86	.078	1.372
Growth-Sal	307	4.93	.079	1.385
Growth-Netw	307	4.91	.077	1.351
Growth-MktSh	307	4.73	.080	1.410
Growth-fund	307	4.54	.085	1.489
RED-GDP	307	4.20	.091	1.597
RED-EconTran	307	4.21	.088	1.548
RED-EmpEm	307	4.42	.089	1.556
RED-ComEmp	307	3.74	.101	1.777
RED-EmplCrea	307	4.06	.098	1.711
RED-EmpOppo	307	3.88	.101	1.771
Valid N (listwise)	307			

Source: SEM

7.3.2: Evaluating the Validity of Measurement Models in CFA and SEM

CFA is described as a statistical process for testing “how well the variables measured represent a smaller number of constructs” (Hair *et al.* 2006, p.773). Although CFA is similar to EFA in some respects, Hair *et al.* have argued that it is philosophically different, as the

researcher is required to specify both the number of factors that exists within a set of variables, and which will load on highly before results are computed” (p.773).

Therefore, CFA was used to determine how well the specification of the factors matched reality (the actual data). Moreover, CFA was used to either confirm or reject the developed hypotheses. The first step in CFA was to obtain a quick model, using the measured variables, representing the latent constructs identified. The six latent constructs were plotted using the manifest variables extracted from the EFA. Using AMOS, only the loadings that theoretically linked the measured variables to their corresponding latent constructs were calculated (See the Appendix 6). For the CFA, Maximum Likelihood Estimation (MLE) was preferred, as its likelihood function could be deduced from an assumption of multivariate normality of the observed variables (Blunch, 2013). Further, a threshold for the modification indices was set at 20. The model was estimated and checked for validity and reliability.

In this study, CFA-SEM was preferred for multivariate analysis, based on its ability to assess the construct validity of the proposed measurement theory (Hair *et al.*, 2006). According to Hair *et al.*, construct validity is “the extent to which a set of measured items actually reflects the theoretical latent construct those items are designed to measure” (p.776). Following suggestions by Fornell and Larcker (1981), the researcher ensured that the measurement model met a satisfactory level of validity and reliability of the constructs (see table 7.8) before testing the relationships represented in the structural model. Therefore, the internal consistency and reliability of the observed variables, and the six latent constructs identified, were tested to determine construct validity and reliability (**see Appendix 6**). Following the rules of thumb (Hair *et al.*, 2006; Ho, 2006) for testing construct validity (See Table 7.8), the internal reliability, convergent validity and construct validity were computed. After the examination and analysis of the items, two items on the entrepreneurial orientation construct, relating to radical orientation (EOROri) and introduction of new products (EO-IProc), were dropped from the entrepreneurial orientation latent construct. This was because they were deemed to affect the construct discriminant validity (Table 7.10 and **Appendix 6a-i**).

Table 7. 8: Measures used to assess validity and reliability in the CFA stage

<p>Standardised loading estimates should be 0.5 or higher, and ideally 0.7 or higher</p> <p>Variance extracted (VE) should be 0.5 or greater to suggest the adequate convergent validity</p> <p>VE estimates for two factors also should be greater than the square of the correlation between the two factors to provide evidence of discriminant validity.</p> <p>Construct reliability should be 0.7 or higher to indicate adequate convergence or internal consistency</p>
--

Following an iterative step by step analysis processing of the items, 32 variables were retained, as they had a recommended standardised estimated loading above 0.5 in their respective latent constructs (see Table 7.9). Furthermore, the latent constructs had a construct validity value above the recommended Cronbach alpha of 0.6 or higher, which indicated that the items had adequate convergence or internal consistency (**appendix 6f**). The results of the composite reliability (CR) and average variance extracted (AVE) were above the 0.6 and 0.5, respectively (Fornell and Larcker, 1981; Hair *et al.*, 2006). Therefore, the results confirmed that construct validity was achieved, based on the validity and reliability of the measuring variables of the six identified constructs. The results also confirmed that the measured scales behaved as expected (Hair *at al.*, 2006). The table provides a summary of the latent factors, observed variables, item-correlation, Cronbach alpha, composite reliability and AVE.

Table 7. 9: A summary of the latent factor loadings after CFA analysis

Latent Factors	Indicators	Communalities	Cronbach Alpha	Composite Reliability	AVE
Firm Entrepreneurial Orientation	Experimentation and original approaches to problem solving (EO-RExp)	0.621			
	Bold, wide-ranging acts are necessary to achieve the firm objectives (EO-REnv)	0.759			
	Bold posture to maximise the probability of exploiting opportunities (EO-PPos)	0.716			
	First business to introduce new products/ services (EO-PIIntroP)	0.763	0.888	0.875	0.502
	Strong tendency towards the firm being ahead of others in introducing novel ideas or products (EO-CAIdeas)	0.804			
	Adopts a very competitive ‘undo-the-competitors’ posture (EO-CAPost)	0.827			
	very aggressive and intensely competitive (EO-CAComp)	0.729			
Firm Decision-Making strategy	Decision-making is participative (DecPart)	0.879			
	Top decision makers in our firm interact with all employees on an informal basis (Dec-EmpPartReg)	0.799			

	Participate in strategic decision-making on a regular basis (DecRegInte)	0.795	0.883	0.887	0.613
	Decision-making in our firm is interactive (Dec-Inter)	0.715			
	free and open exchange of ideas among employees about any strategic issues (Dec-OpenExc)	0.903			
Firm 'bridging Social capital'	establishing sustainable relationships with community leaders (TMT-Com)	0.826			
	establishing sustainable relationship with political leaders (TMT-Pol)	0.881	0.772	0.781	0.545
	establishing sustainable relationship with other government agencies and officials (TMT-Gov)	0.64			
Firm Involvement in Industry Clusters	Ensuring access to R&D (IC-R&D)	0.703			
	Knowledge Sharing (IC-KnowS)	0.787			
	formal co-operation among cluster members (IC-Part)	0.84			
	New venture creation (IC-NewVC)	0.754	0.869	0.865	0.522
	participates in planning for a shared vision (ICSharVi)	0.663			
	developing new and enhanced technologies and products (IC-TechInn)	0.71			
Firm performance	Growth in profitability (Growth-Prof)	0.921			
	Growth in Sales (Growth-Sal)	0.91			
	Growth of net worth (Growth-Netw)	0.919	0.928	0.933	0.737
	Growth in Market share (Growth-MktSh)	0.782			
	Ability to fund growth from profitability (Growth-fund)	0.806			
Regional Development	Gross Domestic product (RD-GDP)	0.83			
	role to meeting the economic transformation agenda for the region (RD-EconTran)	0.84			
	Employees informed about economic transformation	0.803	0.902	0.895	0.589

	agenda (RD-EmpEm)				
	allocates a % of our income for community activities (RD-ComEmp)	0.851			
	created substantial number of new positions (RD-EmpEmCrea)	0.723			
	added substantial number of employees to our firm (RD-EmpOppo)	0.635			

7.3.2: Testing for Discriminant Validity and Multicollinearity

Discriminant validity measures the extent to which a construct is truly distinct from other constructs (Ho, 2006). A high discriminant validity is an indicator that the construct is unique and captures some phenomena the other constructs do not (Hair et al., 2006). However, highly correlated variables indicate multicollinearity among the latent constructs, which might complicate the interpretation of the constructs (Hair *et al.*, 2006). In this case, it would be difficult to ascertain the effect of any single latent construct in the measurement model. Therefore, as recommended by Hair et al, the variance estimates (VE) of any two factors were greater than the square of the correlation between the two factors, thus providing evidence of discriminant validity. Further, the square roots of each constructs, indicated by the AVE (diagonal values in bold on the table), were greater than the square of the correlation coefficients between the constructs and other constructs. Those were indicated in both the horizontal and vertical columns (Fornell and Larcker, 1981; Ho, 2006). Therefore, apart from the EO construct, the researcher confirmed that there was no multi-collinearity between the constructs, as the AVE values were not highly correlated with each other (Kline, 2005).

Initially, the EO construct appeared to have a low AVE (<0.5. Thus, two items (EO-ROri and EO-IProc) were deleted from the model, because of their low communality loadings, which affected the AVE. After deletion, the EO construct achieved an AVE =0.502, which is above the required AVE of ≥ 0.5 (Hair *et al.*, 2006). As the results in table 7.10 below indicate, the AVE values (in bold) were greater than the square of the correlation between two factors but did not exceed the threshold of 0.85. This was evidence that construct validity was achieved, and so there were no validity concerns.

Table 7. 10: The Correlation Matrix showing assessment of Discriminant Validity Test using AVE

	CR	AVE	MSV	MaxR (H)	Firm Growth	EO	RD	Social Capital	Decision Making	Industry Cluster
Firm Growth	0.933	0.737	0.361	0.940	0.859					
EO	0.875	0.502	0.352	0.959	0.418	0.709				
RD	0.895	0.589	0.361	0.971	0.601	0.455	0.767			
Social Capital	0.781	0.545	0.251	0.974	0.418	0.269	0.501	0.738		
Decision Making	0.887	0.613	0.323	0.980	0.177	0.568	0.244	0.246	0.783	
Industry Cluster	0.865	0.522	0.352	0.982	0.358	0.593	0.554	0.497	0.422	0.723

7.3.3: Testing for Linearity and Multi-collinearity for the structural Model

Other than the validity and reliability tests for the observed variables, both linearity and multi-collinearity tests were conducted to establish whether or not the variables were suitable for CFA/SEM analysis. According to Hair *et al.* linearity is used to express the concept that the model being tested possesses the properties of additivity and homogeneity (2006, p. 172). Multi-collinearity, however, can be “expressed as the relationship between two or more independent variables”. Multi-collinearity occurs when any single independent variable is highly correlated with a set of other independent variables (i.e. in which the independent variable is perfectly predicted, indicating a correlation of 1.0) (p. 170). Similarly, to regression analysis, all the relationships perceived in the identified model were tested using a curvilinear test (curve estimation). Using SPSS, all the different possible relationships were tested, which sought to evaluate whether or not there was a strong linear relationship (F value) (**appendix 8a**). The curve estimations for all the relationships were determined to be sufficiently linear to be tested using a covariance-based SEM algorithm, such as AMOS, which only calculates linear relationships.

To confirm the non-existence of multi-collinearity among the independent variables, a linear regression was conducted to determine the tolerance and variance inflation factor (VIF) (see

table 7.11 and **appendix 8b**). Based on the threshold levels for tolerance, <10 and VIF of <3 (it can be allowed if less than 10), the strength of collinearity was determined to establish if they were suitable for CFA analysis. All the computed coefficient values for the VIF were <5, which indicated that there was no multi-collinearity between the independent variables, and that they were suitable for covariance analysis using SEM (Hair et al., 2006; Ho, 2006).

Table 7. 11: Results for the multi-collinearity of the independent variables

Independent	Dependent	FEO	FDMS	FBSC
FEO		-	1.114**	1.570***
FDMS		1.090***	-	1.570**
FBSC		1.09***	1.114***	-
Sig. ** <0.05; ***<0.001				

7.3.4: Testing for Common Method Bias and Outliers for CFA Analysis

The first phase of CFA is generating a satisfactory measurement model for analysis. Therefore, using the manifest variables identified in section 7.2, a measurement model was developed using AMOS and goodness of fit of the model confirmed (**appendix 9**).

Table 7. 12: Goodness of fit for the Measurement Model Test for the initial measurement model

Item	Chi-Square	DF	Ratio x ² : df	RMSEA	IFI	TLI	CFI
Model fit	3269.134	2170	1.5	.024	.943	.934	.942
P	.000						

The second phase of the data analysis using SEM involved the confirmatory factor analysis. However, before proceeding with the CFA, testing for common method bias (i.e. the possibility of all the variables loading into one factor) was carried out. During the analysis, the researcher applied Harman’s single factor test (Harman, 1976), using EFA techniques to eliminate the possibility that all variables used in collecting the data were loading onto one single latent factor. The analysis of the factors to detect common method bias was conducted

by creating a common latent factor in AMOS. The standardised regression weights table was examined, and after a few iterations, it was determined that there was some evidence of common method bias (CMB) in the regional development latent factor. This justified the decision to retain the common latent factor (CLF) during the SEM. To remedy this problem, a data set was created that included CMB adjusted variables, in which composites were computed with averages included (Podsakoff *et al.*, 2003).

Table 7. 13: Goodness of fit for the Common method Test for the model with CMB adjusted

Item	Chi-Square	DF	Ratio x ² : df	RMSEA	IFI	TLI	CFI
Model fit	-	-	-	.039	.971	.963	.970
P	-						

7.3.5: Testing for Measurement and Structural Group Invariance across Groups

In a group invariance test, the factor analysis centres on the correspondence of factors across different groups in the same study, in separate studies, or in sub-groups of the same sample (Byrne *et al.*, 1989, p. 456). The procedure focuses on investigating issues with measurement and structural invariance. This is where the “measurement issue concerns the invariance of regression on intercepts, factor loadings (regression slopes), and error and uniqueness variances, and the structural issue addresses the invariance of factor mean and factor variance-covariance structures” (Byrne *et al.*, 1989: 456). Although the invariance test was initially proposed for testing invariance of factors extracted from the EFA (Reynolds and Harding, 1983; Marsh and Hocevar, 1985; Hair *et al.*, 2006), CFA was a more sophisticated technique to test the invariance (Joreskog and Sorbom, 1993; Ho, 2006).

Using the invariance test, the researcher evaluated the models to determine the most parsimonious, yet substantively most meaningful and best, fit to the data (Byrne *et al.*, 1989). The test looked at the family firms and non-family firms’ group differences, where the x² goodness-of-fit (GOF) value of parameters was constricted to be equal across groups, and the corresponding degrees of freedom (DF) were additive (Byrne *et al.*, 1989). It was used to test the hypothesis that the two groups were invariant. Therefore, if the difference in x² (Δx^2) was not significant, then the hypothesis that the invariant pattern of factor loading is considered tenable. The same procedure was followed to establish the latent mean structure, structural weights, standardised weights, covariance and correlations (**appendix 10**).

The table 7.14 shows a summary of the GOF for the group invariance test. The χ^2 statistic is 554.73 with 374 degrees of freedom. The test null hypothesis states that there were no differences between the matrices. However, the p value associated with this result is 0.00, indicating that there was a significant difference between the observed covariance matrix and the estimated covariance matrix within sampling variance. This caused a type 1 error using $p = 0.05$. As the researcher was aware of using this test alone with the effective sample size of 307, it was pertinent to look at other statistics. As recommended by other researchers (e.g. Scholderer *et al.* 2004; Hair *at al.*, 2006; Hooper *et al.*, 2008). The ratio between χ^2 and the df are ≤ 2 at the significance level of 0.05, and so the model fits the data based on χ^2 : df test. Further, the model was considered adequate, based on the RMSEA (0.040), IFI (0.970), TLI (0.963) and CFI (0.970). The consideration of this model was supported by the high observed communalities among the variables (Meade and Kroustalis, 2005).

Table 7. 14: Measurement model fit summary for the group invariance test.

Item	Chi-Square	DF	Ratio χ^2 : df	RMSEA	IFI	TLI	CFI
Model fit	554.731	374	1.48	.040	.970	.963	.970
P	.000						

7.4: Structural Model Specification

This study utilised multivariate analysis techniques (i.e. CFA) to define and clarify the individual constructs included in the measurement and theoretical constructs. With the general question defined, the study focused the attention on specifying constructs that were used to measure and test the relationships specified in the model. Based on the prior literature reviewed, Figure 7.6 shows the structural model used to test the hypothesis in this study. Although using SEM does not warrant specifying exogenous and endogenous constructs, the specified the three-level ‘firm contribution to regional development’ model portrays ‘regional development’ as the endogenous variable, which is also the dependent variable.

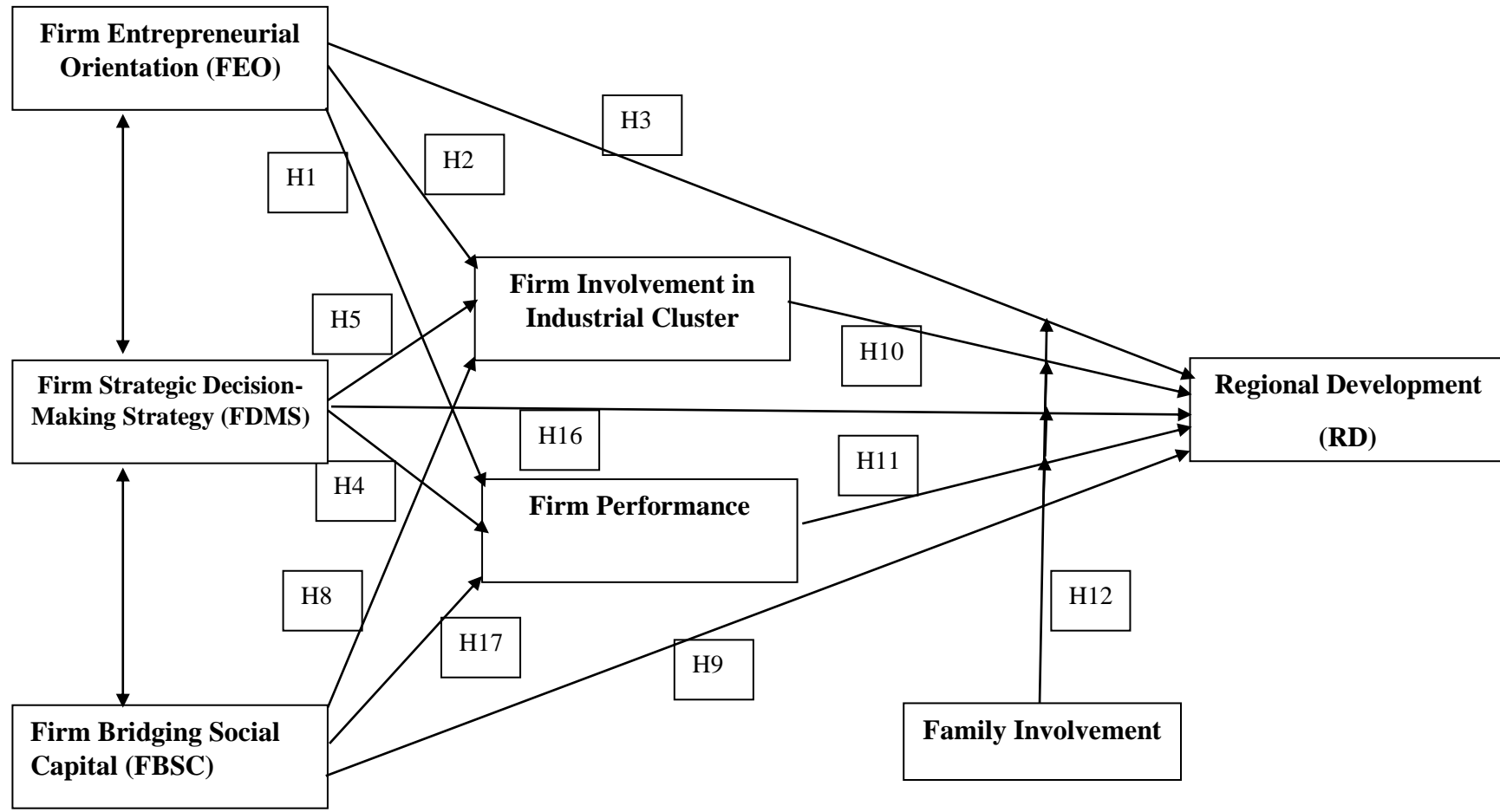


Figure 7. 1: Structural Model showing relationships building the hypothesis

Source: Author

7.4.1: Testing for Structural Model Invariance across Groups

The invariance of the estimated path regression weights across the groups was tested using the standardised regression weights for both family firms (n=124) and non-family firms (n=183). In addition, pairwise parameter comparisons, using the statistical tools provided by Gaskin (2012) (see **appendix 10**). The model fit indices of data from the structural model specifying the relationships between firm level factors and regional development (RD) indicated a good model to data fit. Apart from TLI (0.913), all the other factors considered for the model fit fell within the recommended limits (Scholderer *at al.* 2004; Hair *et al.*, 2006).

Therefore, this sample data fitted the structural model specified for the relationship between firm-level factors and regional economic development well. The GOF coefficients are presented in the table 7.15.

Table 7. 15: Measurement Model fit Summary for the Interaction effects

Item	Chi-Square	DF	Ratio x ² : df	RMSEA	IFI	TLI	CFI	GFI
Model fit	133.519	60	2:1	.037	.978	.913	.977	0.973
P	.000							

7.5: Hypothesis Testing: The Relationship between Firm Level Strategic Behaviours and RD

The first set of hypotheses to be tested related to the level of firm entrepreneurship orientation, and how this affected the ability of the firm to influence regional development. As such, the differences between family firms and non-family firms were determined. These were based on the relationship between firm EO, firm involvement in industrial clusters activities, firm performance and RD. The objective was to determine the direct effect of firm entrepreneurial orientation on regional development.

7.5.1: Test for Hypothesis H1

H1: Non-family firm entrepreneurial orientation will have a stronger positive influence on firm performance compared to family firms.

There was a strong positive relationship between FEO and firm performance ($\beta=.49$, $p<0.05$) in both types of firms. However, non-family firms had a stronger positive relationship ($\beta=.603$, $p<0.05$) as compared with family firms ($\beta=.394$, $p <0.05$), with both relationships being statistically significant. Thus, the hypothesis that there existed a stronger positive relationship between NFFs' EO and firm performance than FFs was accepted. Furthermore, there was a significant difference between the two types of firms ($z=1.939$; $p>0.10$). This indicated that entrepreneurship within non-family firms was twice as likely to contribute to a firm's performance, as compared with family firms.

Generally, existing family business literature that has investigated firm performance differences has reported mixed findings, with some arguing that family businesses performed better than non-family firms (Anderson and Reeb, 2003; Randoy and Goel, Lee, 2006; Maury, 2006). Other researchers argued that family involvement in the business negatively influenced their performance (Villalonga and Amit, 2006, Facio *et al.*, 2010). Therefore, this finding provided empirical evidence from a developing country context (Kenya) indicating that the effect of entrepreneurial orientation on firm performance was stronger in non-family firms, as compared with family firms. Thus, the findings of this study could explain the perception that NFFs had superior performance compared to FFs.

7.5.2: Test for Hypothesis H2

H2: Family firms have a stronger positive relationship between EO and firm involvement in industrial clusters than non-family firms.

The findings showed a strong, positive relationship between firm EO and firm involvement within industry clusters. This confirmed that the firm EO had a positive effect on firm involvement within industrial clusters in both family and non-family firms ($\beta=.52$, $p <0.05$). However, the hypothesis that family firms were more likely to have a stronger, positive influence on involvement in industrial clusters was rejected. The findings showed that non-family firms had a stronger relationship between firm EO and FIIC and were twice as likely to be involved in industrial clusters activities ($\beta=.700$, $p <0.05$) as family firms ($\beta=.475$, <0.05).

Furthermore, there was a statistically significant difference between the two types of firms as regards the extent to which Firm EO effects the firm's involvement within industry clusters ($z=2.052$, $p>0.05$). Thus, the findings showed that the NFFs have superior entrepreneurial behaviours compared to family firms and was more likely to increase their involvement in industrial clusters compared to that of family firms. The hypothesis was not supported and was rejected.

Although there are arguments that portray family firms as being entrepreneurial (Kellermanns and Eddelton, 2006; Nordqvist and Melin, 2010), these findings were consistent with prior research, which perceived family firms to be less entrepreneurial than non-family firms (Nordqvist *et al.*, 2008; Short *et al.*, 2009; Zellweger *et al.*, 2010). Thus, they have a lower involvement within clusters compared to family firms. This supports the theoretically hypothesised relationship of significant differences between family and non-family firms in relation to their involvement within industrial clusters.

7.5.3: Test for Hypothesis H3

H3: Family firms have a stronger positive relationship between EO and regional development than non-family firms.

Generally, the findings indicated a positive relationship between firm level entrepreneurial activities and regional development ($\beta=.20$, $p=.001$). In relation to the hypothesised relationship between the two types of firms, the findings indicated that family firms had a stronger relationship between FEO and regional development ($\beta=.278$, $p=.002$), as against non-family firms ($\beta=.109$, $p=.287$). Therefore, family firms were twice as likely to contribute to RD as non-family firms. In addition, the contribution of family firms' entrepreneurial activities to RD was statistically significant at ($p=0.05$), while that of non-family firms was not. Therefore, the hypothesis that family firms EO had a stronger positive influence on RD compared to NFFs was supported.

Although, there was difference in the FEO between the two firms, this was not statistically significant ($z= -1.250$), as it was in the acceptable region of ± 1.96). This supported the conceptual arguments advanced in the extant literature that a firm's contribution to RD differed, based on the type of firm (Basco, 2015; Memili *et al.*, 2015; Stough *et al.*, 2015). Therefore, this finding demonstrated the potential effect of family involvement in firms as a

differentiating factor of firm entrepreneurial orientation, when compared with non-family firms at the regional level.

The next set of hypotheses tested the relationship between participation in strategic decision-making and the firm's regional impact. Specifically, this set of hypotheses sought to determine the relationship between a firm's strategic decision-making, and its involvement in industrial clusters, firm performance and ultimately RD.

7.5.4: Test for Hypothesis H4

H4: In family firms, participation in strategic decision-making within the firm has a stronger positive effect on firm performance compared with non-family firms.

The findings indicated that there was a negative relationship between decision-making strategy in the firm and firm performance for both family and non-family firms ($\beta = -.38$, $p < 0.05$). For family firms, the relationship was slightly stronger ($\beta = -.342$, $p = .000$) as compared with non-family firms ($\beta = -.339$, $p = .000$). Both types of firms have statistically significant relationships between FDMS and firm performance ($p < 0.05$). However, despite the slight differences in the strength of the relationships, these were not statistically significant ($z = -0.218$). Therefore, the hypothesis was not supported.

In relation to strategic behaviour, some studies have supported arguments that the ownership structure, type of owners and managers involved in the business affect strategy (Le Breton-Miller and Miller, 2008; Eddleston and Kellermannns, 2007). Despite the increased positive association of managers' participation in strategic decision-making and firm performance within the extant literature, findings on the influence of family involvement in business choices were still inconclusive (Dibrell and Moeller, 2011; Miller *et al.*, 2013). Empirically, the evidence from prior studies has not shown decisively that the decision-making of FFs differs from that of NFFs (Basco, 2014). Similarly, the findings of this study have not supported the hypothesised arguments that the more involved TLMs members are in FDMS within the firm, the better the firm's performance. On the contrary, the participation of TMLs in strategic decision-making has negatively influenced firm performance. Possibly, in family firms, participation in the decision-making process shifts from 'business first' to 'family first', countering the positive effects of participative decision-making on a firm's performance.

7.5.5: Test for Hypothesis H5

H5: In family firms, participation in strategic decision-making within the firm has a stronger positive effect on firm involvement in industrial clusters, as compared with non-family firms.

The findings showed that participation in strategic decision-making within the firm has a weak, negative relationship with firm involvement in industrial clusters ($\beta = -.01$, $p = .788$). This means that the higher the level of participation in decision-making processes in the firm, the less likely it is will firm participate in industrial cluster activities. Furthermore, there was a weak, positive relationship between FDMS and FIIC in family firms ($\beta = .021$, $p = .752$), whilst non-family firms had a weak negative relationship between FDMS and FIIC ($\beta = -.055$, $p = .511$). However, in both FFs and NFFs the relationships were not statistically significant, as p values were above the significance level of 0.05. In addition, there was no significant difference between the two types of firm as regards the effect of FDMS on a firm's regional impact ($z = -0.714$, $z = \pm 1.96$). Therefore, due to the relationship not being statistically significant, the hypothesis was not supported.

This implied that, within family firms, there was a positive, structural relationship between FDMS and FIIC. Even though this relationship was weak, there was a slight inclination for decisions-makers to lead the firm to participate positively in activities in industrial clusters (Johanisson et al., 2007; Niu 2009; Basco, 2015). That was contrary to the situation in non-family firms, which was negatively associated with the firm's involvement in activities in industrial clusters. Though there was no statistically significant difference between the two, this was consistent with the conceptual arguments that TLMs in family firms encourage participation and inclusivity, which encourages sharing of ideas and information. Furthermore, there was evidence that family managers were willing to negotiate with other managers to ensure that family-centred goals were integrated within the firms' strategy (Kotlar and De Massis, 2013).

7.5.6: Test for Hypothesis H6

H6: In family firms, participation in strategic decision-making within the firm will have stronger positive effect on the firm's influence on regional development, as compared with non-family firms.

The findings revealed that there was a negative relationship between participation in the decision-making process within the firm and RD ($\beta = -1.8, p < .05$). Family firms had a stronger negative influence ($\beta = -.236, p < .05$) than non-family firms ($\beta = -.107, p = .201$). In addition, the relationship in family firms was statistically significant, whilst that of non-family firms was not. This implied that family firms had a more pronounced negative impact on RD outcomes, as compared with non-family firms. However, when the difference between the two relationships was considered, it was not statistically significant ($z = 1.181$). This was contrary to the hypothesised relationship that participation in strategic decision-making within the firm would have a negative effect on RD. Thus, it was more likely that family firms would negatively contribute to regional development than NFFs. So, as the hypothesis was not supported, it was rejected.

The existing literature has revealed that the strategic behaviours and performance of FFs differs from that of NFFs, especially in decision making (Basco, 2015; Basco, 2013; Chrisman et al., 2005). In FFs, the involvement of the family in the ownership, management and governance of the business tended to affect the firm's strategy (Le Bretton-Miller and Miller, 2008). Due to their ownership rights of the business properties and assets, families have more control on the strategic choices of the business. Therefore, they can influence the distribution and allocation of resources, capabilities, and capital, amongst other resources. In addition, decision-making in family firms does not only focus on economic gains, but also on non-economic, emotional and biological imperatives (Basco, 2014). Thus, family businesses would be more likely to consider decisions that not only benefit the business, but also the family. For instance, the extant literature has demonstrated that family firms are willing to forgo financial benefits to retain control of the business (Gomez-Mejia *et al.*, 2007), a decision geared towards the affective needs of the family, rather than the economic gains of the business. Thus, due to family influence on strategic choices within the firm, and their participation in the regional economy, family firms are more likely to have a stronger negative impact on regional development in comparison with non-family firms.

Finally, the last set of hypotheses tested the effect of a firm's 'bridging social capital' as regards its influence on firm performance, firm involvement in industrial clusters and regional development. The hypotheses sought to establish if a FBSC had different effects on family and non-family firms' strategic behaviours, and to what extent this influenced their contribution to regional development.

7.5.7: Test for Hypothesis H7

H7: In family firms, ‘bridging social capital’ will have a stronger positive effect on a firm’s performance, as compared with non-family firms.

The findings showed that a firm’s ‘bridging social capital’ was positively associated with a firm’s performance for both types of firms ($\beta=.47$, $p<.05$). The level of engagement of TLMs in creating personal and social networks with the community, political leaders, government leaders and managers in other firms contributed positively to a firm’s performance. So, based on the hypothesised relationships, there was a significant, positive relationship between a FBSC and its performance. With family firms showing a stronger effect ($\beta=.427$, $p<.05$), as compared with non-family firms ($\beta=.364$, $p<.05$). However, the findings did not indicate statistically significant differences between the two types of firms ($z=-0.775$, $p>.05$). This indicated that TLMs in both firms could form ‘bridging social capital’ within their regions, which was positively associated with firm performance. Despite this, social capital in family firms had a stronger positive effect on firm performance than in non-family firms. Based on these findings, the hypothesis was supported.

7.5.8: Test for Hypothesis H8

H8: In family firms, ‘bridging social capital’ will have a stronger positive effect on firm involvement in industrial clusters than in non-family firms.

The hypothesis tested the association of a FBSC and the firm’s involvement in industrial clusters. The findings revealed that there was significant, positive relationship between a FBSC and a firm’s involvement in industry clusters ($\beta= .41$, $p<.05$). Based on the hypothesised relationship, family firms reported a stronger, positive effect ($\beta= .541$, $p<.05$) than non-family firms ($\beta=.330$, $p<.05$). The relationship was statistically significant for both family and non-family firms. Furthermore, the findings indicated that family firms had a more intense relationship, as compared with non-family firms. Thus, there were statistically significant differences between family firms and non-family firms, ($z=-2.582$; $p<0.05$). So, the findings showed that when a family firm’s TLMs developed personal and social networks with external stakeholders, (e.g. community leaders, government agents and political leaders), this increased their involvement in industrial clusters activities in a significant way, in comparison with non-family firms. Thus, the hypothesis was supported, and accepted.

The findings supported the conceptual arguments, providing empirical evidence which indicated that family firms were more likely to engage within industry clusters (Johanisson *et al.*, 2007; Cuculelli *et al.*, 2013). Furthermore, family literature has indicated that family firms had strengthened community engagements with stakeholders (Cennamo *et al.*, 2012). Therefore, the Kenyan sample for this study was consistent with prior studies around the world.

7.5.9: Test for Hypothesis H9

H9: In family firms, ‘bridging social capital’ will have a stronger, positive effect on the firm’s impact on regional development, as compared with non-family firms.

The hypothesis tested the association of a firm’s ‘bridging social capital’ with RD. The findings indicated a positive relationship between a FBSC and RD ($\beta=.28$, $p<.05$). Based on the hypothesised relationship, family firms showed a much weaker relationship between FBSC and RD ($\beta=.138$; $p=.097$), whilst non-family firms reported a stronger relationship ($\beta=.291$, $p <.05$). Although the relationship was positive for both types of firms, it was not statistically significant in family firms. This was because the p value was higher than the required significance level of .05. Further, there was no significant difference between the two types of firms ($z=-1.463$, $p>.05$). The findings indicated that a FBSC developed by TLMS through personal and social network relationships with external entities enhanced the positive influence on the regional development. This was not significant for family firms, however, compared with the relationship between non-family firms and RD. Thus, the hypothesis was not supported, and was rejected.

Prior researchers have argued that family firms are unique actors, due to their influence on business choices affecting resource allocation and stakeholder engagement orientation, as compared with non-family firms (Cennamo *et al.*, 2012). Further, as a result of their embeddedness within the regions, they can influence regional development (Basco, 2015; Stough *et al.*, 20015). This builds on the understanding, therefore, that the engagement of family firms’ top managers with stakeholders in building personal and networking relationship would lead to a stronger influence on the regional factors and processes. This would have a stronger influence on RD. Contrary to these arguments, however, NFFs were twice more likely to have a stronger influence on RD than FFs. Figure 7.2 below summarises the structural relationship between the latent variables and table 7.16 shows FFs and NFFs.

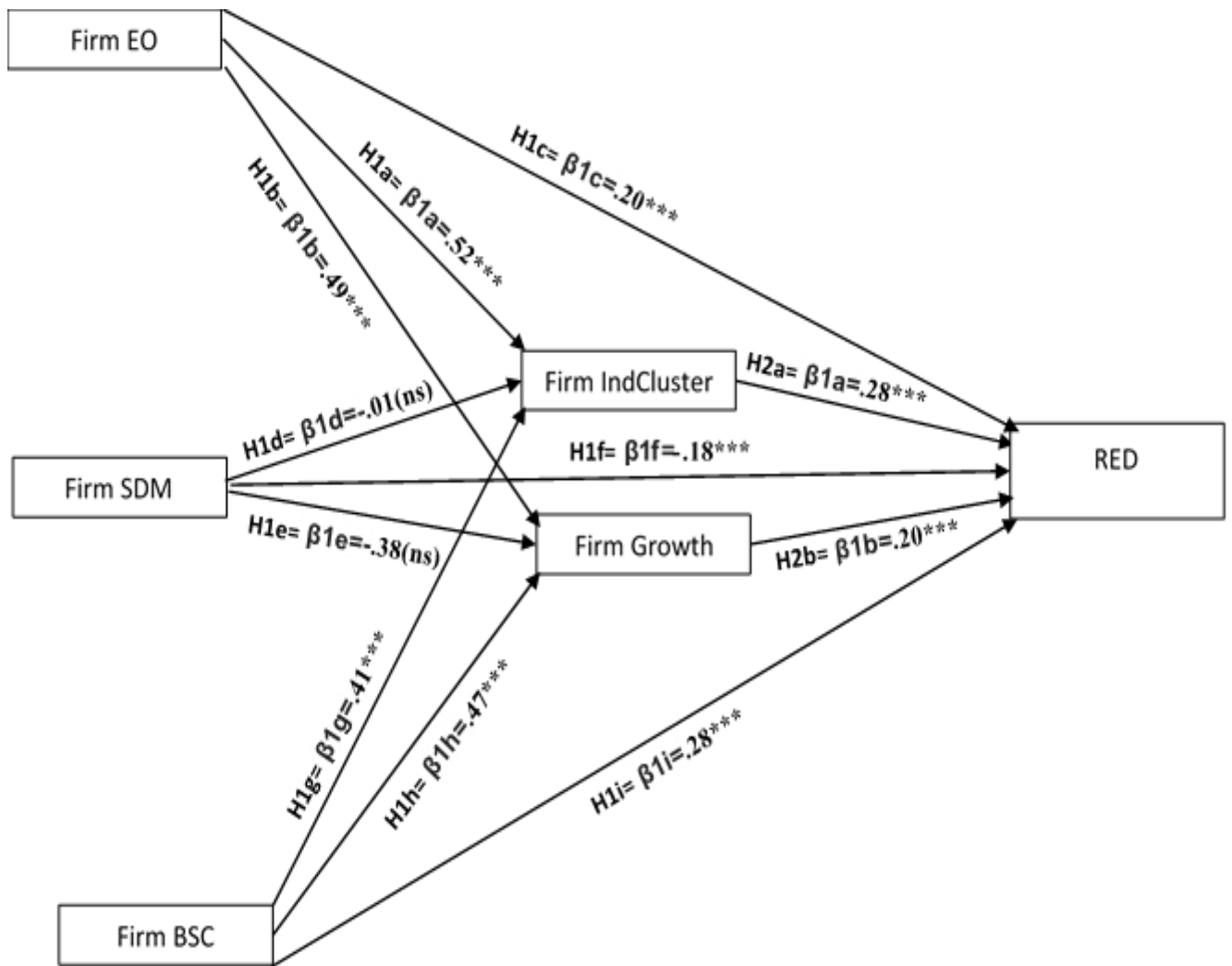


Figure 7. 2: The Firm-Regional Impact Model with standardised regression weights

Source: Author

Table 7. 16: The hypothesis testing outcomes for differences between family and non-family firms' influence on regional economic development

Hypothesis	Independent Variable		Dependent Variable	Family firms		Nonfamily firms		Z-Score
				Estimate	P value	Estimate	P value	
H1a	FEO	→	FirmGrowth	0.394	.000	0.603	.000	1.939*
H1b	FEO	→	IndustryCluster	0.475	.000	0.700	.000	2.052**
H1c	FEO	→	RD	0.278	0.002	0.109	0.287	-1.25
H1d	FSDM	→	IndustryCluster	0.021	0.752	-0.055	0.511	-0.714

H1e	FSDM	→	FirmGrowth	-0.342	.000	-0.339	.000	0.029
H1f	FSDM	→	RD	-0.236	.000	-0.107	0.201	1.181
H1g	FBSC	→	IndustryCluster	0.541	.000	0.33	.000	-2.582***
H1h	FBSC	→	FirmGrowth	0.427	.000	0.364	.000	-0.775
H1i	FBSC	→	RD	0.138	0.097	0.291	.000	1.463

Notes:

*** **P-value < 0.01**; estimated coefficient differs significantly from 0 at 1% level of confidence

** **P-value < 0.05**; estimated coefficient differs significantly from 0 at 5% level of confidence

* **P-value < 0.10**; estimated coefficient differs significantly from 0 at 10% level of confidence

7.6 The Mediation Effect of a Firm's Involvement in Industry Clusters, and Firm Performance.

7.6.1: Measurement of Mediation Model Fit

According to Baron and Kenny (1986) a mediator is a “variable that represents the generative mechanism through which a focal independent variable is able to influence the dependent variable of interest” (p. 1173). For instance, in this study industry clusters and firm performance were considered as mediators for the relationship between firm level factors and regional development. Extant literature has highlighted the importance of the regional context in the study of entrepreneurship and firm activities (Welter, 2010; Wright et al., 2015). In similar vein, others have explored the importance of dimensions of proximity, such as cognitive, organisational, social and institutional proximities, as well as the characteristics of the clustering of a firm's activities in influencing regional development (Ascani, Crescenzi, and Lammarino, 2012; Basco, 2015). The embeddedness of firms (family and non-family) in this context would enable them to alter regional processes and factors affecting regional development. Also, a firm's performance has a potential influence on the relationship between firm level strategic behaviours and RD. For instance, when a firm grows, there

would be more chances that this will have a positive impact on their regional impact. Therefore, the rate at which a firm grows moderates the extent to which firms influence RD.

To test the hypothesised mediating relationships, empirical predictions had to be made and observed (Vancouver and Calson, 2015). Firstly, the model fit was tested and confirmed before the mediation effects were predicted. Secondly, the various direct and indirect paths were tested, and the effects of both mediating variables observed.

The model fit indices indicated a good model to data fit, and so the data obtained fits the structural model prescribed. The ratio between chi-square and df was 3:1, which was consistent with the recommended range at least 1:2. Furthermore, other tests for validity of the model were well within the recommended ranges. So, all tests fit the findings, apart from TLI (.923), and were within acceptable range (table 7.17). Thus, this sample well represented the firms in this study.

Table 7. 17: Measurement Model fit Summary for the mediation effects

Item	Chi-Square	DF	Ratio x ² : df	RMSEA	PCLOSE	IFI	TLI	CFI	GFI
Model fit	57.395	19	3:1	.070	0.053	.960	.923	.959	0.961
P	.000								

7.6.2: Testing Hypotheses H10 and 11

The mediating effects of firm performance on the relationship between firm strategic behaviours and RD

H10: Firm involvement in industry clusters mediates the effect of the relationship between firm strategic behaviours and regional development in both FFs and NFFs

The mediating role of family involvement in the firm on the relationship between firm strategic behaviours and RD

H11: Firm performance mediates the effect of the firm strategic behaviours influence on regional development in both FBs and NFBs.

7.6.2.1: Direct Mediation Effect

Using the approach of Baron and Kenny (1986), without considering the indirect mediation effect of both industry clusters and firm performance (**appendix 15b**), the following tests were carried out and the outcomes observed.

Firstly, concerning the relationship between a firm's EO and RD, when only the mediation effect of firm involvement in industry clusters was considered, the standardised coefficient fell from $\beta=0.457$ ($p=0.001$) to $\beta=0.211$ ($p=0.001$). This indicated that there was a fall in strength, but that it was still significant. Thus, that path (EO-FIIC-RD) was partially mediated. Similarly, when only the mediation effect of a firm's growth was considered, there was a fall in strength from $\beta=0.457$ ($p>0.001$) to $\beta=0.218$ (0.001). This indicated that this path (EO-FP-RD) was also partially mediated.

Secondly, when the relationship between firm SDM and RD was observed, the strength of the mediating effect of a firm's participation in industrial clusters fell from $\beta=-0.260$ ($p>0.001$) to $\beta=-0.191$ (0.001). Additionally, the strength of the mediating effects of a firm's growth fell from $\beta=-0.260$ ($p=0.001$) to $\beta=-0.189$ (0.001), which showed that this path was partially mediated. Therefore, both firm involvement in industrial clusters and firm performance partially mediated the relationship between a firm's strategic decision-making and RD.

Finally, when the relationship between firm BSC and RD was tested, the strength of the mediating effect of the firm's involvement in the industrial cluster fell from $\beta=0.498$ ($p>0.001$) to $\beta=0.287$ ($p0.001$). Similarly, when only firm performance was considered, the strength of the mediation effect fell from $\beta=0.498$ ($p>0.001$) to $\beta=0.290$ ($p>0.001$), which indicated that there was partial mediation in both paths.

7.6.2.2: Indirect Effects with Bootstrapping

When the mediation effects are considered using the bootstrapping method (appendix 16), the following effects were observed:

- 1) Both the direct and indirect effects were significant for the pathway concerned with a firm's EO and RD. This indicated that both a firm's involvement in industrial clusters and its growth partially mediate the relationship between a firm's EO and RD.

- 2) The direct effect of a firm’s involvement in industry clusters was not significant ($p > 0.801$), indicating full mediation, as the standardised indirect effect for this relationship (FSDM-FIIC-RD) was significant. Thus, the entire total variance between a firm’s SDM and RD was fully explained through a firm’s involvement in industry clusters. However, a firm’s performance was partially mediated by the relationship between firm SDM and RD.
- 3) Finally, both the direct and indirect effects of a firm’s involvement in industry clusters and firm growth were significant for the path BSC-RD. Thus, they mediated the relationship between a firm’s social capital and RD.

Based on these results, there existed significant mediation of the structural relationships between the effect of a firm’s EO and RD. That could be partially explained by both the firm’s involvement in industry clusters, and the firm’s growth. However, the structural relationship between a firm’s SDM and RD was mediated through a firm’s participation in industrial clusters, though a firm’s performance partially mediates this relationship. Finally, there was a significant structural relationship between a firm’s BSC and RD, with partial mediation by both the firm’s involvement in industry clusters, and firm performance.

Referring to Baron and Kenny (1986), and introducing ‘bootstrapping’, both a firm’s involvement in industry clusters, and firm growth, mediated the relationship between the predictor variables (FEO, FSDM and FBSC) and the dependent variable (RD), as the p values were all statistically significant (0.001, 0.006 and 0.001, respectively). Therefore, both H10 and H11 were confirmed as accepted (table 7.18).

Table 7. 18: Mediation effects of industry clusters and firm performance

Variable Relationships	Direct without Mediator	Direct with Mediator	Standardised Direct effects (with bootstrapping)	Standardised Indirect effects (with bootstrapping)
FEO-FIIC-RD	0.457 ($p > 0.001$)	0.211 (0.001)	Significant ($p = 0.002$) Partial Mediation	Significant P (0.001)
FEO-FP-RD	0.457 ($p > 0.001$)	0.218 (0.001)	Significant ($p = 0.001$) Partial Mediation	
FSDM-FIIC-RD	-0.260 ($p > 0.001$)	-0.191 (0.001)	Not Significant ($p = -0.801$),	Significant

			Full Mediation	P (0.006)
FSDM-FP-RD	-0.260 (p>0.001)	-0.189(0.001)	Significant (-0.001)- partial Mediation	
FBSC-FIIC-RD	0.498 (p>0.001)	0.287 (0.001)	Significant (p=0.001) partial mediation	Significant P (0.001)
FBSC-FP-RD	0.498 (p>0.001)	0.290 (0.001)	Not significant(p=0.001) Partial mediation	

The next section evaluates and explains the findings in relation to the moderating effects of family involvement on the relationship between the predictor variables and regional economic development. The objective was to determine any differences between family and non-family firm contributions to RD by evaluating the extent of the effect that family involvement had on the relationship between firms' EO, SDM, and BSC, and regional development.

7.7: The Effect of Family Involvement in the Firm Strategic Behaviors

H12: The level of family involvement effects the firm level strategic behaviours influence on regional development, such that there is a significant difference between firms with higher levels of family involvement (FHFI) and firms with a lower level of family influence (FLFI).

Prior research established that the level of family involvement in the firm differed according to whether the focus was on “the demographic components of involvement” (focused on the ownership, management or governance in the firm), or the essence of family involvement (based on the ability and willingness to influence the firm) (Chrisman *et al.*, 2005; Henssen *et al.*, 2008).

In this study, data was collected on the firm's composition and its influence on the firm. Five main components, drawn from the family firm literature were used. Specifically, these were whether the CEO belonged to the family that owned the firm, the percentage of ownership, the number of family members who were managers, the generational involvement in the business, and the potential of intra-firm succession. To determine the degree of family involvement in the firm, the variables were transformed to generate a dummy variable called

‘family involvement in the firm’. The firms were then labelled as either having a ‘high family involvement’ or ‘low family involvement’. In order to meet the required minimum sample size for multivariate analysis, all the firms in the sample were used. That resulted in ninety-six firms with higher family involvement, and two hundred and eleven firms with lower family involvement.

7.7.1: Measurement Model Fit Summary for the Family Involvement Effects

First, before proceeding to establish the moderating effects of family involvement in the firm from the structural model, the model fit was determined to ensure that all statistical requirements for multivariate analysis were met. As indicated in the table below the ratio between chi-square and df is within the required ratio. Also, the other goodness-of-fit indicators were satisfactorily achieved for the measurement model used to test the differences.

Table 7. 19: A summary of the Model Fit

Item	Chi-Square	DF	Ratio x ² : df	RMSEA	IFI	TLI	CFI	GFI
Model fit	64.479	50	1.2:1	.018	.996	.979	.995	0.986
P	.000							

To determine the effects of family involvement, the firms were classified into two groups (high and low), and the difference tests were done on the various relationships between the predictor variables and the dependent variable. The level of family involvement in the firm influenced the ability of family firms to contribute to regional economic development, the study compared firms with high family involvement with firms with low or no family involvement, as evidenced below.

From the findings, there was a strong positive relationship between a firm’s EO and a firm’s performance, for both family and non-family firms. However, there were significant differences between the firms with low family involvement ($\beta=.619$, $p=.000$), which were twice as strong as those firms with high family involvement ($\beta=.384$, $p=.000$). The degree of difference was ($z= 0.2058^{**}$).

Additionally, based on the findings, there was a strong positive relationship between firms' EO and firm involvement in industrial clusters. Further, there was a significant difference between firms with low family involvement, and these had twice as strong a relationship ($\beta=.668$, $p=.000$) compared to firms with a high level of family involvement ($\beta=.461$, $p=.000$). The degree of difference was ($z = 1.815^*$).

Subsequently, there was a significant difference between firms with high family involvement, and those with low family involvement, when the effect between 'bridging social capital' was considered. So, firms with a high family involvement ($\beta=.511$, $p<.05$) indicated that 'bridging social capital' with external entities enhanced the firm's engagement in industrial cluster activities. This was as compared with those with low family involvement ($\beta=.338$, $p<.05$). The degree of difference was ($Z=1.979^{**}$).

Finally, there was a positive relationship between a firm's performance and RD. This was significantly different, as firms with a high family involvement ($\beta=.361$, $p<.05$) showed that they had an enhanced organisational performance, as compared to firms with a low family involvement ($\beta=.169$, $p<.1$), with ($z=1.677^*$)

Although the findings showed that not all the relationships were fully affected when the degree of family involvement in the firm was considered, most of the relationships were at least partially influenced. Therefore, the hypothesis was partially supported, as family involvement influenced a number of relationships between the strategic behaviours and regional development, as indicated in the table 7.20 below.

Table 7. 20: The moderating effects of family involvement on the relationship between predictor variables and the dependent variable

Hypothesis	Independent Variable	Dependent Variable	Family Inv Low		Family Inv High		Z-Score
			Estimate	P value	Estimate	P value	
H1a	EO	→ FirmPerf	0.596	.000	0.407	.000	-1.695*
H1b	EO	→ IndustryCluster	0.675	.000	0.441	.000	-2.106**
H1c	EO	→ RD	0.159	0.090	0.260	0.008	0.742
H1d	SDM	→ IndustryCluster	-0.035	0.619	0.035	0.649	0.672
H1e	SDM	→ FirmPerf	-0.342	.000	-0.339	.000	0.029
H1f	SDM	→ RD	-0.329	.000	-0.355	0.000	-0.248

H1g	BSC	→	IndustryCluster	0.356	.000	0.528	.000	-2.036**
H1h	BSC	→	FirmPerf	0.354	.000	0.440	.000	0.995
H1i	BSC	→	RD	0.291	0.000	0.144	.0124	-1.334

7.8: Summary of the Findings

The study was designed to test the theoretical and conceptual relationships proposed in chapters two and three concerning the relationship between firm level strategic behaviours and their effect on regional level outcomes. The initial objective of the study was to identify the theoretical constructs that could help explore the underlying factors that would explain the relationship between firm level factors (micro factors) and regional level outcomes (macro factors). The quantitative data analysis was set to determine the firm level factors that affected a firm's influence on RD, the relationship between the firm level factors identified, and the regional factors. In addition, to examine the differences and the extent to which family involvement in the firm influenced regional economic development.

From the literature review, three key theoretical constructs were identified and applied in developing the conceptual model. This was to examine the differences between the strategic behaviours of family and non-family firms, and their contribution to regional development. The first research question was answered using EFA analysis, which identified three exogenous factors and three endogenous factors. The statistical relationships between the predictor variables and the dependent variables were tested using CFA analysis, and findings reported. The hypotheses were tested using structural path analysis, during which a number of relationships were hypothesised and tested using the model. AMOS software (version 12) was used to confirm the validity and reliability of measurement and structural models. These were used to test the relationships between the latent constructs identified, based on the recommended standards (Hair *et al.*, 2006; Ho, 2006). Table 7.21 provides a summary of the hypotheses tested and outcomes.

Table 7. 21: Summary of the hypotheses' test results

Hypothesis	Description of hypothesis	Decision
H1	Non-family firms' entrepreneurial orientation will have a stronger positive influence on firm growth compared to family firms.	Supported
H2	Family firms have a stronger positive relationship between entrepreneurial orientation and firm involvement in industrial cluster than non-family firms.	Not Supported
H3	In family firms, entrepreneurial orientation will have a stronger positive effect on the firm's influence on regional development, as compared with non-family firms.	Supported
H4	In family firms, participation in strategic decision-making within the firm has a stronger positive effect on a firm's performance, as compared with non-family firms	Not Supported
H5	In family firms, participation in strategic decision-making within the firm has a stronger positive effect on the firm's involvement in industrial clusters. As compared with non-family firms	Not Supported
H6	In family firms, participation in strategic decision-making within the firm will have stronger positive effect on the firm's influence on regional development, as compared with non-family firms	Not Supported
H7	In family firms, 'bridging social capital' with external entities will have a stronger positive effect on a firm's performance, as compared with non-family firms.	Supported
H8	In family firms, 'bridging social capital' with external entities will have a stronger positive effect on a firm's involvement in industrial clusters, as compared with non-family firms.	Supported
H9	In family firms, 'bridging social capital' with external entities will have a stronger positive effect on the firm's influence on regional development, as compared with non-family firms	Not Supported

H10	Firm involvement in industry clusters mediates the effect of the firm level factor influences on regional development, in both family and non-family firms	Supported
H11	Firm performance mediates the effect of the firm's strategic behaviours on regional development, in both family and non-family firms.	Supported
H12	The level of family involvement effects the firm level strategic behaviours influence on regional development, such that there is a significant difference between firms with higher levels of family involvement (FHFI) and firms with a lower level of family influence (FLFI).	Partially supported

7.9: Chapter Summary

The chapter summarised the descriptive statistics on family and non-family firms by the firm's age, size, and nature of the business, plus geographic sales. Furthermore, multivariate techniques were used for the analysis of the data. This required that the data met some of the requirements based on the statistical inference assumptions of multivariate analysis, which included multi-variate normality, linearity, independence of error terms, and quality of variance dependence.

From the manifest variables, six latent constructs were obtained, using exploratory factor analysis (EFA), and after being assessed for their validity and reliability, they satisfied the required criteria. The data was further subjected to CFA, which was the preferred method of analysis for testing structural relationships compared to EFA (Hair *et al.* 2006). During the confirmatory stage, several techniques, such as 'common method bias' (CMB) and multi-group invariance analysis, were used to determine that the measurement and structural models met the various goodness-of-fit criteria prescribed in the SEM (Hair *et al.*, 2006; Ho, 2006). The 'common method bias' was conducted to ensure that all manifest variables were not loading onto one latent factor. The results of the multi-group invariance test showed that

there were no significant differences between respondents from the two groups, as they understood the research instrument. Thus, the data was reliable for SEM testing. Based on the structural model designed to measure the relationship between firm level strategic behaviours (independent variables), and regional development outcomes (dependent variable), the findings reported statistically significant differences in some of the relationships, based on responses provided by top managers in the firms.

To understand the differences between family and non-family firms, detailed analysis of both theoretical and conceptual relationships of the latent constructs was conducted. This was carried out using SEM techniques to test the hypothesis proposed in the conceptual model. Firstly, an analysis was conducted to determine the relationship between the firm level strategic behaviours and RD. Secondly, the moderating effects of the firm's involvement in the clusters and firm growth were analysed in detail. Finally, the degree of family involvement in the firms (high and low) was analysed. The results and tested hypotheses revealed that there were positive relationships between a firm's EO and regional development, but a negative relationship was observed between FDMS and RD. When the effects of a firm's involvement in industrial clusters and firm performance were considered separately, they did not fully mediate the relationship between firm level strategic behaviours and RD. When both paths were considered together, though, they partially mediated the relationship between the firm level factors and RD. Finally, the study revealed that the level of family involvement influenced the firm's regional impact, as there were significant differences in the underlying relationships. This was because of high family involvement, as compared with firms that had low family involvement. Therefore, it can be argued that the level of family involvement in a business can differentiate the extent to which family and non-family firms contribute to regional development. The next chapter presents discussion of the findings.

CHAPTER 8: DISCUSSION OF THE FINDINGS

8.1: Introduction

The study sought to investigate the role of family firms (FFs) in regional development as compared with non-family firms (NFFs). This chapter discusses the findings in relation to the literature reviewed and the objectives of this study. In addition, the chapter presents a discussion of the underlying mechanisms that provide explanations of the observed phenomenon. This in relation to the impact of FFs on regional development, as compared with NFFs. The chapter is organised in the following manner. Section 8.2 provides an overview of the findings in chapter 7. Sections 8.3, 8.4, 8.5 and 8.6 discuss the findings of the study in relation to prior literature. Section 8.3.1 proposes a theoretical model for investigating strategic behaviour and regional development. Finally, section 8.7 provides a summary of this chapter.

8.2: Overview of the Findings from Chapter Seven

The primary aim of the study was to investigate the role of family firms in regional development. The study focused on extending our understanding of whether FFs strategic behaviours influence their contribution to regional development as compared with NFFs. The positioning of the study meant that the sample included both FFs and NFFs. This was in order to identify and understand how firm level strategic behaviours based on entrepreneurial orientation, decision-making strategy and ‘bridging social capital’ affect their impact on regional development. Further, the study sought to investigate the effect of firm involvement in industrial clusters, and firm growth on the relationship between firm level strategic behaviours and regional development outcomes. The findings in chapters six and seven confirmed that the integration of the three firm level strategic behaviours (at micro level) improved our understanding of how the two types of firms differed in their impact on regional development (at the macro level). The main findings of this study can be summarised as follows:

Firm level strategic behaviours should be studied using a multidimensional approach. This is because TLMs in a business are likely to co-ordinate and follow consistent planning and

execute the organisation's strategic plans. Therefore, it is expected that there will be many inter-relationships between structural functions influencing organisational outcomes.

Family businesses are likely to contribute more to regional development, despite non-family businesses exhibiting statistically stronger relationships between FEO, firm performance and FIIC. Further, autonomy was not a key determinant of FEO contribution to regional development, despite being an important dimension of both FFs and NFFs entrepreneurial orientation.

Adopting a participative approach in strategic decision-making within the TLMs does not guarantee a positive outcome regarding the firm's regional impact. In fact, the findings showed there was a negative effect on both sets of firms, though it was more pronounced in family firms. Hence, the presence of 'the family' in FFs does not guarantee a competitive advantage over NFFs, as the stagnation of family resources can enhance the negative effects on firm performance, FIIC and RD.

Although the firm's 'bridging social capital' positively induces firm performance and FIIC, non-family firms had a stronger effect on regional development. This could be attributed to managers in NFFs engaging in extensive 'bridging social capital' relationship with external entities as opposed to FFs who might focus on strengthening their 'bonding social capital' relationships within the family.

Beyond the firm level, the analysis revealed that both firm involvement in industrial clusters and firm performance partially mediated the relationship between firm level strategic behaviours and regional development. Indeed, the results of the mediation effect showed that a firm's regional impact was not fully explained through the direct relationship between firm level strategic behaviours and regional outcome dimensions.

The level of family involvement in a firm is a key distinguishing factor when comparing family and non-family firms and their contribution to regional development. Thus, the level of family involvement in the firm moderates the relationship the firm level strategic behaviours and regional development outcomes.

8.3: Strategic Behavioural Differences between Family and Non-family Firms

The primary objective of the study was to examine whether or not FBs contributed differently to regional development, as compared with NFBs, and to identify the underlying factors that might explain such differences. Drawing on family business, entrepreneurship and regional development literature, the study identified three possible explanatory variables. These were ‘entrepreneurial orientation’, strategic decision-making and ‘bridging social capital’, along with family involvement as a moderator between the two sets of firms.

The findings of this study were interesting, as they confirmed that integrating the three firm level strategic behaviours mentioned above improves our understanding of how FFs and NFFs differ in their contribution to regional development. Further, the findings unpack the ‘black-box’ associated with firm behaviours by showing, not only the underlying mechanism through which firms contribute to regional development, but also the differentiated effects of these variables on both types of firms. Moreover, the findings enabled an understanding of the effects of family involvement on family businesses. This has been an elusive construct, especially in understanding how family firms with concentrated family ownership affect regional development. Indications from literature previously examined were inconclusive (Chang *et al.*, 2008; Memili *et al.* 2015).

Therefore, the study has determined three important insights into the effects of firms on regional development. These are relevant and timely to advance knowledge and to inform business practices and policies. Firstly, the positive effects of family firm EO on RD was found to be greater and more significant, as compared with NFFs. Secondly, the negative effects of participating in strategic decision-making in FFs on regional development was more pronounced, as compared with those of NFFs. Thirdly, the positive effects of FBSC in NFFs was stronger and more significant, though on aggregate, a firm’s BSC had a positive impact on regional development in both types of firms.

Therefore, these important insights have been significant in advancing knowledge on how firm level strategic behaviours differ between FFs and NFFs. Furthermore, the findings have identified the need for a multidimensional approach when investigating family firm effects on regional development, as these open the ‘black-box’ associated with family involvement (Gomez-Mejia *et al.*, 2007; Chrisman *et al.*, 2012; Basco, 2015).

Although entrepreneurship has been recognised as an engine for economic growth and development, the findings of extant studies on the contribution of FFs and NFFs to regional development have been inconclusive (e.g. Memilli et al., 2015). Scholars such as Memilli *et al.*, (2015), who drew on a knowledge-based view of economic growth, argued for the balanced presence of both types of firms in order to achieve optimum economic growth. Other studies have observed that the behavioural differences between FBs and NFBs could lead to differentiated contributions but did not examine these variables in a holistic manner (Basco 2015; Bird and Wennberg, 2013; Stough et al., 2015). However, this study has demonstrated that although there should be a balanced mix of FFs and NFFs (Memilli et al., 2015), it is clear that strategic behaviours have an enhanced effect on regional development outcomes and would explicitly tilt the balance if there is a disproportionate concentration of either of the firms within the region.

This study extends our understanding by examining ‘firm EO’, strategic decision-making and ‘bridging social capital’ in an integrated manner to determine the mechanisms through which firms could influence RD outcomes. In particular, the study demonstrates the importance of conceptualising firm level entrepreneurship as a composite construct to extend the understanding of how firms influence regional development. However, this perspective is not intended to investigate or quantify the proportion that firms contribute to regional development as a result of firm level entrepreneurship. Rather, it demonstrates that embracing the entrepreneurial perspective in explaining the contribution of firms to regional development is based on several strategic behaviours of TLMs. In addition, the underlying strategic behaviours can explain the differentiated contributions between FFs and NFFs.

8.3.1 Firm Entrepreneurial Orientation Strengthens Firms’ Impact on RD

The findings reinforced the arguments postulated by some scholars that entrepreneurship positively influenced regional development in different regions around the world (e.g. Audretsch and Thurik, 2000, 2001; Thurik *et al.*, 2002; Boettke and Coyne, 2003; Coyne and Leeson, 2004; Memilli *et al.*, 2015; Adusei, 2016). Therefore, it was not surprising that the findings in section 6.5 confirmed that firm entrepreneurship orientation could positively enhance a firm’s contribution to RD. The latent factor sought to establish the overall entrepreneurial behaviour of firms based on EO dimensions (Miller, 1985; Lumpkin and Dess, 1996; Casillas and Moreno, 2010). In relation to the three identified firm level relationships tested, differences emerged on the effects of FEO on the performance of the

firm, firm involvement in industrial clusters and regional development between the two types of firms.

Based on the perceptions of the TLMs, there was evidence to support strong positive relationships between FEO and FIICs (H1). Further, the findings also reported that FEO enhanced firm performance (H2). In addition, the findings confirmed that a significant and strong positive effect of FEO on regional development outcomes (H3). Thus, the findings provided empirical evidence from the context of a developing economy to support the conceptual arguments that firm level entrepreneurship contributes to regional development.

Further analysis of the empirical data, however, indicated differences in FEO between the two types of firms. NFFs had a superior EO, as compared with FBs, which positively enhanced firm performance and firm involvement in industrial clusters. Essentially, these findings resonate with prior literature (e.g. Short *et al.* 2009; Zellweger *et al.*, 2010; Le Breton-Miller, Miller, & Bares, 2015) that suggest NFFs are more entrepreneurial than FFs. Although TLMs in family firms engage in entrepreneurial behaviours such as innovation, risk-taking and proactiveness, the effects NFFs are greater. However, the findings did not contradict some prior studies that focused on the long-term orientation of family firms. These argued that family participation in the firm enhanced entrepreneurship, - as they sought to create transgenerational wealth (Habbershon *et al.*, 2003) or value (Chrisman *et al.*, 2003; Habbershon, 2006). As this study established, FFs have an enhanced contribution to the RD compared to their counterparts.

Another notable finding of the study was that FEO, is a composite factor that included 'innovativeness', 'risk-taking', 'pro-activeness' and 'competitive aggressiveness'. In addition, the EO dimensions were responsible for the differences amongst the two types of firms in regional development outcomes, as the EFA revealed that autonomy was not loading on the FEO factor. The findings revealed that 'innovativeness', 'risk-taking', 'proactiveness' and competitive aggressiveness were positively correlated. Contrary to Lumpkin and Dess (1996) suggestion that EO consists of five dimension or three dimensions (Miller, 1983; 2011), this study established that autonomy was not considered within the African context, which is considered to be community oriented. Family businesses rely on their familial or communal relationships as opposed seeking autonomy (Khayesi et al., 2014).

Thus, the sample of Kenyan firms also revealed, however, that autonomy was of less importance in determining the EO effects of firms on regional development. Contrary to prior

findings (e.g. Nordqvist *et al.*, 2008) that argued that autonomy is a key dimension in determining the entrepreneurial behaviour of firms, it is worth noting that the dimension is not a significant determinant of the regional impact of firms. This implication might be far reaching for both family and non-family firms, as they considered both internal and external autonomy to be drivers of economic activity (Zellweger *et al.*, 2010). Thus, it can be argued that autonomy is highly correlated with ‘new entry’ and not existing ventures (Lumpkin and Dess, 1996; Zellweger *et al.*, 2010). Therefore, autonomy only becomes a significant factor when establishing new ventures and not of significant importance in existing firms.

Surprisingly, FBs had a stronger impact on regional development outcomes despite the stronger and significantly positive relationships between NFFs EO, firm performance and FIICs. This means that the finding has provided empirical evidence to support the argument that FFs have an enhanced contribution to regional development (Anderson and Reeb, 2003; Randoy and Goel, 2003; Lee, 2006; Maury, 2006). This is contrary to the suggestions that FFs had lower impact (Villaronga and Amit, 2006; Facio *et al.*, 2010). Therefore, this study has contributed to the continuing debate on the influence of family firm entrepreneurship, and has followed the call for more studies to understand the relationship between FFs and regional development (e.g. Nordqvist and Melin, 2010; Hitt *et al.*, 2011; Basco, 2015; Stough *et al.*, 2015). In essence, the findings of this study have extended and provided empirical support to these studies on FFs that argued that family firms portray superior performance, as compared with NFFs. There is no consensus, though, on their proportional contribution to regional development.

From this study one can argue that FFs are likely to contribute more to GDP, job opportunities and wealth creation than NFFs. Although the entrepreneurial orientation of family firms appears less strong than that of NFFs, the direct effect of FEO provides an explanation for the higher influence that FFs have on RD. For instance, this superior influence can be attributed to the long-term orientation (LTO) of family firms towards investment and ownership. In turn, this affects EO dimensions, such as innovation, risk-taking, proactiveness and competitive posture across the organisation and geographic contexts (Kemelgor, 2002; Kreiser *et al.*, 2002; Kreiser *et al.*, 2010), which then influence their contribution to RD. Further, given the focus on the African context in this study, it is possible that the socio-cultural context (Vershina *et al.*, 2017) and institutional environment (Murithi *et al.*, 2018; Khavul *et al.*, 2009) had an influence on the EO of firms. Kreiser *et al.*

(2010) provided empirical evidence to demonstrate that national culture dimensions and institutions influenced risk taking and reactivity in organisations. Vershinina *et al.* (2017) contend that specific Kenyan socio-cultural environment would either enable or constraint the level of entrepreneurship, especially in new venture creation. While Murithi *et al.* (2019) argue that the institutional voids presence in developing economies such as Kenya influence the development and contribution of FFs Vis a Vis NFFs. Thus, FBs are more likely to outperform NFBs on regional development as they are embedded in the social-cultural institutions.

8.3.2: Participation in the FDMS Impedes Firms' effects on RD

In addition to the EO of a firm, the ability of TMLs to reconfigure and modify its resources and capabilities will help them to act more quickly to take advantage of entrepreneurial opportunities. That is, the firm should possess mechanisms that enable management to make both quick and incremental decisions at the right time and in appropriate situations. Hence, the 'participative decision-making strategy', which refers to making key business decisions through teamwork. The findings revealed that participative strategic decision-making was critical in determining the allocation of resources, strategic direction, behaviours, and performance in both types of firms. Further, as per the outcomes of the current study, it can be said that participative decision-making correlates with the EO of the firm (i.e. the ability to innovate, take risks, be pro-active, compete in the market place and independently execute their mandate, or the strategic alliances the firm develops with external entities). Therefore, according to prior research (Eddleston and Kellermanns, 2007), TLM participation in the strategic decision-making process positively enhances firm performance, involvement in industrial cluster activities, supporting venture creation, creating jobs and wealth creation for the shareholders.

Contrary to the prior research (Eddleston and Kellermanns, 2007), this study showed a negative association between participation in the decision-making process and firm performance (H4), in both types of firms. In relation to firm performance, the findings did not show significant differences between participation in decision-making strategy and firm performance. Prior studies, though, argued that family firms differed in relation to their strategic behaviour, because of the family influence on the firm, as compared with NFFs (Sharma *et al.*, 1997; Astrachan *et al.*, 2002; Chrisman *et al.*, 2005).

Further, the findings of the current study did not support the hypothesised relationships involvement in industrial clusters FIICs (H5) and regional development (H6). Prior studies argue that FFs through participation in decision-making process positively enhanced involvement in industrial clusters and regional development (Basco, 2015; Stough et al., 2015). However, this study found that PDMS negatively impacts on FIIC and Regional development. Thus, this study reinforced the explanation of the conceptual arguments that family involvement in the firm shapes the firm's strategic decisions. Also, that these contribute to the differences between FFs and NFFs (Chrisman *et al.*, 2007, Zellweger *et al.*, 2010). Family influence on decision making process influences firm performance and involvement in industry clusters, which in turn affects the regional impact of a firm (Basco, 2013; Chrisman, Chua, and Sharma, 2003).

It was interesting to note that when there was family involvement in the firm, there was a pronounced negative effect on participative strategic decision-making and on firm performance compared with non-family businesses. These findings can be explained by drawing on the literature from family business involvement theories. Firstly, the greater the involvement of family members in strategic decision-making processes, the more likely were the owners to seek to protect their Socioemotional wealth (SEW). This argument was supported by Gomez-Mejia *et al.* (2007), who highlighted that the presence of a controlling family coalition in the firm negatively influenced the financial outcomes of the firm. However, the findings contradicted Eddleston and Kellermanns (2007), who established that a participative strategy was positively related to performance. Furthermore, on the contrary. Kim and Gao (2013) observed that family involvement had no direct influence on performance. Instead, when the family firm has a long-term goal orientation, this positively moderates the relationship between family involvement in strategic management and performance.

Secondly, the focus on pursuing family-centred, non-economic goals (FCNEs) will result in the TLMs being less likely to react and adapt and slow in response to rapid market and competitive changes. In turn, this affects a firm's performance and its effect on regional development. For instance, the decisions of managers of family firms to pass the firm on to future generations will lead to the firm to focus on family orientation, as opposed to an entrepreneurial orientation. According to Martin and Lumpkin (2003) an increased focus on

family orientation will overtake the entrepreneurial orientation, as the firm is passed on through generations.

On the contrary, these findings showed a positive association of family firms' SDM and FIIC, whereas this was negative in NFFs. They supported the conceptualisation in prior studies that family involvement in the firm leads to different outcomes, as compared with NFFs (Sharma *et al.*, 1997; Chrisman *et al.*, 2005; Basco, 2013). The implication is that TLMs in family firms are more willing to engage in industrial activities in the region (Niu, 2009). Given the powers of the family to influence a firm's decisions and their embeddedness in the region, there is a preference to engage in activities within the industrial clusters. Further supporting the arguments that family firms are more willing to engage with other external stakeholders and local communities (Cennamo *et al.*, 2009), this should encourage sharing of ideas, innovations, and partnerships, the developing of a shared vision and encouraging technological innovations within the industrial clusters.

Further, the results from analysing the relationship between participation in the strategy decision-making process and regional development outcomes have reinforced the arguments made by (Memili *et al.*, 2015) that there are no significant differences in the contribution of both FFs and NFFs to economic development. Nevertheless, the study established that, based on the degree of inclusivity in decision-making, family firms had a slightly stronger negative effect on RD, as compared with NFFs. Therefore, the findings contradicted other studies arguing that the participation of family owners in decision-making would positively enhance regional development (Burkart *et al.*, 2003; Beghoff, 2006; Basco, 2015; Stough *et al.*, 2015).

The negative association between participation in the decision-making process, firm involvement in the industrial cluster, firm performance and regional development can be explained by the type of firm ownership and the geographical context of the study. As established by Khavul *et al.* (2008), family firms in emerging economies tend to involve extended members of the family, unlike those in western economies. Thus, the evidence has reinforced that the participation of extended family members in the decision-making process will negatively affect the pace at which strategic decision-makers integrate, build and reconfigure internal and external resources to influence performance, industrial cluster participation and regional development (Teece *et al.*, 1997). Instead of the decision-making process being a consultative process seeking to gather quality information to support and guide the business strategic direction, the founder (or patriarch) of the family consolidates

decision-making to propagate family Centred economic goals (FCEGs). Thus, this could negatively influence the firm regional impact, as it would negate the advantages of a consultative process in the strategy-making process (Eddleston and Kellerman, 2007).

8.3.3 FBSC with External Entities Facilitates Firms Influence on Regional Development

The study found evidence to support the proposition that a firm's 'bridging social capital' positively enhances a firm's performance, and firm involvement in industrial clusters. In addition, that there was a positive relationship between TLMs 'bridging social capital' and its impact on RD. It was found that TLMs can draw on such personal and social networks to benefit from both financial and informational resources, and that that can lead to competitive advantages. Meanwhile, the literature (e.g. Bourdieu, 2005) has indicated that managers can leverage their personal or social network relationships to influence strategic resources or policies within the region. Therefore, FBSC could positively enhance regional development (Woolcock and Narayan, 2000, Acquah, 2007; Sharma, 2008).

The implication of this finding is that the social context in which a firm's actors are embedded is significant. Therefore, given the contextual differences between developing economies and those of developed economies, manager's personal and social network relationships with external entities is likely to mitigate the effects of weak institutions and uncertainties in the market (Murithi *et al.*, 2019). In such contexts, TLMs, who actively seek to develop social capital with external leaders and entities, can positively influence firm regional impact (Peng and Zhou, 2005). In particular, participation within industrial clusters enables firms to develop R&D, share resources, locate near other suppliers and buyers (reducing transactional costs), exchange knowledge and ideas, contribute to developing a shared vision, and technological transfers. When a firm's managers engage with those from other firms and leaders, this enhances their ability to influence regional factors and processes, which in turn can impact on regional development.

For the hypothesised relationship linking TLM's 'bridging social capital' to regional development, the study established a positive association. The finding is in line with studies that found that managerial social capital developed at the firm level (micro) contributes to organisational success at the regional level (macro) (Coleman, 1998; Nahpiet and Ghoshal, 1998, Leanna and Van Buren, 1999). The implication of the findings (discussed in section

6.5.9) is that social capital developed by TLMs with external entities and leaders positively enhances a firm's impact on regional development.

The findings also support the arguments of Leana and Van Buren (1999) and Arregle *et al* (2007), who proposed that NFFs can employ institutionalised practices and policies similar to those of FFs. Therefore, NFFs would generate social capital similar to that which occurs in FFs. Thus, contrary to the proposition that family firms have stronger social capital compared to NFFs, the findings of this study indicated that NFFs had a much stronger positive influence. Therefore, despite the established importance of 'bridging social capital' in both FFs and NFFs in regional development, it is more effective in NFFs.

The differences in the 'bridging social capital' effect on the regional impact of firms between FFs and NFFs can be explained by considering two alternatives. Firstly, it appears that in family firms, TLMs focus on internal familial relationships and ties, as compared with those firms with community leaders, political and government agents. This perspective was supported by Pearson *et al.* (2008) and Carr *et al.* (2011), who drew on the social capital theory (the three facets; structural, relational and cognitive) to argue that family firms tend to have stronger internal structural relationships due to cognitive (shared vision) and relational (family interaction and involvement in the firm) factors, which uniquely affect a firm's behaviour and performance. In essence, TLMs in family firms focus more on building and developing familial social capital, as opposed to developing social capital with community leaders, political and government agents. This will instead consolidate a firm's resources to growing 'bonding social capital', as opposed to developing 'bridging social capital'.

Secondly, the next alternative argues that excessive internal social capital and group closure, such as familial relationships within family firms, will lead to closed ideas and firm stagnation (Alder and Kwon, 2002; Pearson *et al.*, 2008). The implication of overpowering internal social capital within family firms is that it might result in them being close-knit and protective. This might have negative effects on the firm's performance (Portes, 1998; Gomez-Mejia *et al.*, 2007) and regional embeddedness (Grannovetter, 1985; Basco 2015). In the case of conflicts or dysfunctional bonding social capital within a firm, the effects will be detrimental to a firm's regional impact.

Although the social capital developed with each of the three dimensions is distinct, it appears that the social capital relationships of Kenyan firms with external entities positively enhanced performance. That was consistent with the findings from Ghana by Acquah (2007), and

prior studies from China (e.g. Peng and Luo, 2000; Park and Luo, 2001). Thus, the findings from Kenya, Ghana and China have clearly indicated that social capital derived from personal and networking relationships (other than with other top managers - as is the focus in Western economies) are beneficial to firms in developing economies.

This study has responded to calls for research that focuses on using data from the sub-Saharan African context (Jones et al., 2018; Welter, 2011; Wright *et al.*, 2005; Zoogah et al., 2015). As the findings have indicated, firms rely on 'bridging social capital' with communities, government leaders and agencies in order to overcome challenges arising from institutional inefficiencies and market uncertainty in Kenya, and other sub-Saharan economies. Family firms are known to use other non-competitive mechanisms to circumvent market uncertainty, inadequate managerial capabilities, and to mitigate their lack of risk-taking behaviour. Evidence from East European countries established that family firms are more likely to make informal payments (i.e. corrupt bribes) as additional export risk insurance to compensate for their lack of export managerial experience and to protect their SEW (Bassetti *et al.*, 2018).

In addition, the Kenyan economic context, and to an extent those of SSA countries, is characterised by a collectivist culture. The latter has influenced both FFs and NFFs to develop social networking relationships with communities and political leaders (Vershina *et al.*, 2017). Therefore, the strong socio-cultural, institutional context in SSA, in which both the community and the family are tenets, encourages business families to embed cultural and family social relationship networks in their business activities (Murithi *et al.*, 2019).

Thus, given the difficulties and challenges facing SMEs in developing economies (identified in chapter 4, section 4.4), extended social networks should tend to moderate the relationship between 'bridging social capital' and regional development outcomes. This is supported by data from Uganda (Khayesi *et al.*, 2014). For instance, as established in that study, the implications of reliance on both familial and extended social networks in raising financial resources might be two-fold. Firstly, it might result in higher costs, which in turn might reduce the impact of a family business on regional development outcomes. This because the owners of firms divert resources from the firm to pursue FCNE. This would be to satisfy the immediate and extended family members' needs, which might include community welfare. Secondly, the willingness of family business owners to use their financial resources to meet

the needs of dependants, which might include community welfare objectives, is likely to enhance community resilience, even in times of economic crisis.

8.3.4: Proposed Theoretical Model: Firm Level Strategic Behaviour Effects on RD

The findings have demonstrated the significance of a multidimensional approach in examining the effects of strategic behaviours on the role of family (and non-family) firms, and their influence on regional development. Based on the proposed correlations between the firm level strategic behaviours, the following were the effects of the interactions

- 1) FEO moderates the negative relationship between FDMS and RD
- 2) FEO reduces the positive relationship between FBSC and RD
- 3) FDMS strengthens the positive effects between FEO and RD
- 4) FDMS strengthens the positive relationship between FBSC and RD
- 5) FBSC weakens the positive relationship between FEO and RD
- 6) FBSC moderates the negative effects of FDMS on RD

The study has emphasised treating firm level entrepreneurial behaviours as a composite construct that can be holistically understood by drawing on multiple theories as suggested by Miller, (2011); particularly entrepreneurial orientation, RBV and social capital. As observed, the firm's EO is correlated to both FSDM and FBSC, and vice versa.

As revealed by this study, participation in the decision-making process is critical in determining the allocation of resources and capabilities that will influence the firm's ability to innovate, compete, proactively pursue opportunities and independently develop external alliances. Furthermore, the extent to which decision-makers participate in decision-making processes strengthens their ability to develop personal and social networks with external entities. This would have an influence on the entrepreneurial orientation of the firm. Miller's reflection on the development of EO is critical of the fact that either entrepreneurship scholars have solely focussed on determining the entrepreneurial behaviours of a firm –classifying firms as either entrepreneurial vis-à-vis not entrepreneurial, instead of determining antecedents of behaviours that lead to entrepreneurship, which was the original intention of the 1983 publication. Further, as observed by various studies, EO originates from the strategy making process literature (Miller and Friesen, 1982; Miller 1983; Kandawalla, 1977), thus it's a

composite component which components that have different sources even within a given type of firm (Miller, 2011). Further, some studies have also demonstrated that the external environment can have affect to EO dimensions (Lumpking and Dess, 1996; 2001), the connexion of EO to firm resources and capabilities as well as performance, focussing on different environments and strategies, and moderating or moderated by various other conditions (Covin et al.; Dess et al.2006; Rauch et al., 2009; Wiklund & Shepherd, 2003, 2005). However, as miller (2011) observed there are few studies that that evaluate the causal relationshipship between EO, its environment and strategic context and performance (p.878). In this tudy, EO is explored from a strategic behavioural perspective in influencing performance, firm involvement in clusters and regional development outcomes.

Theoretically, strategic behaviour is a composite construct that consists of the strategic actions of the TLMs. As metioned eatlier in section 3.1 the strategic management process involves decision making. EO refers to TLM preferences, perceptions and and behaviours which are informed their decision-making styles, methods and practices. The EO preceeds the allocation of resources and capabilities as well as the development strategic relationships that enhances knowledge and resources acquisition. EO is significant for developing a strategic posture that ensures positive performance and growth of the firms. As Miller (2003) there is a complimentarity between decision making processes and decisions that a frim makes to harness the resources for profitable purposes. Even the most prolific entrepreneurs might be symied by shortage if resources (Miller, 2011). Even though strategic management processes might be similar for botth FBs and NFBs, the interaction between the family and business sytems in FBs is a source of 'familiness' which influences the goal, resources and capabilities and well as external relationships (Habbershon et al., 2003; Chrisman et al., 2003; Moore, 2009).

Further, familiness manifests itself within the family business (structural, cognitive and relational). Pearson et al. (2008) agued that social capital theory can be incorporated within the context of FBs to understand the underlying structures and mechanism of familiness that lead to distinctive and constrictive familiness. Although familiness is still yet to be fully configured, the ability to integrate, build and reconfigure internal and external competencies to address the rapidly changing environment (Teece et al., 1997). Further, the development of strong networks would have an influence on the acquisition of necessary resources to grow

the business (Granovetter, 2005). Both family and nonfamily firms were capable of developing stronger bridging capital, FBs mobilise and deploy resources differently (Levie and Lerner, 2009). Indeed, social capital helps offset the weaknesses in human and financial capital within FBs as they are prone to focusing on non-economic goals. For instance, when stronger social capital is present among family members (bonding capital) the FBs can generate competitive advantage. Thus, the relationship between the three firm level factors could explain the underlying structural and mechanism through which strategic behaviours within family firms contribute to regional development compared to NFFs.

From the multivariate interaction effects between the three strategic behaviours (entrepreneurial behaviours, decision making and external relationship) produces differentiated outcomes between FBs and NFBs. As 'entrepreneurial orientation' and 'bridging social capital' both positively moderates the effects of FDMS on firm's influence on regional development outcomes. As established a participative strategy in decision-making process had negative effects on the firm's regional impact. Hence their ability to innovate, take risks, be proactive and compete, as well as developing strategic alliances with external entities are beneficial to firm's regional impact.

The findings also showed that a FBSC was critical in acquisition of the allocation of resources (financial, human, social and knowledge) from collaboration with external entities and determination of strategic direction, behaviours, and performance in both sets of firms. Hence this moderated the negative effects of FDMS on regional development dimensions. Furthermore, as per the outcomes of the survey undertaken in this study, it can be said that FBSC moderates the effects FEO on RD. A stronger FBSC with external entities will lessen the firm's EO i.e. the ability to innovate, take risks, be proactive, compete in the marketplace and act independently.

In order to holistically understand the effects of firm's strategic behaviours on regional development, this study emphasis the use of a multidimensional framework. As indicated in prior studies family firms have showed distinct behaviours when compared to NFFs. However, there is inconsistencies when investigating their contribution to regional development. Therefore, to enhance our understanding on how their strategic behaviours affect their contribution to regional development a multidimensional approach is inevitable. The three theoretical lenses were critically evaluated in chapter 3, section and synthesised in

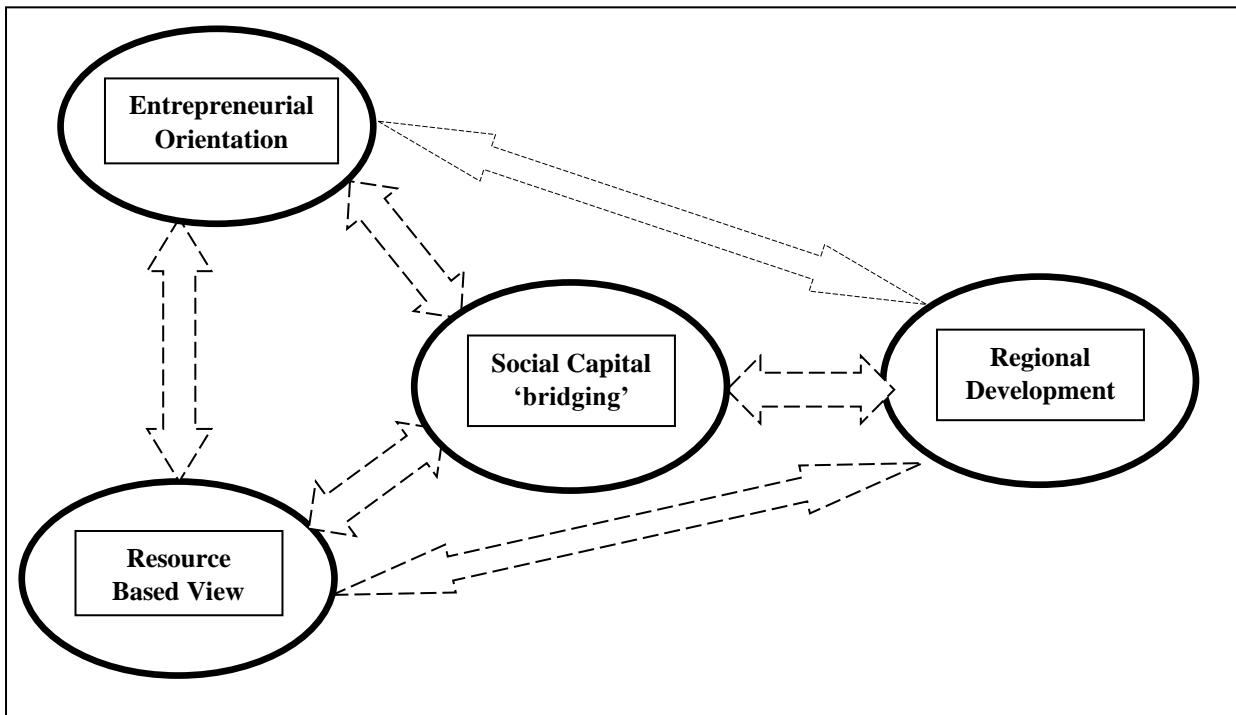


Figure 8. 1: A Multidimensional Firm Regional Impact Model

Source: Author (2019)

The study demonstrates the effect of strategic behavioural differences between the two types of firms and their impact on regional development. The next sections (8.3.1, 8.3.2 and 8.3.3) unpack the firm level strategic behaviours that influence a firm's impact on regional development.

8.4: Firm Involvement in Industrial Clusters Enhances Firms' effect on Regional Development

As reported in chapter 7 (section 7.6) industrial clusters partially mediated the relationship between the firm level strategic behaviours and RD. That empirical evidence showed the importance of firm involvement in industrial clusters for regional development (Rocha, 2004; Niu, 2009). Industrial clusters represent an external environment that is external to the firms but internal to the region. Therefore, based on their abilities to aggregate a firm's influence (through organisational partnerships, networks and alliances), they play a critical role in mediating the relationship between strategic behaviours and regional development outcomes.

In the analysis of a firm's involvement within industrial clusters, the findings supported the conceptual arguments by Niu (2009) that "the development of regional industrial clusters

promotes tighter inter-firm coordination and frequent collaboration, which helps participating firms in pursuing a competitive position in the global market" (p. 445). Here, industrial clusters are 'relational spaces' (Capello, 2009), in which firms can develop their competitive advantages by engaging in sharing resources, innovative capabilities and knowledge spill overs; thus, promoting value creation and the growth of firms. Thus, actors in firms can alter dimensions responsible for regional development.

However, as noted in the literature, firm behaviours (such as choice of entrepreneurial orientation, participation in strategic decision-making processes, resource allocation or business relationships) depend on the type of ownership and management regime (Basco, 2015; Stough et al., 2015). Consequently, studying firm involvement in industrial clusters enabled the identification of the effect of industrial clusters on the relationship between firm level strategic behaviours and RD. Furthermore, this study supports the arguments by Block and Spiegel (2013) that focusing on the regional spatial dynamics helps to bring out the differential effects of both FFs and NFFs on regional development outcomes. In addition, the results of the study confirmed the importance of the suggestions by Markusen (1996, 2002). Thus, an improved understanding of how the decisions of a firm's actors might influence the firm's strategic behaviours and performance outcomes is required in order to deepen our understanding of the role of family firms in regional development.

In addition, the findings demonstrated differences between FFs and NFFs' interactions within industrial clusters. The evidence has supported the theoretical proposition that the participation of family firms within industrial clusters enables them to leverage their location, which enhances regional performance (Cucculelli and Storai, 2015). Further, the embeddedness of family firms within the regional environment enables them to have a notable influence on regional development outcomes (i.e. GDP, employment opportunities and wealth creation) within the geographic economies where they are located (Basco, 2015; Stough *et al.*, 2015).

Also, the findings from the study emphasised the notion that family enterprises are a key economic actor within industrial clusters around the world (Johannisson *et al.*, 2007), which was consistent with studies from the Mitterland region in Germany (Bergoff, 2006), industrial clusters in Sweden (Johannisson *et al.*, 2007) and Italian districts (Cucculelli and Storai, 2015). However, there is contradicting evidence that family firms are prevalent in only less developed regional economic environments in the USA (Chang *et al.*, 2008), as the study

reveals a large proportion of family firms located within urban cities, such as Nairobi, Kenya, that seem to have a notable influence on the region. A similar scenario is expected in most urban cities in developing economies, as firms seem to cluster in major cities to leverage on the infrastructure and proximity to government agencies and institutions, as opposed to western economies.

8.5: Firm Performance Plays a Significant Role on Firms' Regional Impact

One of the research objectives was to determine the effect of firm performance on the relationship between firm level strategic behaviours and regional development. Firm performance was measured using mainly profitability measures in comparison with industry averages. These comprised growth in sales, market share, employee numbers, profit, and the ability to fund growth (Casillas and Moreno, 2010). This was essential as to minimise discrimination against NFFs, when comparing their performance effect to those of family firms (Powell, 1992; Anderson and Eshima, 2013). NFFs are known to pursue non-financial goals in addition to financial goals. These objective measures enabled standardisation of the variables to allow for comparison across FFs and NFFs, as well as across industries, market contexts and economic conditions (Achtenhagen *et al.*, 2010; Andersson and Eshima, 2013).

The findings presented in chapter 7 (section 7.6) provided empirical evidence that firm performance partially mediates the relationship between the firm level strategic behaviours and RD. The hypothesis tested the extent to which firm performance explained the relationship between the identified firm level strategic behaviours and RD in both sets of firms. During the path analysis, it was established that when the mediating effect of firm performance was taken into consideration, the strength of the predicting independent variables was reduced in all the three factors, such as the firm's EO, SDM and BSC. The findings indicated that these three factors have both direct and indirect effects on regional development.

As entrepreneurship behaviour is positively associated with firm performance, then the higher the EO the higher the firm performance, and this leads to a higher mediating effect. Similarly, the strategic decision-making process and social capital have effects on their relationship with RD. Therefore, firm performance is an underlying essential factor that explains the relationship between firm level strategic behaviours and RD. As it is argued that the higher the rate of firm growth, the more likely it is to contribute to regional development outcomes.

For instance, the greater a firm's profitability, the higher the contribution to the GDP basket. Therefore, the more likely it is that the business will create employment opportunities and pay dividends to shareholders.

The findings support prior studies that established that firms with high entrepreneurial orientation are positively associated with higher firm performance (e.g. Brown *et al.*, 2000; Moreno and Casillas, 2008). Further, the findings of this study have supported the argument that enhanced firm performance was positively associated with improved regional development (Anderson & Reeb, 2003). Further, prior studies have established that firms with external networks have been able to draw on both financial and other resources that contribute to being competitive, and hence to value creation and improved performance (Gedajlovic *et al.*, 2013). From an economic perspective, firms that are growing contribute more to the GDP, job opportunities and wealth creation in the region.

The implication is that a firm's performance is important in explaining the underlying effect of a firm's entrepreneurial orientation, participation in strategic decision-making and 'bridging social capital' on regional development. Thus, although firm entrepreneurship, or creating a participative environment in decision-making or enhancing engagement with external entities, does have a direct effect on RD, the rate of firm growth helps to enhance the firm's regional impact. However, since a firm's performance partially mediates the relationship between firm level strategic behaviours and regional development, the direct effects are significant too. When the level of a FEO improves, the expectation is that this will have a positive effect on the firm's performance, which in turn enhances firm regional impact.

Instead, a firm's performance can be affected by the presence of family members in the firm. The implications of such family involvement are not well understood, as there is still a debate as to whether or not this has a positive or negative effect on value creation (Villalonga and Amit, 2006). This could mean that the higher the family involvement, the lower will be the firm's performance. The effect of the firm's performance was significant in understanding not only the effect of firm actors on the firm's performance, but also the effect of the firm's performance on regional development. Therefore, the study has demonstrated that firm performance is a mediating mechanism through which the firm's strategic behaviours can influence firms to contribute more or less to regional development.

8.6: There are Significant Differences between FFs and NFFs' effect on RD

The fourth question in the study was to explore 'why family firms were perceived to contribute more to regional development, as compared with non-family firms?', particularly if family involvement in the business enhanced the firm's regional impact. The question was initiated from the lack of consensus by family business researchers on whether or not family firms have superior performance, and contribute more to regional development (i.e. GDP, employment opportunities and wealth creation) compared to NFFs. Given the lack of empirical explanation of the underlying factors that influence a family firm's contribution to regional development, the study sought to explore if family involvement in the firm enhanced a firm's contribution to RD. The findings in chapter seven provided empirical evidence that supported the theoretical and conceptual arguments that family involvement in the firm contributed to the behavioural and performance differences between FFs and NFFs.

In order to distinguish between family and non-family firms, two techniques were employed. Firstly, the identification of family firms was based on the respondent's classification of whether the firm was a FFs and NFFs, and their perceptions as regards the effects of strategic firm level factors. It was evident that FFs and NFFs differed in their strategic behaviour and regional impact. Secondly, when the level of family participation was considered, the firms showed distinct behaviours. In the second criteria, a dummy variable was introduced so that the firms were categorised into two groups. These were firms with higher family involvement (FHF) and firms with low or no family involvement (FLFI). The degree of family firm involvement was determined by the level of family involvement in ownership, management, the generations involved in the business, and the intention for intra-family succession (Westhead and Cowling, 1998; Chua *et al.*, 1999). Based on this analysis, significant differences emerged between family and non-family firms. These were on the effects on regional development in the following areas; namely a firm's entrepreneurial orientation, 'bridging social capital', involvement in industrial clusters, and performance.

- FLFI reported a positive and significant impact on the relationship between a firm's EO and a firm's performance, as compared with FHF in developing economies.
- FLFI were more likely to participate significantly in industrial clusters activity given their superior firm EO, as compared with FHF in developing economies.

- The presence of ‘familiness’ in FHFIs does not guarantee that their embeddedness in regional economies will have a positive impact on regional environment compared to FLFI, as suggested in extant literature.
- Given the willingness for TLMs in FHFIs to develop personal and social networks with managers from other firms, community leaders, politicians and government, they were more likely to influence regional factors and processes significantly within industrial clusters, as compared with FLFI.
- The age of firms significantly influenced FHFIs participation in industrial clusters and firms’ performance, as compared with FLFI.
- The size of firms was a key factor in determining FHFIs engagement in industrial cluster activity, as compared with FLFI. FHFIs were less likely to engage in industrial clusters as compared with FLFI.

Although the extant literature (e.g. Basco, 2015; Memili *et al.*, 2015, Stough *et al.*, 2015) does not provide conclusive findings on significant differences between FFs and NFFs regarding their contributions to regional development, this study has demonstrated some of the underlying factors contributing to the differences. The data from Kenyan firms is consistent with earlier studies showing that family firms are less entrepreneurial as compared with their counterparts. This is as a result of family involvement. With family being involved in the ownership, management and governance of a firm, their focus on FCNE objectives and preservation of socioemotional wealth are enhanced. Perhaps, this is the reason why ‘family orientation’ overtakes an ‘entrepreneurial orientation’, as suggested in prior studies (Martin and Lumpkin, 2003). Therefore, this study has established that significant differences exist between family firms with concentrated ownership and control in Kenya, and SSA. These differences manifest themselves in the relationships between FEO, family performance and a firm’s involvement in industrial clusters. These differences have the potential to reduce their impact on regional development in comparison with firms with low family involvement.

‘Familiness’ encourages the participation of TLMs in strategic decision-making process in family firms. This generates competitive advantages for family firms that enhance a firm’s performance, stakeholder engagement and regional ‘familiness’. The expectation was that TLMs in FHFIs would benefit from easier reconfiguration of resources, enabling firms to adjust to the changes in external environment and contribute to regional development.

Surprisingly, the study established that the interaction of the two variables ('family involvement' and 'participative strategy decision-making') was negatively associated with regional development, both amongst firms with high and low family involvement. FHFIs had a higher negative impact, though, partially supporting the theoretical predictions. The study also demonstrated that family involvement (as per the extent to which the family was involved in the ownership, management, governance of the firm and transgenerational transfer) had an influence beyond the family firm level on regional development. Although there were no significant differences between FHFIs and FLFIs, the study showed that when 'familiness' becomes stagnated, it will lead to a pronounced negative effect on RD.

Moreover, building on prior studies, it was hypothesised that the effect of 'bridging social capital' with external entities (i.e. managers in other firms, community and political leaders) would have a stronger positive effect on the relationship between family firms and RD, as compared with NFFs. Although the results of the interaction between family involvement and a firm's 'bridging social capital' were positively associated with RD, it was stronger in NFFs. Furthermore, the findings revealed significant differences between FHFIs and those firms with low family involvement, hence at least partially supporting the theoretical predictions. These findings have suggested that TLMs in FHFIs are more likely to engage in wider, stronger personal and social network relationships with community stakeholders. Which then enhance their participation in industrial cluster activities. The explanation for this strategic behaviour in FHFIs would seem to be the drive to acquire strategic or financial information, or resources that enhance a position as 'hidden champions', rather than as competitors. This, in turn, would enable them to safeguard their investments without having to lose their SEW (Gomez-Mejia *et al.*, 2007). In addition, as postulated by Johansson *et al.* (2007), that subsequent generations would rely heavily on networking and mutual trust accumulated from generation to generation. Further, that this would enhance family firms' TLMs' collaborations and engagements with stakeholders. This would be in order position themselves within or value industrial cluster networks and the business community.

Although FHFIs positively developed personal and social network relationships with external entities, the effect on regional development was weaker. This was not surprising, as previous studies have suggested that FHFIs have a negative impact on regional development (Carney, 2005). In that instance, family firms with a higher family ownership stake and more involvement in management will dedicate their resources to developing 'familial social

capital', as opposed to bridging social network relationships with external entities (Pearson *et al.* 2008; and Carr *et al.*, 2011). This study has supported the arguments that there are differences between FFs and NFFs' contribution to regional development, as proposed by prior scholars, such as Basco (2015) and Stough *et al.* (2015). However, when the effects of 'bridging social capital' are considered, FLFI are more likely to have a stronger impact on regional development, as compared with FHHI.

The study also included controlling variables in the multidimensional, regional impact conceptual model of the firm. This comprised a firm's size, age, nature of the business, and geographical distribution of sales. Only a firm's age and size had significant influences on the differences on FHHI and FLFI as regards their relative contribution to regional development. It appears that older FHHI had a pronounced negative effect on firm performance, as compared with FLFI. On the contrary, older FHHI seem to promote a firm's involvement in industrial cluster activities, as opposed to FLFI. Whereas, larger FHHI had a pronounced negative impact on a firm's involvement in industrial cluster activities, as compared with FLFI. Family firms are often not only older but also larger in size. Thus, in essence, long-lived and larger family businesses are expected to be embedded in industrial clusters networks. On the contrary, the study demonstrated that older and large firms are more likely to have an enhanced negative influence on firm participation on industrial clusters.

8.8: Summary of the Chapter

Based on the objectives of the study, it was found that statistical links exist between firm level strategic behaviours (at the micro level) and regional development outcomes (at the macro-level). The multidimensional approach adopted in the study, drawing on entrepreneurial orientation, a resource-based view and social capital, has enhanced an understanding of the underlying differences in the contributions of family and non-family firms to regional development. However, the findings revealed that the three firm level strategic behaviours had different effects on the firm's regional impact, but when analysed simultaneously, they provided a holistic explanation to such differences.

Further, the findings explained the importance of the effects of both industrial clusters and firm performance on the relationship between the firm level strategic behaviours and regional development. An expected finding was that FFs entrepreneurial orientation differed between

the two types of firms, with NFFs having a strong entrepreneurial orientation, as compared with family firms. However, FFs were more likely to have a stronger influence on regional development, as compared with NFFs.

In addition, a firm's 'bridging social capital' positively enhanced a firm's performance and involvement in industrial clusters. However, non-family firms were more likely to influence regional development, as opposed to family firms.

The study also revealed some interesting findings on the effects of strategic behaviours on firm contribution to RD. For example, participation in the strategic decision-making process and performance were negatively associated for both types of firms. That had a negative influence on regional development for both FFs and NFFs. In addition, the negative effects of TLM's participation in strategic decision-making on regional development was more pronounced in FFs than in NFFs. The study also showed that long-lived and large FHLI have an enhanced negative influence on a firm's involvement in industrial clusters activities.

In summary, this study confirmed that there are some significant differences in strategic behaviour between family and non-family firms, and that this influences the extent to which the firm contributes to regional development. Therefore, the study has explained some of the underlying mechanism responsible for the differences observed based on theoretical and empirical observation. As the findings have significant implications and recommendation for theoretical and practical consideration, as well as policy development. The next section will discuss the contributions, implications and recommendation of the study in the fields of entrepreneurship, family firms and regional development.

CHAPTER 9: CONCLUSIONS AND RECOMMENDATIONS

9.1: Introduction

The primary aim of the study was to investigate the role of family firms (FFs) in regional development, distinguishing them from non-family firms (NFFs). To identify the effects of firm level strategic behaviours on a firm's regional impact, the study used a multidimensional approach. This simultaneously investigated three firm level factors: namely, entrepreneurial orientation, decision-making strategy, and social capital with external entities. The study explored these factors using a bottom-up approach. This considered the effects of a firm's performance in relation to the industry average, as well as the firm's involvement in industrial clusters relating to regional development. Finally, the study also investigated the moderating effects of family involvement on the relationships between firm level strategic behaviours and regional development dimensions.

This final chapter of this thesis summarises the findings of based on the research questions in section 9.2. It then specifies contributions to knowledge, methodology and practice in section 9.3. The implications of the study for managers of firms and policymakers are also set out in section 9.3. Section 9.4 outlines the limitation of the study, and how they were overcome. Section 9.5 presents the recommendations for future research, and final section 9.6 shows a summary of this chapter.

9.2: Summary of the Findings Based on the Research Questions

The study explored the extent that FBs influence regional development, as compared to NFBs. Specifically, this study explored the effects of firm level strategic behaviours of family (and non-family) firms on regional development. Further, the study investigated the mediating effects of a firm's involvement in industrial clusters and its performance, as well as the moderating effects of family involvement on a firm's regional impact. In order to achieve the set objectives, the study used a multilevel model that included the interaction between the firm strategic behaviours (at the micro level) and regional dimensions (at the macro level). Consequently, the study sought to answer the following questions:

RQ 1: How do firm level strategic behaviours affect the family firm's impact on regional development, as compared to non-family firms?

RQ 2: What is the effect of a firm's involvement in industrial clusters on the relationship between firm level strategic behaviours and regional development?

RQ 3: What is the effect of a firm's performance on the relationship between firm level strategic behaviours and regional development?

RQ 4: How, and to what extent, does family involvement in the business affect contribution to regional development compared to nonfamily firms?

The study used a quantitative methodology to address the questions, drawing on SEM data analysis techniques.

In answering the first question, this study identified three strategic behaviours that influenced firm level impact on regional development within a developing economy such as that of Kenya. Firstly, the study confirmed that FEO had a stronger positive impact on the three exogenous factors: firm performance, firm involvement in industrial clusters, and regional development. However, differences emerged, showing that FBs operating within the Kenyan economy were more likely to contribute to RD, despite NFBs having stronger relationships between FEO, firm performance and FIIC. Secondly, it emerged that the FDMS negatively impacted on all three exogenous factors, and these effects were more pronounced in family firms than in NFFs operating within Kenya. Finally, FBSC positively influenced firm performance, FIIC and RD, though NFFs appeared to have an enhanced influence on regional development in developing economies based on their communal cultural orientation that enhances a sense of community.

In answering the second question, the study confirmed that involvement in industrial clusters played a role in the firm's ability to influence regional development outcomes. Although the FIIC partially mediated the relationship between the firm strategic behaviours and regional development outcomes, there was full mediation on the relationship between FDMS and RD. Thus, industrial clusters play a critical role in regional development, especially in developing economies such as Kenya.

In addition, regarding the mediating effects of firm performance, the findings of the study confirmed that firm performance was essential for enhancing a firm's regional impact in developing economic context such as Kenya. It is acknowledged that high performing firms will make an increased contribution to GDP, employment opportunities and wealth creation, which will contribute positively to regional development. This was evident from the statistically significant relationship between firm strategic behaviours, firm performance and RD outcomes.

The last question sought to establish whether the level of family involvement in the business, was a significant differentiator of firms' contribution to RD between FFs and NFFs. The study confirmed that significant differences emerged between FHFIs and FLFIs within the Kenyan economy. Hence, FLFI indicated significant differences between FEO, firm performance and FIIC, when compared with FLFI. Although the participative approach to decision-making was enhanced in FHFI, there were no significant differences when compared with FLFI. In addition, there were significant differences between FHFI, as they were more likely to be involved in industrial clusters compared to FLFI. Surprisingly, significant differences emerged between FHFI and FLFI, as firm age influenced FIIC and firm performance, whilst firm size influenced FIIC. The next section outlines the study's contribution to scholarship, methodology, and policies in the field of entrepreneurship, family firms and regional development.

9.3: Contributions and Implications of the Study

In relation to family business scholarship, there has been an emerging trend amongst scholars to use multiple theories in order to unpack the underlying mechanisms that provide an explanation of the distinct behaviours of FBs (e.g. Chang *et al.*, 2008; Cabrera-Suarez *et al.*, 2011). In addition, previous studies suggested the extension of research beyond the family and firm levels to investigate the behavioural impact of FBs on regional economic and social development, as exemplified by Basco (2015) and Stough *et al.* (2015). Additionally, prior theoretical studies have proposed multilevel conceptual models that linked a firm's behaviours with regional outcomes to explain the impact of firms on regional development (e.g. Hitt *et al.*, 2011; Basco, 2015; Stough *et al.*, 2015). Finally, scholars have called for studies to test the validity of established constructs in less researched contexts such as the

Middle East, Asia and Africa (Welter, 2011; Wright *et al.*, 2015; Zoogah *et al.*, 2015). Consequently, this study responded to the calls from these researchers by contributing to theory, research methods and practice in entrepreneurship, family business and regional development.

9.3.1: Contributions to Theory and Implications

The main contribution of this study is to offer a holistic explanation of the role of FBs in regional development, as compared with NFBs in a developing country such as Kenya. The study applied a multi-dimensional approach by focusing on the effects of three firm level strategic behaviours in regional development from the top-level managers' perspectives. This was as opposed to the top-bottom approach in most studies that focuses on regional level dimensions. The next section presents the contribution to theory.

9.3.1.1: The Effects of Firm Level Strategic Behaviours on Regional Development

This study has made a significant contribution by confirming that using a multidimensional approach to studying firm level strategic behaviours improves an understanding of a family firm's regional impact within developing countries such as Kenya. Thus, the study provided a holistic view of the effects of firm level strategic behaviours; entrepreneurial orientation, decision-making strategy, and bridging social capital on regional development outcomes such as GDP, employment opportunities and wealth creation.

9.3.1.2: FEO strengthens Firm Regional Impact particularly in FFs.

In this study, FEO was found to have a significant positive influence on firm performance (FP), firm involvement in industrial clusters (FIIC) and regional development (RD) in both sets of firms in developing economies. The study enhances our understanding of the extent to which the entrepreneurial orientation of TLMs has focused on innovation, risk-taking, proactiveness, competitiveness and autonomy, and how this affects a firm's contribution to regional development. In addition, significant differences emerged between the two sets of firms, with FFs considered to be less entrepreneurial, as compared with NFFs from the data collected from Kenya. This is a particularly significant contribution to the study of family firms, as existing literature has shown mixed findings regarding the entrepreneurial

orientation of the firm (e.g. Nordqvist and Melin, 2010; Zellweger *et al.*, 2012). Thus, this study has provided evidence from the developing economy context to support the argument that FFs are less entrepreneurial than NFFs. This is significant; firstly, because family firms form the largest proportion of privately held firms in these regions (Carney, 2005; Khavul *et al.*, 2009), and secondly, because of the challenging institutional and economic environment in which Kenyan firms operate (Murithi *et al.*, 2019).

Another important contribution to the literature of family firms and entrepreneurship has been that of the predisposition of family firms' top-level managers to take risks, innovate, seek opportunities and compete. Family firms TLMs EO has a stronger impact on RD compared with that of TLMs in non-family firms. It is evident that the study has extended the EO literature by providing empirical evidence that supports family firms proposed superior contribution to RD from a developing economic context, which is understudied. This was achieved by determining the level of FEO and its effects on regional development dimensions, and particularly in relation to developing economies such as Kenya. Further, this study revealed that autonomy, which is considered as a significant dimension of EO (Lumpkin and Dess, 1996; Millier, 2011; Zellweger *et al.*, 2009) in determining the FEO, was not significant in explaining the positive association between FEO, FP, FIIC and RD in the Kenyan sample used. Hence, 'autonomy' concept should be revisited in the EO literature to determine its predisposition especially in established firms as opposed to new firms or start-ups.

The **implication** is that when TLMs in family firms are engaged in determining the entrepreneurial behaviours, this is more likely to strengthen their contribution to RD compared with non-family firms. This is because family firms are known to have a long-term orientation when developing their strategies due to their intention to create transgenerational wealth, as opposed to NFBs which are driven by short term returns to increase their shareholders value. Further, it implies that the EO dimensions can manifest differently based on the context of study. In this case, autonomy is considered insignificant in determining a firm's EO influence on RD in a developing economic context, where weak institutions and market uncertainties exist.

9.3.1.3: Family firms TLMs Participative strategy in FDM process has pronounced negative effects on RD

The findings relating to participation of TLMs in decision-making within the firms showed a strengthened participation in FFs compared with NFFs operating within the Kenyan economy. Despite this observation the study revealed that participation of TLMs in FDMS has a negative effect contrary to prior studies that more participation and inclusion in strategic decision-making process within the firm will positively enhance FP, FIIC, and RD. The proposition assumed that firms under family ownership and control would give rise to ‘familiness’. Thus, in turn, this encourages the participation and inclusion decision-making environment that is positively associated with firm performance (Eddleston and Kellerman, 2007) and stakeholder engagement (Cennamo *et al.*, 2009). Hence, there would be a significant positive impact on firm performance and FIIC which would result in positive regional development (Basco, 2015). However, despite the obvious advantages that participation in decision-making has on FP, FIIC, and RD, the findings showed a negative association in both sets of firms, though more pronounced in family firms. Therefore, the study provided support for anecdotal evidence, earlier reported, that family firms do have a conservative orientation especially in decisions that might put their ownership control at risk (Gomez-Mejia *et al.* 2007). This has negative effects on their financial performance and growth, as well as engaging with other stakeholders in the industrial clusters and regions as shown by the data drawn from developing economy-Kenya. When such behaviours are aggregated at the regional level this would have negative impact at the regional level contrary to suggestions by Basco (2015) and Stough *et al.* (2015) who suggested that family firms positively influenced RD as a result of the presence of ‘familiness’.

The **implication** is that while the ‘familiness’ increases the participation of TLMs in the decision-making processes of family firms, this does not necessary lead to competitive advantage compared to NFFs, particularly in their contribution to RD. This is because it may encourage the decision makers to pursue consolidation of resources due to concentration of family ownership and management. As a result, family firms become more risk averse, leading TLMs to make decisions inclined more towards preserving their SEW (i.e. protecting their wealth) than realising economic gains, and thus reducing the firm’s contribution to regional development.

9.3.1.4: TLM development of FBSC enhances NFFs' influence on RD compared to FFs

The third contribution is that the study extended the understanding of the influence of social capital on firm performance, FIIC and regional development in a developing economy context. Particularly, this relates to TLMs' personal and social network relationships with external stakeholders, such as managers in other firms, community leaders, political and government agencies. With a focus on 'bridging social capital', the study answers call for distinction between 'bonding' and 'bridging' social capital effects on firm performance and regional economies (Sharma, 2008). Using a sample of Kenyan firms, the study demonstrated that both family firms and non-family firms have strong social capital relationships with external entities, and that these enhanced firm performance, FIIC and regional development. In particular, the study demonstrated that TLMs in FFs could develop stronger bridging social relationships with managers in other firms, community and political leaders, as well as government agencies, which influenced their firm performance and FIIC, as compared with NFFs. However, the association between BSC in non-family firms and RD was superior compared to family firms.

The **implications** are two-fold. Firstly, family firms operating within developing economies such as Kenya are less likely to focus on developing external relationships ('bridging social capital'), beyond a certain extent, as opposed to internal relationships ('bonding social capital'). Hence, TLMs may influence the reallocation of resources to promote family cohesion and harmony as opposed to developing external relationships which have an impact of FP, FIIC and RD. Secondly, although the findings indicate less focus on 'bridging social capital' by TLMs within the firm may lower its contribution to regional development in the short-term, this might enhance firm resilience due to the strengthening of internal social bonds within the family firm. Thus, in turn, might lead to regional resilience, because of their embeddedness; hence being good for the region in the long run within developing economies (Kenya) that are faced by market uncertainties and institutional voids.

9.3.1.5: The Level of FIIC and FP Differentiates Firm Contribution to RD

The study reinforces the need for family business scholars to consider the implications of family involvement in firms within developing economies such as exemplified in Kenya.

Firstly, from a ‘geographical approach’ and secondly from the ‘family essence’ approach. The level of family involvement, based on ownership, management, control and transgenerational transfer, significantly influenced FIIC in firms operating in Kenyan economy. Family firms showed distinct behaviours on their involvement in industrial clusters compared to NFFs. For instance, FHFIs reported significant differences in the relationship between FEO and FIIC compared with FLFI. Whereas, in FLFL, FEO is more likely to have a superior impact on firm performance than FHFI. Additionally, regarding the relationship between FBSC and FIIC, FHLI are more likely to leverage on the benefits of being involved in the industrial clusters’ activities compared to FHLF given the less developed business environment. This is significant to further our understanding on how and to what extent family firms are unique social actors capable of influencing regional factors and process in order to influence regional development especially in developing economies that face market uncertainty and institutional voids as opposed to developed economies with predictable markets and formal institutions exemplified by western economies.

The **implications** are as follows: Firstly, a higher level of family involvement in the TLM of the business positively influences the impact of FEO on firm performance, FIIC, and regional development in developing economies such as Kenya. Secondly, a higher family involvement will positively influence the association between ‘bridging social capital’ and FIIC. This is because of the weaknesses in the institutional environment and strong socio-cultural context in developing economies, such as sub-Saharan Africa. Finally, a high level of family involvement can negatively influence the positive effects of participation in decision-making on firm performance, FIIC and RD. This is because of the presence of a patriarchal society and founder centrality in family firms in sub-Saharan Africa, where decision-making could be concentrated in the hands of the founder or a few founding members.

9.3.1.6: The significance of a Multidimensional Approach When Investigating Business’ Strategic Behaviours Effects on RD

Overall, the study advocates for a multidimensional approach in studying strategic behaviours on firm-regional impact within developing economies i.e. Kenya. As indicated in chapter 8 section 8.3.4, in addition to entrepreneurial orientation, this study has demonstrated that scholars should embrace the role that participation of TLM in decision-making strategies and developing bridging social capital play in the relationship between firm strategic behaviours

and regional development outcomes, depending on the level of family involvement. The study has supported the researcher's overall conceptual logic that firm level entrepreneurial behaviours is a composite construct. Further, entrepreneurship studies should embrace other related theories in order to understand its theoretical implications for organisational behaviours, strategic direction and performance (George and Marino, 2011; Miller, 2011). This was demonstrated through the relationship between the three firm level strategic behaviours (FEO, FDMS and FBSC) and regional development outcomes that correlate differently in firms, depending on the type of ownership and degree of family involvement in the business. Further, the study makes important contributions to theoretical developments, as it responds to recent call for research that looks beyond the ontological differences between FFs and NFFs and investigates their behavioural influence (essence) on regional economic and social development (e.g. Basco 2015; Stough *et al.*, 2015).

The **implication** is that a multidimensional approach is more likely to provide a holistic understanding and explanation of the underlying mechanisms and structural behaviours that differentiate family and non-family contributions to RD operating in developing economies i.e. Kenya.

9.3.2 Contributions to research methodology in family business studies

The study has made several significant contributions to the research on entrepreneurship, family firms and regional development by developing a multilevel model for examining the link between firm level strategic behaviours to regional level outcomes.

The study contributes to family business research by exploring the intersection between strategic behaviours and regional development dimensions, where it proposed and confirmed the validity of a multilevel analytical framework within developing economies. The model significantly enhances our understanding of the influence of TLMs in family firms' strategic behaviours and their regional impact, as compared with non-family firms. The multilevel model is supported by empirical evidence confirming that firm level strategic behaviours (micro level factors) had a strong correlation with regional development dimensions (macro level factors) in family firms operating in developing economic context. This has added to the existing knowledge within the family business literature that seek to bridge the gap between

family business and regional development literature (e.g. Nordqvist and Melin, 2010; Hitt *et al.*, 2011; Basco, 2015; Stough *et al.*, 2015).

Further this study has extended prior studies that have proposed theoretical framework (but not tested them with empirical data) showing that endogenous and exogenous factors mediate or influence the relationship between firm level strategic behaviours and regional level dimensions (e.g. Rocha, 2004; Basco, 2015; Stough *et al.*, 2015). The analytical framework incorporated the mediating effects of firm performance and FIIC, as well as the effects of family involvement, in explaining the relationship between firm level strategic behaviours and RD. Using EFA, the study identified important variables and established their reliability and validity in their explanatory power of firm behaviours on RD outcomes. This confirmed that structural relationships existed between the firm level factors and RD dimensions in firms operating within developing economies such as Kenya. With the proposed multilevel firm-regional impact model, this thesis has extended the understanding of how a firm's actors (TLMs), through their influence on the firm's strategic behaviours, can impact regional development.

Another contribution to researching family businesses influence of RD was made by designing a methodological approach that goes beyond exploring demographic difference between FBs and NFB (the 'components' approach). In addition, the study confirms that it is possible to utilise the 'essence' approach when examining family influence on the firms' regional impact. This is significant because the study explored the effects of both privately held FFs and NFFs strategic behaviours without having to discriminate between either of the firms or significantly alter the survey instrument. This approach yielded empirical data, and so differing from the use of secondary data approach widely used in prior studies (e.g. Memili *et al.*, 2015, Chang *et al.*, 2008).

9.3.3 Implications to Policy and Practice

The study makes several recommendations for policymakers and practitioners to consider when developing policies and strategies that promote sustainability of family (or non-family) firms in developing economies such as Kenya.

The first contribution to policy is the establishment of a government agency or association to promote and advocate for the sustainability of family businesses in national and regional development. The study revealed the underlying factors that differentiate strategic behaviours between FBs and NFBs and their contribution to regional development. This confirmed that strategic behaviours in FBs emerge from different referent points as opposed to NFBs and that this will result in different regional outcomes for the firms. Therefore, policymakers should consider and understand the effects of TLMs' on strategic behaviours of the FBs. This is because as social actors they have a significant influence on the firms' ability to alter the regional factors and process that have an implication on regional development.

The second policy contribution, based on this empirical evidence, is that policymakers, government's agents can support FBs by developing tax policies tailored to promoting family ownership and inter-generational successssion without discriminating against them. Most FBs founders in Africa fail to provide a clear succession plan or hide their wealth due to fear of heavy taxation that comes with tranfer of assets to future generations which hinders sustainability and competitiveness. Therefore, introducing tax cuts for inter-generational tranfers will ensure that family firms remain competitive, even when they transition from generation to generation, and that they contribute positively to economic and social development in the regions.

Thirdly, policymakers, government agencies and industry associations in developing countries such as Kenya should advocate the development and growth of family businesses by establishing competitiveness and cooperation agencies within industrial clusters and the regions. The agencies should advocate for the establishment of specific sector policies that ensure the sustainability of FBs, protection of minority shareholders, inter-country pro-family business agendas especially in developing economies. As argued family firms can overcome institutional voids and market uncertainties apparent in the regions, because of their embeddedness in socio-ccultural institutions (Murithi *et al.*, 2019).

Fourth, Government policymakers, industry associations (such as KNCCI, KAM, KEPISA, and AFBE etc.) and business development institutions (The SME Institute) should provide a conducive industrial environment that allows TLMs from both FBs and NFBs to interact with each other. As no firm can have monopolistic control of knowledge and growth strategies this

will facilitate the sharing of R&D, resources, knowledge, developing partnerships, shared vision, technology among others, which contribute to the firm's ability to influence regional dimensions that have an impact on regional development outcomes.

Finally, family firms are an important to economic development, thus a conflict resolution tribunal for family businesses and business family should be created in Kenya that will help parties to resolve conflicts impartially without affecting the business operations. One such initiative can focus on conflict resolution that emerges during transition from first generation founders to subsequent generations, or sibling rivalry or relative's invasion on business properties especially when the patriarch or matriarch exits the business which is a common feature in Kenyan family businesses such as Tusky's Supermakets, Kiriri family, Njenga Karume among others.

Further, the study makes the following contribution to practice.

First, firm owners and shareholders are advised to develop training programs in collaboration with advisors and consultants that build TLMs' capacity to evaluate their impact on firm strategic behaviours, as these significantly influence firm regional impact. Specifically, there is a need for family firms to be aware that possessing different firm's goals i.e. preservation of SEW, 'familiness' i.e. unique resources and capabilities, and strong internal or external relationships with stakeholders can enable or impede firm performance, FIIC, and regional development.

Further TLMs and other stakeholders (such as managers from other firms, investors, community leaders, and government representatives), should work collaboratively in order to create a good business climate within the industry clusters and regional economy. In this regard, both sets of businesses will be able to participate in the industrial cluster activities as these enhances the businesses' ability to contribute to the regional development agenda.

The study has revealed that in developing economies such as Kenya, characterised by weak institutions, inefficient markets and a large informal sector, family firms should continuously engage with external entities to leverage on both internal and external relationships, as well as the existing resources within an industry cluster network. Although the focus on

maintaining ownership control is important to family firms (Gomez-Mejia *et al.*, 2007), external linkages could enable the firm to benefit from R&D activities, knowledge exchanges, information sharing, lower transaction costs, partnerships and technological innovations. Based on this analysis, family firms are set to benefit more from interactions with top managers from other firms, community leaders, political and government agents. Therefore, family business TLMs should be encouraged to engage in industrial clusters activities to promote the firm's ability to innovate, take risks, and be proactive as this can lead to transgenerational wealth creation and increased performance of the firm.

Generally, the study challenges the assumption common in the SME sector and policy development that 'one size fits all'. It is the case in most developing economies but does not suffice when developing economic and industrial policies. Even though family firms range from small to large enterprises, there is no co-ordinated efforts to advocate for or encourage the development and sustainability of family businesses. Thus, stakeholders should understand that the presence and embeddedness of family firms in a region has the potential to influence regional factors and processes that would have a different impact on regional development compared with NFFs (Basco, 2015; Stough *et al.*, 2015).

9.4: Limitations of the Study

Although this study has made significant theoretical, methodological and practical contributions, like any other research, there were limitations associated with it. This section will outline some of the limitations that the researcher found, and which could provide direction to future research agenda.

First, one of the limitations of the study is the sample size. Although the study a suitable sample size for SEM analysis, there were several incomplete questionnaires, which were eliminated from the study. Of the 410 research questionnaires received back, the study utilised only 307 of them. The intention here was to boost the validity and reliability of the data, as only fully completed research instruments were required for the SEM analysis (Hair *et al.*, 2006). This was in order to estimate maximum likelihood (MLE) in structural model estimation (Tanaka, 1993; Hair *et al.*, 2006). Future studies could validate the research

instrument using a larger sample size or using data from different contexts or regions. This will confirm its reliability and that of the results.

Besides, there was no comprehensive database consisting of all privately held firms in the population operating within Kenya. This made it difficult to develop a sampling framework drawn from the wider population of all privately held firms operating in Kenya. However, following recommendations from other studies (e.g. Naldi *et al.*, 2007; Pittino *et al.*, 2011), it was possible to obtain a representative sample using existing database developed by the researcher similar to other studies conducted in Sub-Saharan Africa (e.g. Floren, 2002; Venter, 2003; Acquaah, 2007). As earlier stated in section 5.5.1 the researcher developed a sampling frame including registered businesses from the existing business database obtained from KAM, KNCCI, KEPSA, KPMG Top 100 and AFBE.

Another limitation is that the study used a survey instrument that drew on variables adopted from prior studies, such as FEO (Moreno and Casillas, 2010), FDMS (Kellermans and Eddleston, 2007) and BSC (Acquaah, 2007). It emerged that some variables did not load under the latent constructs, especially in the FEO. For instance, the variables used to measure ‘autonomy’ did not load under the FEO construct. Thus, all such variables were eliminated completely from the analysis. Although the variables were clearly defined, great care taken in the design of the research instrument, and it was piloted to establish its reliability, the variables used instruments would not be completely free from bias.

Further, the data collected was from a single geographical context, Kenya with no comparative data from other regions or countries. However, Kenya is a significant context that is understudied in the entrepreneurship, family business and regional development literature. By extension, this is also true of the rest of sub-Saharan Africa. However, the focus on a single geographical region limits the generalisability of the findings, due to the influence of cultural and institutional factors specific to the context (Zoogah *et al.*, 2015; Vershinina *et al.*, 2017). For instance, in comparison to developed nations where there are stronger institutions, stronger formal economies, sophisticated markets, and individualistic cultures, emerging economies are still operating under weak institutions, informality, imperfect markets and collectivist cultures (Khavul *et al.*, 2009).

Moreover, the use of a ‘quantitative approach’ for data collection could pose some limitations. Probably the use of a mixed method approach, or qualitative approach using cases studies, could have provided more information to understand and explain strategic behaviours and their influence on RD. Perhaps applying qualitative research methods would have enabled collection of in-depth information to understand why the association between FDMS negatively influences firm performance, FIIC and RD. Also, using mixed methods would have enabled the triangulations of findings to enhance the analysis of the underlying mechanisms that link firm level strategic behaviours to regional level outcomes.

9.5: Recommendations for Future Studies

This study proposes areas that can be further developed in future studies, given the findings and discussions in the previous two chapters. The recommendations put forward are a testament to the importance of the study for unravelling emerging queries, especially when considering an under-researched context like Kenya. The following recommendations are based on the contradictory findings or emerging issues from the study.

9.5.1: Although the study focused on three strategic behaviours (entrepreneurial orientation, decision-making and social capital), the researcher believes that there are other firm level or contextual factors that can influence a firm’s contribution to regional development. Hence, future studies could explore other factors, such as organisation culture, strategic choices, family identity, institutions etc. to determine their influence of family firm on regional development.

9.5.2: The study established that participative strategy in decision-making was negatively correlated to firm performance and RD. Although prior literature indicated that participative decision-making strategy positively enhanced firm performance in Western economies (e.g. Eddleston and Kellerman, 2007), it was not found to be the case in developing economies. Future studies could use qualitative research designs to explore further the underlying effects of participative decision-making strategy on firm performance, FIIC and RD, using a ‘developing economies’ context. This would extend the understanding regarding whether or not cultural or institutional contexts are responsible for the negative impact on firm performance and regional development.

9.5.3: The proposed multidimensional model that explored the direct and indirect effects of strategic behaviours on firm impact on regional development could be tested using samples from other countries in Africa, and beyond. As far as the researcher knows, this is the first attempt to develop and empirically test a multilevel model, using a bottom-top approach, in order to understand the role of family firms in regional development. Furthermore, the researcher would encourage the incorporation of institutional contexts and national cultures in any framework for cross-national comparative studies.

9.5.4: In this study, 'family involvement' was captured using six suggested variables from Westhead and Cowling (1998), and Chua *et al.* (1999), (self-identification, ownership, management, governance, successions, and intra-generational transfer). However, other suggested instruments have been used to capture family essence within the firms, such as F-PEC (Klein *et al.*, 2002). It is suggested that the FPEC instrument could be used alongside the six variables, or separately, in order to provide a richer account of family involvement in the business. This would also be useful to capture a richer account of firm heterogeneity in comparative studies that utilised cross-national samples, especially from developed and developing nations.

9.5.5: As observed earlier, in chapter 5, data collection was conducted using a cross-sectional design, which meant data was collected at a single point in time between June-September 2017. To have a comprehensive view on the impact of family firms on regional development, a longitudinal research design might be adopted to evaluate contribution over a longer period. This will take into consideration the temporal and contextual influences of the relationship between family firms and regional development (Stough *et al.*, 2015). For instance, changes in the developmental stages of firms or economies could be identified to determine their effect on the relationships between family firms and regional dimensions.

9.5.6: This research intended to explore the bottom-up approach of firm regional impact to establish the differences between FFs and NFFs.

9.5.7: Future studies would benefit from using mixed methods, especially in relation to the last objective, which sought to determine the moderating effects of family

involvement on the relationship between strategic behaviours and RD. For instance, a mixed methods research design would help to develop a better understanding of how contextual factors (such as age and size) contribute to family firm regional impact. Also, as prior researchers have stipulated family businesses are heterogeneous, with different behavioural outcomes (Westhead and Howorth, 2007), this might explain why family firms seemed to have a slightly stronger negative effect on performance and RD.

9.6: Chapter Summary

The study aimed at contributing to family business research in several ways to increase the understanding of the role of family firms in regional development compared to non-family firms. In this regard, the study revolved around the following objectives:

9.6.1: To examine firm level strategic behavioural effects on the influence of family firms on regional development, as compared with non-family firms.

9.6.2: To determine the effect of industrial clusters in the relationship between firms and regional development.

9.6.3: To establish the effect of firm performance on the relationship between family firms and regional development.

9.6.4: To evaluate the moderating effect of family involvement on the differences between family and non-family firm contributions to regional development.

The final chapter concludes that family firms are significant players in developing economies, as they are important economic actors in regional development, as compared with their counterparts. This study established that a multidimensional approach to investigating the effects of strategic behaviours (from a micro level) on regional development (at a macro level), and provided a holistic explanation as to how, and to what extent, family firms contributed to regional development. In addition, using a multilevel conceptual model, the study provided empirical evidence to corroborate the conceptual arguments found in prior literature. These were that family firms are unique economic actors capable of influencing RD differently from NFFs (Basco, 2015; Stough *et al.*, 2015).

Based on the assumption that TLMs will coordinate strategic plans within the organisation, the study established that the three firm level strategic behaviours are correlated. In addition, the study shows that family firms' TLMs propensity to take risks, innovate and seek opportunities aided their superior contribution to regional development. Given their ability to focus on long-term goals, as opposed to short-term gains, family firms could improve economic stability within the region. However, the inclination of family firms to allow participation and inclusiveness in decision-making processes appeared to impede regional development, as they were more likely to forego financial gains in favour of preserving their socio-emotional wealth. Also, despite the positive social engagement of family firms with external entities, their contribution to regional development was not greater than that of non-family firms. Indeed, family firms were keen to develop their internal and familial ties, which in turn, can diminish their regional impact.

Finally, the study provided some implications for managers of firms, policy makers, industry associations and government agents. Further, proposed were areas that can be considered for future research in order to enhance the understanding of how FFs firms contribute to regional development, as compared with NFFs. It is important to note that the intention of the study was not to try and be comprehensive concerning all firm level strategic behaviours that can influence a firm's regional impact. Rather, the intention was to provide an explanation of some of the firm level strategic behaviours, drawn from managerial and organisational fields, to develop a conceptual framework linking family firms to RD. Future researchers could investigate further the empirical differences between FFs and NFFs, not only in developed economies, but also in developing economies. They could use national statistical data, applying either longitudinal or qualitative research designs.

10: REFERENCES

- Acquaah, M. (2007). Managerial social capital, strategic orientation, and organizational performance in an emerging economy. *Strategic Management Journal*, 28(12), 1235-1255.
- Achtenhagen, L., Naldi, L., & Melin, L. (2010). “Business growth”—Do practitioners and scholars really talk about the same thing? *Entrepreneurship Theory and Practice*, 34(2), 289-316.
- Acquaah, M. (2012). Social networking relationships, firm-specific managerial experience and firm performance in a transition economy: A comparative analysis of family owned and nonfamily firms. *Strategic Management Journal*, 33(10), 1215-1228.
- Acs, Z., & Armington, C. (2004). Employment growth and entrepreneurial activity in cities. *Regional Studies*, 38(8), 911-927.
- Adler, P. S., & Kwon, S. W. (2002). Social capital: Prospects for a new concept. *Academy of Management review*, 27(1), 17-40.
- Adusei, M. (2016). Does entrepreneurship promote economic growth in Africa? *African Development Review*, 28(2), 201-214.
- Africa Development Bank Group (2013). *The state of Kenya’s Private Sector*, Accessed from [https://www.afdb.org/fileadmin/uploads/afdb/Documents/Project-and-Operations/The State of Kenya s Private Sector - Recommendations for Government-Development Partners and the Private Sector.pdf](https://www.afdb.org/fileadmin/uploads/afdb/Documents/Project-and-Operations/The_State_of_Kenya_s_Private_Sector_-_Recommendations_for_Government-Development_Partners_and_the_Private_Sector.pdf) , 10th June 2016.
- Africa Development Bank Group (AFBG) (2018) *East Africa Economic Outlook, Macroeconomic developments: manufacturing’s comparative advantage and competitiveness*, accessed from <https://www.afdb.org/fileadmin/uploads/afdb/Documents/Publications/2018AEO/African-Economic-Outlook-2018-East-Africa.pdf> , 13th October 2018.
- Ahmad, Nadim and Seymour, Richard G., *Defining Entrepreneurial Activity: Definitions Supporting Frameworks for Data Collection*. OECD Statistics Working Paper. Available at SSRN: <https://ssrn.com/abstract=1090372>
- Ahmed, S. and Uddin, S., (2018). Toward a political economy of corporate governance change and stability in family business groups: A morphogenetic approach. *Accounting, Auditing and Accountability Journal*, 31(8), pp.2192-2217.
- Aldrich, H. E., & Cliff, J. E. (2003). The pervasive effects of family on entrepreneurship: Toward a family embeddedness perspective. *Journal of Business Venturing*, 18(5), 573-596.

- Allouche, J., Amann, B., Jaussaud, J., & Kurashina, T. (2008). The impact of family control on the performance and financial characteristics of family versus nonfamily businesses in Japan: A matched-pair investigation. *Family Business Review*, 21(4), 315-330.
- Amaeshi, K., & Idemudia, U. (2015). Africapitalism: A management idea for business in Africa?. *Africa Journal of Management*, 1(2), 210-223.
- Amann, B., & Jaussaud, J. (2012). Family and non-family business resilience in an economic downturn. *Asia Pacific Business Review*, 18(2), 203-223.
- Amit, R., Glosten, L., & Muller, E. (1993). Challenges to theory development in entrepreneurship research. *Journal of Management Studies*, 30(5), 815-834.
- Anderson, B. S., & Eshima, Y. (2013). The influence of firm age and intangible resources on the relationship between entrepreneurial orientation and firm growth among Japanese SMEs. *Journal of Business Venturing*, 28(3), 413-429.
- Anderson, R. C., & Reeb, D. M. (2003). Founding-family ownership and firm performance: evidence from the S&P 500. *The Journal of Finance*, 58(3), 1301-1328.
- Argyrous, G. (2011). *Statistics for research: with a guide to SPSS*. London: Sage Publications.
- Arregle, J. L., Hitt, M. A., Sirmon, D. G., & Very, P. (2007). The development of organizational social capital: Attributes of family firms. *Journal of Management Studies*, 44(1), 73-95.
- Ascani, A., Crescenzi, R., & Iammarino, S. (2012). Regional Economic Development. *A Review, SEARCH WP01/03*, 2-26.
- Astrachan, J. H., & Jaskiewicz, P. (2008). Emotional returns and emotional costs in privately held family businesses: Advancing traditional business valuation. *Family Business Review*, 21(2), 139-149.
- Astrachan, J. H., & Shanker, M. C. (2003). Family businesses' contribution to the US economy: A closer look. *Family Business Review*, 16(3), 211-219.
- Astrachan, J. H., & Zellweger, T. (2008). Performance of family firms: A literature review and guidance for future research. *Zeitschrift für KMU und Entrepreneurship*, 56(1/2), 1-22.
- Astrachan, J. H., Klein, S. B., & Smyrnios, K. X. (2002). The F-PEC scale of family influence: a proposal for solving the family business definition problem. *Family Business Review*, 15(1), 45-58.
- Athanassiou, N., Crittenden, W. F., Kelly, L. M., & Marquez, P. (2002). Founder centrality effects on the Mexican family firm's top management group: Firm culture, strategic vision and goals, and firm performance. *Journal of World Business*, 37(2), 139-150.

- Audretsch, D. B., & Thurik, A. R. (2000). Capitalism and democracy in the 21st century: from the managed to the entrepreneurial economy. *Journal of Evolutionary Economics*, 10(1-2), 17-34.
- Audretsch, D. B., & Thurik, A. R. (2001). What's new about the new economy? Sources of growth in the managed and entrepreneurial economies. *Industrial and Corporate Change*, 10(1), 267-315.
- Audretsch, D. B., & Thurik, A. R. (2004). *A model of the entrepreneurial economy* (No. 1204). Papers on Entrepreneurship, Growth and Public Policy. Working paper. Available at SSRN:<http://hdl.handle.net/10419/19957>.
- Audretsch, D. B., & Fritsch, M. (2003). Linking entrepreneurship to growth: The case of West Germany. *Industry and Innovation*, 10(1), 65-73.
- Audretsch, D. B., & Keilbach, M. (2004). Entrepreneurship capital and economic performance. *Regional Studies*, 38(8), 949-959.
- Avlonitis, G. J., & Salavou, H. E. (2007). Entrepreneurial orientation of SMEs, product innovativeness, and performance. *Journal of Business Research*, 60(5), 566-575.
- Backman, M., & Palmberg, J. (2015). Contextualizing small family firms: How does the urban–rural context affect firm employment growth? *Journal of Family Business Strategy*, 6(4), 247-258.
- Balkundi, P., Kilduff, M., Barsness, Z. I., & Michael, J. H. (2007). Demographic antecedents and performance consequences of structural holes in work teams. *Journal of Organizational Behavior*, 28(2), 241-260.
- Banalieva, E. R., & Eddleston, K. A. (2011). Home-region focus and performance of family firms: The role of family vs non-family leaders. *Journal of International Business Studies*, 42(8), 1060-1072.
- Barnett, V. (2002). *Sample survey principles and methods*. London: Arnold.
- Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17(1), 99-120.
- Barney, J. B. (2001). Resource-based theories of competitive advantage: A ten-year retrospective on the resource-based view. *Journal of Management*, 27(6), 643-650.
- Barney, J. B., & Arikan, A. M. (2001). The resource-based view: Origins and implications. *Handbook of Strategic Management*, 124188.
- Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51(6), 1173.

- Baruch, Y. (1999). Response rate in academic studies-A comparative analysis. *Human relations*, 52(4), 421-438.
- Basco, R. (2013). The family's effect on family firm performance: A model testing the demographic and essence approaches. *Journal of Family Business Strategy*, 4(1), 42-66.
- Basco, R. (2014). Exploring the influence of the family upon firm performance: Does strategic behaviour matter? *International Small Business Journal*, 32(8), 967-995.
- Basco, R. (2015). Family business and regional development—A theoretical model of regional familiness. *Journal of Family Business Strategy*, 6(4), 259-271.
- Basco, R., & Calabrò, A. (2016). Open innovation search strategies in family and non-family SMEs: Evidence from a natural resource-based cluster in Chile. *Academia Revista Latinoamericana de Administración*, 29(3), 279-302.
- Basco, R., & Pérez Rodríguez, M. J. (2009). Studying the family enterprise holistically: Evidence for integrated family and business systems. *Family Business Review*, 22(1), 82-95.
- Basco, R., & Pérez Rodríguez, M. J. (2011). Ideal types of family business management: Horizontal fit between family and business decisions and the relationship with family business performance. *Journal of Family Business Strategy*, 2(3), 151-165.
- Bassetti, T., Dal Maso, L., & Lattanzi, N. (2015). Family businesses in Eastern European countries: How informal payments affect exports. *Journal of Family Business Strategy*, 6(4), 219-233.
- Beal, B. D., & Gimeno, J. (2001). Geographic agglomeration, knowledge spillovers, and competitive evolution. In *Academy of Management Proceedings* (Vol. 2001, No. 1, pp. A1-A6). Academy of Management.
- Begley, T. M., & Boyd, D. P. (1987). Psychological characteristics associated with performance in entrepreneurial firms and smaller businesses. *Journal of Business Venturing*, 2(1), 79-93.
- Bell, J. (2014). *Doing Your Research Project: A guide for first-time researchers*. London: McGraw-Hill Education.
- Belliveau, M. A., O'Reilly, C. A., & Wade, J. B. (1996). Social capital at the top: Effects of social similarity and status on CEO compensation. *Academy of Management Journal*, 39(6), 1568-1593.
- Bembenek, B., Jankowska-Mihulowicz, M., & Piecuch, T. (2014). Decision making on accession to the industry cluster on the example of a family business. *Economic and Social Development: Book of Proceedings*, P. 603.
- Berger, P., & Luckmann, T. (1967). *The social construction of reality: A treatise on the sociology of education*. New York: Doubleday.

- Berghoff, H. (2006). The end of family business? The Mittelstand and German capitalism in transition, 1949–2000. *Business History Review*, 80(2), 263-295.
- Berkowitz, D., & DeJong, D. N. (2005). Economic fragmentation in Russia: The influence of international trade and initial conditions. *Economics of Governance*, 6(3), 253-268.
- Berrone, P., Cruz, C., & Gomez-Mejia, L. R. (2012). Socioemotional wealth in family firms: Theoretical dimensions, assessment approaches, and agenda for future research. *Family Business Review*, 25(3), 258-279.
- Berrone, P., Cruz, C., Gomez-Mejia, L., & Larraza-Kintana, M. (2010). Socioemotional wealth and corporate responses to institutional pressures: Do family-controlled firms pollute less? *Administrative Science Quarterly*, 55(1), 82-113.
- Bhaskar, R. (1978), *A Realist Theory of Science*, Harvester Press, Hassocks.
- Bhaskar, R. (1979), *The Possibility of Naturalism*, Harvester Press, Hassocks.
- Bhaskar, R. (1989), *Reclaiming Reality: A Critical Introduction to Contemporary Philosophy*. London: Verso.
- Bird, B., Welsh, H., Astrachan, J.H., & Pistrui, D. (2002). *Family Business Research: The evolution of an academic field*. *Family Business Review*, 15(4), 337–350.
- Bird, M., & Wennberg, K. (2014). Regional influences on the prevalence of family versus non-family start-ups. *Journal of Business Venturing*, 29(3), 421-436.
- Birley, S. (2001). Owner-manager attitudes to family and business issues: A 16 country study. *Entrepreneurship Theory and Practice*, 26(2), 63-76.
- Bishop, K., Mason, G., Robinson, C., (2009) *Firm Growth and its Effects on Economic and Social Outcomes*, National Institute of Economic and Social Research, London.
- Bjuggren, C. M., Johansson, D., & Sjögren, H. (2011). A note on employment and gross domestic product in Swedish family-owned businesses: A descriptive analysis. *Family Business Review*, 24(4), 362-371.
- Blaikie, N. (2007) *Approaches to Social Inquiry* (2nd Ed.) Malden: Polity Press.
- Block, J. H., & Spiegel, F. (2013). Family firm density and regional innovation output: An exploratory analysis. *Journal of Family Business Strategy*, 4(4), 270-280.
- Block, J., Miller, D., Jaskiewicz, P., & Spiegel, F. (2013). Economic and technological importance of innovations in large family and founder firms: An analysis of patent data. *Family Business Review*, 26(2), 180-199.
- Blunch, N. J. (2013). *Introduction to Structured Equation Modelling—Using IBM SPSS Statistics and AMOS*. Newbury: Sage

- Boettke, P. J., & Coyne, C. J. (2003). Entrepreneurship and development: Cause or consequence? In *Austrian Economics and Entrepreneurial Studies* (pp. 67-87). Emerald Group Publishing Limited.
- Bourdieu, P. (1986). Codification. *Actes de La Recherche En Sciences Sociales*, 64(1), 40–44.
- Bourdieu, P. (2011). The forms of capital. (1986). *Cultural theory: An anthology*, 81-93.
- Boyacigiller, N. A., & Adler, N. J. (1991). The parochial dinosaur: Organizational science in a global context. *Academy of Management Review*, 16(2), 262-290.
- Breton-Miller, L., & Miller, D. (2006). Why Do Some Family Businesses Out-Compete? Governance, Long-Term Orientations, and Sustainable Capability. *Entrepreneurship Theory and Practice*, 30(6), 731-746.
- Brockhaus, R.H. (1982). The psychology of the entrepreneur. *Encyclopedia of Entrepreneurship*, 39-57.
- Brockhaus, R.H. (2004). Family business succession: Suggestions for future research. *Family Business Review*, 17(2), 165-177.
- Brockhaus, R.H. (1994). Entrepreneurship and family business research: Comparisons, critique, and lessons. *Entrepreneurship Theory and Practice* 19(1): 25-38.
- Brown, C. (2000) Entrepreneurial education Teaching Guide”, Kansas City. M O: Kauffman Centre for Entrepreneurial Leadership Clearing House on Entrepreneurship Education.
- Brundin, E., & Wigren-Kristoferson, C. (2013). Where the two logics of institutional theory and entrepreneurship merge: Are family businesses caught in the past or stuck in the future? *South African Journal of Economic and Management Sciences*, 16(4), 452-467.
- Bruton, G. D., Ahlstrom, D., & Obloj, K. (2008). Entrepreneurship in emerging economies: Where are we today and where the research should go in the future? *Entrepreneurship Theory and Practice*, 32(1), 1-14.
- Bryman, A. (2016) *Social Research Methods* (5th Ed.), Oxford: Oxford University Press
- Burkart, M., Panunzi, F., & Shleifer, A. (2003). Family firms. *The Journal of Finance*, 58(5), 2167-2201.
- Burns, A. and Rensburg, Theo J. V. (2013). *Global economic prospects, January 2013: assuring growth over the medium term (English)*. Global economic prospects; Vol. 6. Washington, DC World Bank Group.
- <http://documents.worldbank.org/curated/en/972011468323945797/Global-economic-prospects-January-2013-assuring-growth-over-the-medium-term>, Accessed on 12msrch 2016
- Burns, P. (2001). *Entrepreneurship and Small Business*. Basingstoke: Palgrave.

- Burt, R.S. (2000). The network structure of social capital. *Research in organizational behavior*, 22, 345-423.
- Burt, R.S., & Ronchi, D. (2007). Teaching executives to see social capital: Results from a field experiment. *Social Science Research*, 36(3), 1156-1183.
- Burt, R.S. (1992), *Structural Holes: The Social Structure of Competition*, Harvard University Press, Cambridge, MA.
- Byrne, B. M. (2008). Testing for multigroup equivalence of a measuring instrument: A walk through the process. *Psicothema*, 20(4), 872–882.
- Byrne, B. M., Shavelson, R. J., & Muthén, B. (1989). Testing for the equivalence of factor covariance and mean structures: the issue of partial measurement invariance. *Psychological Bulletin*, 105(3), 456.
- Cable, D. M., & Shane, S. (1997). A prisoner's dilemma approach to entrepreneur-venture capitalist relationships. *Academy of Management Review*, 22(1), 142-176.
- Cabrera-Suárez, M., Déniz-Déniz, M., & Martín-Santana, J. (2014). The setting of non-financial goals in the family firm: The influence of family climate and identification. *Journal of Family Business Strategy*, 5(3), 289-299.
- Cabrera-Suárez, M.K., de la Cruz Déniz-Déniz, M. and Martín-Santana, J.D., (2011). Familiness and market orientation: A stakeholder approach. *Journal of Family Business Strategy*, 2(1), 34-42
- Cai, L., Liu, Q., Deng, S. and Cao, D. (2014), “Entrepreneurial orientation and external technology acquisition: an empirical test on performance of technology-based new ventures”, *Journal of Business Economics and Management*, 15 (3), pp. 544-561.
- Campbell Jr, H. S., James, R. D., & Kunkle, G. (2013). Firm growth and regional income convergence: Is there a connection. *Institute for Exceptional Growth Companies—Edward Lowe Foundation*. Available at: [www. exceptionalgrowth. org/insights/FirmGrowthRegionalIncome. pdf](http://www.exceptionalgrowth.org/insights/FirmGrowthRegionalIncome.pdf) (accessed 11 November 2014).
- Capello, R. (2009). Spatial spillovers and regional growth: a cognitive approach. *European Planning Studies*, 17(5), 639-658.
- Carmon, A., Miller, A., Raile, A., & Roers, M. (2010). Fusing family and firm: Employee perceptions of perceived homophily, organizational justice, organizational identification, and organizational commitment in family businesses. *Journal of Family Business Strategy*, 1(14), 210-223.
- Carnes, C. M., & Ireland, R. D. (2013). Familiness and innovation: Resource bundling as the missing link. *Entrepreneurship Theory and Practice*, 37(6), 1399-1419.

- Carney, M. (2005). Corporate governance and competitive advantage in family-controlled firms. *Entrepreneurship Theory and Practice*, 29(3), 249–265.
- Carr, J. C., Cole, M. S., Ring, J. K., & Blettner, D. P. (2011). A measure of variations in internal social capital among family firms. *Entrepreneurship Theory and Practice*, 35(6), 1207-1227.
- Carree, M. A., & Thurik, A. R. (2008). The lag structure of the impact of business ownership on economic performance in OECD countries. *Small Business Economics*, 30(1), 101-110.
- Casillas, J. C., & Moreno, A. M. (2010). The relationship between entrepreneurial orientation and growth: The moderating role of family involvement. *Entrepreneurship & Regional Development*, 22(3-4), 265-291.
- Casson, M. (1999). The economics of the family firm. *Scandinavian Economic History Review*, 47(1),10-23.
- Casson, M., & Giusta, M. D. (2007). Entrepreneurship and social capital: Analysing the impact of social networks on entrepreneurial activity from a rational action perspective. *International Small Business Journal*, 25(3), 220-244.
- Cennamo, C., Berrone, P., Cruz, C., & Gomez–Mejia, L. R. (2012). Socioemotional wealth and proactive stakeholder engagement: Why family–controlled firms care more about their stakeholders. *Entrepreneurship Theory and Practice*, 36(6), 1153-1173.
- Chandler, A. D. (1990). *Strategy and structure: Chapters in the history of the industrial enterprise* (Vol. 120). Cambridge: MIT press.
- Chandler, A.D. (1977), *Visible Hand: The Managerial Revolution in American Business*, Belknap Press, Cambridge, MA.
- Chang, E. P., Chrisman, J. J., Chua, J. H., & Kellermanns, F. W. (2008). Regional economy as a determinant of the prevalence of family firms in the United States: A preliminary report. *Entrepreneurship Theory and Practice*, 32(3), 559-573.
- Chirico, F., Ireland, R., & Sirmon, D. (2011). Franchising and the Family Firm: Creating Unique Sources of Advantage Through “Familianness”. *Entrepreneurship Theory and Practice*, 35(3), 483-501.
- Chirico, F., Nordqvist, M., Colombo, G., & Mollona, E. (2012). Simulating dynamic capabilities and value creation in family firms: Is paternalism an “asset” or a “liability”? *Family Business Review*, 25(3), 318-338.
- Choi, Y., Yoshikawa, T., Zahra, S., & Han, B. (2014). Market-oriented institutional change and R&D investments: Do business groups enhance advantage? *Journal of World Business*, 49(4), 466-475.

- Chrisman, J. J., Chua, J. H., & Litz, R. (2003). A unified systems perspective of family firm performance: An extension and integration. *Journal of Business Venturing*, 18(4), pp. 467-472.
- Chrisman, J. J., Chua, J. H., & Litz, R. A. (2004). Comparing the agency costs of family and non-family firms: Conceptual issues and exploratory evidence. *Entrepreneurship Theory and Practice*, 28(4), 335-354.
- Chrisman, J. J., Chua, J. H., & Sharma, P. (2005). Trends and directions in the development of a strategic management theory of the family firm. *Entrepreneurship Theory and Practice*, 29(5), 555-575.
- Chrisman, J. J., Chua, J. H., Pearson, A. W., & Barnett, T. (2012). Family involvement, family influence, and family-centered non-economic goals in small firms. *Entrepreneurship Theory and Practice*, 36(2), 267-293.
- Chrisman, J. J., Kellermanns, F. W., Chan, K. C., & Liano, K. (2010). Intellectual foundations of current research in family business: an identification and review of 25 influential articles. *Family Business Review*, 23(1), 9-26.
- Chrisman, J., Chua, J., Kellermanns, F., Iii, C., & Debicki, B. (2008). Management Journals as Venues for Publication of Family Business Research. *Entrepreneurship Theory and Practice*, 32 (5), 927-934.
- Chua, J. H., Chrisman, J. J., & Sharma, P. (1999). Defining the family business by behavior. *Entrepreneurship Theory and Practice*, 23(4), 19-39.
- Chua, J. H., Chrisman, J. J., & Sharma, P. (2003). Succession and nonsuccession concerns of family firms and agency relationship with nonfamily managers. *Family Business Review*, 16(2), 89-107.
- Chua, J. H., Chrisman, J. J., Steier, L., & Rau, S. B. (2012). Sources of heterogeneity in family firms: An introduction. *Entrepreneurship Theory and Practice*, 36(6), 1103–1113.
- Chua, J., Chrisman, J., & Massis, A. (2015). A Closer Look at Socioemotional Wealth: Its Flows, Stocks, and Prospects for Moving Forward. *Entrepreneurship Theory and Practice*, 39(2), 173-182.
- Chua, J.H, Chrisman, J.J. and Steier, L.P. (2003). Extending the Theoretical Horizons of Family business Research, *Entrepreneurship: Theory and Practice*, Summer2003, 27 (4), 331-338.
- Claessens, S., Djankov, S. Fan, J. P., and Lang, L. H. (2002). Disentangling the Incentive and entrenchment effects of large shareholdings. *Journal of Finance*, 57(6), 2741-2771.

- Coleman, J. S. (1988). Social capital in the creation of human capital. *American Journal of Sociology*, 94, 95-120.
- Coleman, J.S., 1990. *Foundations of Social Theory*. Harvard University Press, Cambridge, MA.
- Colli, A., Fernandez-Perez, P., & Rose, M. (2003). National determinants of family firm development: Family firms in Britain, Spain and Italy in the 19th and 20th centuries.
- Cools, E., and Van den Broeck, H. (2007/2008) 'The Hunt for the Heffalump Continues: Can Trait and Cognitive Characteristics Predict Entrepreneurial Orientation'. *Journal of Small Business Strategy*, 18(2): 23-41.
- Cooper, D.R. & Schindler, P.S. (2007). *Business Research Methods*. 9th Edition. New York: McGraw-Hill.
- Cooper, A., Edelstein, H., Levin, B., & Leung, J. (2010). Use of web-based research materials in education: Is uptake occurring. In *Canadian Society for the Study of Education (CSSE) Conference, Montreal, Canada*. Retrieved from <http://www.oise.utoronto.ca/rspe/UserFiles/File/CSSEWebtrackerFinal.doc>.
- Corbetta, G., & Salvato, C. A. (2004). The board of directors in family firms: one size fits all? *Family Business Review*, 17(2), 119-134.
- Covin, J. G., & Miles, M. P. (1999). Corporate entrepreneurship and the pursuit of competitive advantage. *Entrepreneurship: Theory and Practice*, 23(3), 47-47.
- Covin, J. G., & Slevin, D. P. (1986). The development and testing of an organizational-level entrepreneurship scale. *Frontiers of Entrepreneurship Research*, 1(3), 628-639.
- Covin, J. G., & Slevin, D. P. (1989). Strategic management of small firms in hostile and benign environments. *Strategic Management Journal*, 10(1), 75-87.
- Covin, J. G., & Slevin, D. P. (1991). A conceptual model of entrepreneurship as firm behavior. *Entrepreneurship Theory and Practice*, 16(1), 7-26.
- Covin, J. G., & Slevin, D. P. (2002). The entrepreneurial imperatives of strategic leadership. *Strategic entrepreneurship: Creating a new mindset*, In M. A. Hitt, R. D. Ireland, S. M. Camp, & D. L. Sexton (Eds.), *Strategic entrepreneurship: Creating a new mindset*: 309–327. Oxford: Blackwell Publishers.
- Covin, J. G., Green, K. M., & Slevin, D. P. (2006). Strategic process effects on the entrepreneurial orientation–sales growth rate relationship. *Entrepreneurship Theory and Practice*, 30(1), 57-81.
- Coyne, C. J., & Leeson, P. T. (2004). The plight of underdeveloped countries. *Cato Journal*, 24 (3), 235-249 .

- Craig, J., & Moores, K. (2005). Balanced scorecards to drive the strategic planning of family firms. *Family Business Review*, 18(2), 105-122.
- Cramer, D., & Howitt, D. L. (2004). *The Sage Dictionary of Statistics: a Practical Resource for Students in the Social Sciences*. London: Sage.
- Creswell, J.W. (2014) *Research Design; Quantitative, Qualitative and Mixed Method Approach*. (4 Ed.) London: Sage.
- Croitoru, G., Badea, A., Radu, F., & Radu, V. (2011, September). The Regional Cluster of SME's in Romania. In *ECEI2011-6th European Conference on Innovation and Entrepreneurship: ECEI 2011* (p. 197). Academic Conferences Limited.
- Crotty, M. (1998). *The foundations of Social Research: The meaning and perspective in the research Process*, Sage Publications Limited, London.
- Cruz, A. D., Hamilton, E., & Jack, S. L. (2012). Understanding entrepreneurial cultures in family businesses: A study of family entrepreneurial teams in Honduras. *Journal of Family Business Strategy*, 3(3), 147-161.
- Cruz, C., & Nordqvist, M. 2012. Entrepreneurial orientation in family firms: A generational perspective. *Small Business Economics*, 38(1), 33-49.
- Cucculelli, M., & Micucci, G. (2008). Family succession and firm performance: Evidence from Italian family firms. *Journal of Corporate Finance*, 14(1), 17-31.
- Cucculelli, M., & Storai, D. (2015). Family firms and industrial districts: Evidence from the Italian manufacturing industry. *Journal of Family Business Strategy*, 6(4), 234-246.
- Cyert, R. M., & March, J. G. (1963). *A Behavioral Theory of the Firm*. Englewood Cliffs: Prentice Hall.
- Daft, R. L. (1983). Learning the craft of organizational research. *Academy of Management Review*, 8(4), 539-546.
- Dannenberg, P., & Nduru, G. (2015). Regional linkages in the Kenyan horticultural industry. *Economic Development in Rural Areas: Functional and Multifunctional Approaches*. Ashgate: Farnham, 15-33.
- Davenport, T.H., Prusak, L., (1998). *Working knowledge: how organizations manage what they know*. Harvard Business School Press, Boston, MA.
- Davidsson, P. and Honig, B. (2003) 'The Role of Social and Human Capital Among Nascent Entrepreneurs', *Journal of Business Venturing* 18(3): 301–331.

- Davidsson, P., & Wiklund, J. (2001). Levels of analysis in entrepreneurship research: Current research practice and suggestions for the future. *Entrepreneurship Theory and Practice*, 25(4), 81-100.
- Dawson, A., & Mussolino, D. (2014). Exploring what makes family firms different: Discrete or overlapping constructs in the literature? *Journal of Family Business Strategy*, 5(2), 169-183.
- De Massis, A., & Kotlar, J. (2014). The case study method in family business research: Guidelines for qualitative scholarship. *Journal of Family Business Strategy*, 5(1), 15-29.
- De Massis, A., Frattini, F., Kotlar, J., Petruzzelli, A. M., & Wright, M. (2016). Innovation through tradition: Lessons from innovative family businesses and directions for future research. *Academy of Management Perspectives*, 30(1), 93-116.
- De Massis, A., Kotlar, J., Chua, J. H., & Chrisman, J. J. (2014). Ability and willingness as sufficiency conditions for family-oriented particularistic behavior: implications for theory and empirical studies. *Journal of Small Business Management*, 52(2), 344-364.
- De Massis, A., Melin, L., Nordqvist, M., Audretsch, D. & Eddleston, K (2013). Call for papers: “Family Business and Regional Development”, *Journal of Family Business Strategy: Special Issue Available from, <file:///H:/PhD/Call%20for%20papers/Call%20For%20Papers%20-%20Family%20Business%20and%20Regional%20Development.pdf>*, accessed on 20/03/2015.
- De Massis, A., Sharma, P., Chua, J. H., & Chrisman, J. J. (2012). *Family business studies: An annotated bibliography*. Cheltenham: Edward Elgar Publishing.
- Debicki, B., Matherne, C., Kellermanns, F., & Chrisman, J. (2009). Family Business Research in the New Millennium: An Overview of the Who, the Where, the What, and the Why. *Family Business Review*, 22(2), 151-166.
- DeBresson, C. (Ed.), 1996. *Economic Interdependence and Innovative Activity: An Input–Output Analysis*. Aldershot: Elgar.
- Deloitte (2016) Africa Growing Trends going into 2017: How business needs to plan for the changing continent, accessed from https://www2.deloitte.com/content/dam/Deloitte/za/Documents/africa/za_5MarCS_Africa_Trends_in_2017W.pdf, on 18th November 2018.
- Deng, P., Lu, S., & Xiao, H. (2013). Evaluation of the relevance measure between ports and regional economy using structural equation modeling. *Transport Policy*, 27(1), 123-133.
- Denscombe, M. (2010). *Ground Rules for Social Research: Guidelines for Good Research* (2nd Ed.) Berkshire: Open University Press.

- Denscombe, M. (2012). *Research proposals: A practical guide: A practical guide*. London: McGraw-Hill Education.
- Denyer, D., & Tranfield, D. (2011). Producing a Systematic Review. In D. Buchanan & A. Bryman (Eds.), *The SAGE Handbook of Organizational Research Methods* (pp.671 – 689). London: Sage Publications Ltd.
- Denzin, N. K., & Lincoln, Y. S. (Eds.). (2011). *The Sage handbook of qualitative research*. New York: Sage Publication Ltd.
- Dess, G. G., Lumpkin, G. T., & Covin, J. G. (1997). Entrepreneurial strategy making and firm performance: Tests of contingency and configurational models. *Strategic Management Journal*, 18(9), 677-695.
- Dibrell, C., & Moeller, M. (2011). The impact of a service-dominant focus strategy and stewardship culture on organizational innovativeness in family-owned businesses. *Journal of Family Business Strategy*, 2(1), 43-51.
- Dillman, D. A. (2009). Some consequences of survey mode changes in longitudinal surveys. *Methodology of Longitudinal Surveys*, 127-140.
- Doane, D. P., & Seward, L. E. (2011). Measuring skewness: a forgotten statistic. *Journal of Statistics Education*, 19(2), 1-18.
- Dodd, S. (2002). Metaphors and meaning: A grounded cultural model of US entrepreneurship. *Journal of Business Venturing*, 17, 519-535.
- Dommeier, C. J., and Moriarty, E., (2000) Comparing Two Forms of an Email Survey: Embedded vs. Attached. *International Journal of Market Research*. 42(1), pp. 39-50.
- Donaldson, L., & Davis, J. H. (1991). Stewardship theory or agency theory: CEO governance and shareholder returns. *Australian Journal of Management*, 16(1), 49-64.
- Donaldson, L., & Davis, J. H. (1993). The need for theoretical coherence and intellectual rigour in corporate governance research: reply to critics of Donaldson and Davis. *Australian Journal of Management*, 18(2), 213-223.
- Doran, J., McCarthy, N., & O'Connor, M. (2018). The role of entrepreneurship in stimulating economic growth in developed and developing countries. *Cogent Economics & Finance*, 6(1), 144-153.
- Duncan, R., (1974). Modifications in decision structure in adapting to the environment: some implications for organizational learning. *Decision Sciences* 5, 705–725.
- Durand, R., & Mani, D. (2018). *Family Firms in the Ownership Network: Clustering, Bridging, and Embeddedness* (No. 1275). HEC Paris.

- Dyck, B. and Maus, M., Starke, F. A. and Mischke, G. A. (2002). Passing the Baton: The Importance of Sequence, Timing, Technique and Communication in Executive Succession. *Journal of Small Business Management*, 34, 15-26.
- Dyer, W. C, Jr. (1986) *Cultural Change in Family Firms: Anticipating and Managing Business and Family Transitions*. San Francisco: Jossey-Bass.
- Dyer, W. G., & Handler, W. (1994). Entrepreneurship and family business: Exploring the connections. *Entrepreneurship Theory and Practice*, 19, 71-71.
- Dyer, W., & Whetten, D. (2006). Family Firms and Social Responsibility: Preliminary Evidence from the S&P 500. *Entrepreneurship Theory and Practice*, 30 (6), 785-802.
- Dyer, W.G. (2003) The Family: The missing variable in Organisational Research, *Entrepreneurship Theory and Practice*, Vol. 27, No. 4, p401-416.
- Dyer, W.G., Jr. (2006). Examining the “family effect” on firm performance. *Family Business Review*, 19(4), 253–273.
- Easterby-Smith, M., Thorpe, R., and Jackson, P. (2012) *Management Research*, 4th Edition, London, Sage.
- Eddleston, K. A., & Kellermanns, F. W. (2007). Destructive and productive family relationships: A stewardship theory perspective. *Journal of Business Venturing*, 22(4), 545-565.
- Eddleston, K., Kellermanns, F.W., & Sarathy, R. (2008). Resource configuration in family firms: Linking resources, strategic planning and technological opportunities to performance. *Journal of Management Studies*, 45(1), 26–50.
- Edwards, J. R., and Lambert, L. S. (2007). Methods for integrating moderation and mediation: a general analytical framework using moderated path analysis. *Psychological Methods*, 12(1), 1.
- Edwards, P.K, O’Mahoney, J., and Vincent, S. (2014) *Studying Organisations Using Critical Realism: A practical Guide*, Oxford: Oxford University Press.
- Enders, C. K., & Bandalos, D. L. (2001). The relative performance of full information maximum likelihood estimation for missing data in structural equation models. *Structural Equation Modeling*, 8(3), 430-457.
- Ensley, M. D., & Pearson, A. W. (2005). An exploratory comparison of the behavioral dynamics of top management teams in family and nonfamily new ventures: Cohesion, conflict, potency, and consensus. *Entrepreneurship Theory and Practice*, 29(3), 267-284.
- Eriksson, P. and Kovalainen, A. (2008). *Qualitative Methods in Business Research*, London: Sage

- Eybers, C. (2010). Copreneurships in South African small and medium-sized family businesses. *Unpublished doctoral thesis, Nelson Mandela Metropolitan University*.
- Faccio, M., Lang, L. H., & Young, L. (2001). Dividends and expropriation. *American Economic Review*, 91(1), 54-78.
- Faccio, M., Lang, L., (2002). The ultimate ownership of Western European corporations. *Journal of Financial Economics* 65(3), 365 – 395.
- Family Firm Institute (FFI) (2015) Retrieved from <http://www.ffi.org/?page=globaldatapoints>, in June 2017.
- Farayibi, A. (2015). Entrepreneurship as a Driver of Economic Growth: Evidence from Enterprise Development in Nigeria. *Available at SSRN 2852865*.
- Farjoun, M. (2002). Towards an organic perspective on strategy. *Strategic management journal*, 23(7), 561-594.
- Farrington, S., Venter, E. and Merwe, S (2011). Organisational based factors influencing the non-financial goals of family businesses, *Management Dynamics*, 20, (3), pp. 51-67.
- Farrington, S. M. (2009). Sibling partnerships in South African small and medium-sized family businesses. Unpublished doctoral thesis, Nelson Mandela Metropolitan University, Port Elizabeth.
- Fink, M., & Kraus, S. (Eds.). (2009). *The management of small and medium enterprises*. Routledge.
- Flören, R. H. (2002). *Crown princes in the clay: An empirical study on the tackling of succession challenges in Dutch family farms*. Uitgeverij Van Gorcum.
- Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of marketing research*, 18(1), 39-50.
- Frank, H., Lueger, M., Nosé, L., & Suchy, D. (2010). The concept of “Familiness”: Literature review and systems theory-based reflections. *Journal of Family Business Strategy*, 1(3), 119-130.
- Freeman, R. E. (1984). *Strategic management: A stakeholder approach*. Boston: Pitman Publishing
- Fromhold-Eisebith, M. (2009). Space (s) of innovation: Regional knowledge economies. In *Milieus of Creativity* (pp. 201-218). Springer, Dordrecht.
- Gallo, M. A., Ariño, A., Máñez, I., & Cappuyns, K. (2002). Internacionalización vía alianzas estratégicas en la empresa familiar. *IESE. Documento de Investigación*, 447.
- Gallo, M. Á., Tàpies, J., & Cappuyns, K. (2004). Comparison of family and nonfamily business: Financial logic and personal preferences. *Family Business Review*, 17(4), 303-318.
- Gartner, W. B. (1988). “Who is an entrepreneur?” is the wrong question. *American Journal of Small Business*, 12(4), 11-32.

- Gartner, W. B. (1989). Some suggestions for research on entrepreneurial traits and characteristics. *Entrepreneurship Theory and Practice*, 14(1), 27-38.
- Gedajlovic, E., & Carney, M. (2010). Markets, hierarchies, and families: Toward a transaction cost theory of the family firm. *Entrepreneurship Theory and Practice*, 34(6), 1145-1172.
- Gedajlovic, E., Honig, B., Moore, C. B., Payne, G. T., & Wright, M. (2013). Social capital and entrepreneurship: A schema and research agenda. *Entrepreneurship Theory and Practice*, 37(3), 455-478.
- George, B. A., & Marino, L. (2011). The epistemology of entrepreneurial orientation: Conceptual formation, modeling, and operationalization. *Entrepreneurship Theory and Practice*, 35(5), 989-1024.
- Gereffi, G., & Lee, J. (2016). Economic and social upgrading in global value chains and industrial clusters: Why governance matters. *Journal of Business Ethics*, 133(1), 25-38.
- Gersick, K. E., Lansberg, I., Desjardins, M., & Dunn, B. (1999). Stages and transitions: Managing change in the family business. *Family Business Review*, 12(4), 287-297.
- Gersick, K.E., Davis, J.A., McCollom Hampton, M. and Lansberg, I. (1997). *Generation to Generation Life Cycles of the Family Business*. Boston: Harvard Business School Press.
- Gibb Dyer Jr, W. (2006). Examining the “family effect” on firm performance. *Family Business Review*, 19(4), 253-273.
- Gomez-Mejia, L. R., Cruz, C., Berrone, P., & De Castro, J. (2011). The bind that ties: Socioemotional wealth preservation in family firms. *Academy of Management Annals*, 5(1), 653-707.
- Gomez-Mejia, L. R., Haynes, K., Núñez-Nickel, M., Jacobson, K., & Moyano-Fuentes, J. (2007). Socioemotional wealth and business risks in family-controlled firms: Evidence from Spanish olive oil mills. *Administrative Science Quarterly*, 52 (1), pp. 106–137.
- Gomez-Mejia, L., Nunez-Nickel, M., & Gutierrez, I. (2001). The Role Of Family Ties In Agency Contracts. *Academy of Management Journal*, 44(1), 81-95.
- Gorsuch, R. L. (1990). Common factor analysis versus component analysis: Some well- and little-known facts. *Multivariate Behavioral Research*, 25(1), 33-39.
- Granovetter, M. (1985). Economic action and social structure: The problem of embeddedness. *American Journal of Sociology*, 91(3), 481-510.
- Graves, C., & Shan, Y. G. (2014). An empirical analysis of the effect of internationalization on the performance of unlisted family and nonfamily firms in Australia. *Family Business Review*, 27(2), 142-160.

- Green, K. M., Covin, J. G., & Slevin, D. P. (2008). Exploring the relationship between strategic reactivity and entrepreneurial orientation: The role of structure–style fit. *Journal of Business Venturing*, 23(3), 356-383.
- Guba, E. G. and Lincoln, Y. S. (1989) *Fourth Generation Evaluation*. Beverly Hills, CA: Sage.
- Guba, E. G., & Lincoln, Y. S. (1994). *Competing paradigms in qualitative research*. *Handbook of Qualitative Research*, 2(163-194), 105.
- Guo, Y. & Wanangwa, N. (2016), South Africa as the Case Study on the Relationship between Entrepreneurship and Economic Development. *DEStech Transactions on Economics, Business and Management*, available from <http://www.dpi-proceedings.com/index.php/dtem/article/view/4206>, accessed on March 2017.
- Gupta, V. K., & Gupta, A. (2015). Relationship between entrepreneurial orientation and firm performance in large organizations over time. *Journal of International Entrepreneurship*, 13(1), 7-27.
- Gupta, V., Levenburg, N. M., Moore, L., Motwani, J., & Schwarz, T. (2011). The spirit of family business: A comparative analysis of Anglo, Germanic and Nordic nations. *International Journal of Cross Cultural Management*, 11(2), 133-151.
- Guth, W. D., & Ginsberg, A. (1990). Guest editors' introduction: Corporate entrepreneurship. *Strategic Management Journal*, [Special issue], 11, 5-15.
- Habbershon, T. (2006). Commentary: A Framework for Managing the Familiness and Agency Advantages in Family Firms. *Entrepreneurship Theory and Practice*, 879-886.
- Habbershon, T. G., & Williams, M. L. (1999). A resource-based framework for assessing the strategic advantages of family firms. *Family Business Review*, 12(1), 1-25.
- Habbershon, T. G., Nordqvist, M., & Zellweger, T. (2010). Transgenerational entrepreneurship. *Transgenerational entrepreneurship: Exploring growth and performance in family firms across generations*, 1-38.
- Habbershon, T., & Pistrui, J. (2002). Enterprising Families Domain: Family-Influenced Ownership Groups in Pursuit of Transgenerational Wealth. *Family Business Review*, 15(3), 223-237.
- Habbershon, T., Williams, M., and Macmillan, I. (2003). A unified systems perspective of family firm performance. *Journal of Business Venturing*, 18(4), 451-465.
- Hair, J.F., Black, W.C., Babin, B.J., Anderson, R.E., and T, R.L (2006) *Multivariate Data Analysis*, (6th Ed.), New Jersey: Pearson Education International.
- Handler, W. C. (1989). Methodological issues and considerations in studying family businesses. *Family Business Review*, 2(3), 257-276.

- Harman, H. H. (1976). *Modern factor analysis* (3rd ed.). Chicago: University of Chicago Press.
- Hartog, C., Parker, S., van Stel, A., & Thurik, R. (2010). The two-way relationship between entrepreneurship and economic performance. *Scales report H200822*.
- Hau, K. T., & Marsh, H. W. (2004). The use of item parcels in structural equation modelling: Non-normal data and small sample sizes. *British Journal of Mathematical and Statistical Psychology*, 57(2), 327-351.
- He, Z., & Rayman-Bacchus, L. (2010). Cluster network and innovation under transitional economies: an empirical study of the Shaxi garment cluster. *Chinese Management Studies*, 4(4), 360-384.
- Henssen, B., Voordeckers, W., Lambrechts, F., & Koiranen, M. (2011). A different perspective on defining family firms: The ownership construct revisited. Università Degli Studi Di Palermo.
- Hiebl, M. R. (2014). A finance professional who understands the family: family firms' specific requirements for non-family chief financial officers. *Review of Managerial Science*, 8(4), 465-494.
- Hinton, P. R., & McMurray, I. (2017). *Presenting Your Data with SPSS Explained*. Taylor & Francis.
- Hirsch, P. M., & Levin, D. Z. (1999). Umbrella advocates versus validity police: A life-cycle model. *Organization Science*, 10(2), 199-212.
- Hisrich, R., Peters, M., and Shepherd, D. (2005) *Entrepreneurship* (6th ed.). New York: McGrawHill.
- Hitt, M. A., Biermant, L., Shimizu, K., & Kochhar, R. (2001). Direct and moderating effects of human capital on strategy and performance in professional service firms: A resource-based perspective. *Academy of Management Journal*, 44(1), 13-28.
- Hitt, M. A., Ireland, R. D., Camp, S. M., & Sexton, D. L. (2001). Strategic entrepreneurship: Entrepreneurial strategies for wealth creation. *Strategic Management Journal*, 22(6-7), 479-491.
- Hitt, M. A., Ireland, R. D., Sirmon, D. G., & Trahms, C. A. (2011). Strategic entrepreneurship: creating value for individuals, organizations, and society. *Academy of Management Perspectives*, 25(2), 57-75.
- Ho, R. (2006). *Handbook of univariate and multivariate data analysis and interpretation with SPSS*. Florida: CRC Press.
- Hofstede, G. (2001). *Culture's consequences: Comparing values, behaviors, institutions and organizations across nations*. California: Sage publications.

- Holland, P. G., & Boulton, W. R. (1984). Balancing the “family” and the “business” in family business. *Business Horizons*, 27(2), 16-21.
- Holland, P.G. and Oliver, J.E. (1992) ‘An empirical examination of the stages of development of family businesses’, *Journal of Business and Entrepreneurship*, 4(3), .27–38.
- Hooper, D., Coughlan, J., & Mullen, M. (2008). Structural equation modelling: Guidelines for determining model fit. *Articles*, 2.
- Horn, R. (2010) *Researching and Writing Dissertations – A Complete Guide for Business and Management Students* CIPD: London.
- Hoskisson, R. E., Eden, L., Lau, C. M., & Wright, M. (2000). Strategy in emerging economies. *Academy of Management Journal*, 43(3), 249-267.
- Hosseini, S. V. M., & Ghanbari, M. R. (2011). Investigation and analysis of the performance of industrial clusters in Islamic Republic of Iran. *International Journal of Business and Social Science*, 2(15), 231-235.
- Hoy, F., & Verser, T. G. (1994). Emerging business, emerging field: Entrepreneurship and the family firm. *Entrepreneurship: Theory and Practice*, 19(1), 9-24.
- Inkpen, A. C., & Tsang, E. W. (2005). Social capital, networks, and knowledge transfer. *Academy of Management Review*, 30(1), 146-165.
- Irava, W., & Moores, K. (2010). Clarifying the strategic advantage of familiness: Unbundling its dimensions and highlighting its paradoxes. *Journal of Family Business Strategy*, 1(3), 131-144.
- Ireland, R. D., Hitt, M. A., Camp, S. M., & Sexton, D. L. (2001). Integrating entrepreneurship and strategic management actions to create firm wealth. *Academy of Management Perspectives*, 15(1), 49-63.
- Ireland, R., Hitt, M., & Sirmon, D. (2003). A Model of Strategic Entrepreneurship: The Construct and its Dimensions. *Journal of Management*, 963-989.
- Jack, S. L. (2005). The role, use and activation of strong and weak network ties: A qualitative analysis. *Journal of Management Studies*, 42(6), 1233-1259.
- James, H.S., Jr. (1999). Owner as manager: Extended horizons and the family firm. *International Journal of the Economics of Business*, 6, 41–56.
- Jansen, T., & Basco, R. (2014). It’s not the concept, stupid! What family business research is about? In working paper. Germany: Witten/Herdecke University.

- Jaskiewicz, P., González, V. M., Menéndez, S., & Schiereck, D. (2005). Long-run IPO performance analysis of German and Spanish family-owned businesses. *Family Business Review*, 18(3), 179-202.
- Jaskiewicz, P., Uhlenbruck, K., Balkin, D. B., & Reay, T. (2013). Is nepotism good or bad? Types of nepotism and implications for knowledge management. *Family Business Review*, 26(2), 121-139.
- Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3(4), 305-360.
- Johannisson, B., & Huse, M. (2000). Recruiting outside board members in the small family business: An ideological challenge. *Entrepreneurship & Regional Development*, 12(4), 353-378.
- Johannisson, B., Caffarena, L. C., Cruz, A. F. D., Epure, M., Pérez, E. H., Kapelko, M., & Sekki, A. (2007). Interstanding the industrial district: contrasting conceptual images as a road to insight. *Entrepreneurship and Regional Development*, 19(6), 527-554.
- Jones, P., Maas, G., Dobson, S., Newbery, R., Agyapong, D., & Matlay, H. (2018). Entrepreneurship in Africa, part 1: entrepreneurial dynamics in Africa. *Journal of Small Business and Enterprise Development*, 25(3), 346-348.
- Jonson, P. and Clark, M. (2006) 'Editors' Introduction: *Mapping the Terrain: An Overview of Business Management Research Methodologies*' in P. Johnson and M. Clark (Eds) *Business and Management Research Methodologies*. London: Sage, pp. xxv-iv.
- Jöreskog, K. G., & Sörbom, D. (1993). *LISREL 8: Structural equation modeling with the SIMPLIS command language*. Scientific Software International.
- Kalnins, A., & Chung, W. (2006). Social capital, geography, and survival: Gujarati immigrant entrepreneurs in the US lodging industry. *Management Science*, 52(2), 233-247.
- Kantur, D. (2016). Strategic entrepreneurship: mediating the entrepreneurial orientation-performance link. *Management Decision*, 54(1), 24-43.
- Kaplowitz, M. D., Hadlock, T. D., & Levine, R. (2004). A comparison of web and mail survey response rates. *Public opinion quarterly*, 68(1), 94-101.
- Karlsson, C., Johansson, B., & Stough, R. (2013). *Entrepreneurial Knowledge, Technology and the Transformation of Regions*. New York: Routledge.
- Kaufmann, P. J., & Dant, R. P. (1999). Franchising and the domain of entrepreneurship research. *Journal of Business Venturing*, 14(1), 5-16.
- Kelemen, M. and Rumens, N. (2008). *An Introduction to Critical Management Research*. London: Sage.

- Kellermanns, F. W., & Eddleston, K. A. (2004). Feuding families: When conflict does a family firm good. *Entrepreneurship Theory and Practice*, 28(3), 209-228.
- Kellermanns, F. W. and Eddleston, K. (2006b). 'Feuding families: the management of conflict in family firms. In Poutziouris, P., Smyrnios, K. and Klein, B. (Eds), *Family Business Research Handbook*. Northampton: Edward Elgar Publishing, 358–68
- Kellermanns, F. W., & Eddleston, K. A. (2007). A family perspective on when conflict benefits family firm performance. *Journal of Business Research*, 60(10), 1048-1057.
- Kellermanns, F. W., Eddleston, K. A., Barnett, T., & Pearson, A. (2008). An exploratory study of family member characteristics and involvement: Effects on entrepreneurial behavior in the family firm. *Family Business Review*, 21(1), 1-14.
- Kellermanns, F., & Eddleston, K. (2006). Corporate Entrepreneurship in Family Firms: A Family Perspective. *Entrepreneurship Theory and Practice Entrepreneurship*, 30 (6), 809-830.
- Kelly, L., Lewa, P. M., & Kamaria, K. (2008). Founder centrality, management team congruence and performance in family firms: a Kenyan context. *Journal of Developmental Entrepreneurship*, 13(4), 383-407.
- Kenya Economic Development Report (2010) Youth and Human Development: Tapping the Untapped Resource, accessed from http://hdr.undp.org/sites/default/files/kenya_nhdr_2009_en.pdf , on 22nd April 2017
- Kenya National Bureau of Statistics (KNBS) (2016) *Micro, Small and Medium Enterprises (MSME) Survey Basic report*, accessed from <https://www.knbs.or.ke/2016-micro-small-and-medium-enterprises-msme-survey-basic-report-2> on 20th May 2017
- Kets de Vries, M. F. K. (1993). The dynamics of family-controlled firms: The good and the bad news. *Organizational Dynamics*, 21(3), 59-71.
- Khan, J. H., & Ghani, J. A. (2004). Clusters and entrepreneurship: Implications for innovation in a developing economy. *Journal of Developmental Entrepreneurship*, 9(3), 221-38.
- Khanna, A., Papadavid, P., Tyson, J., & te Velde, D. W. (2016). The role of services in economic transformation—with an application to Kenya. *Supporting Economic Transformation*, London: ODI
- Khavul, S., Bruton, G. D., & Wood, E. (2009). Informal family business in Africa. *Entrepreneurship Theory and Practice*, 33(6), 1219-1238.
- Khayesi, J. N., George, G., & Antonakis, J. (2014). Kinship in entrepreneur networks: Performance effects of resource assembly in Africa. *Entrepreneurship Theory and Practice*, 38(6), 1323-1342.

- Kim, Y., & Gao, F. Y. (2013). Does family involvement increase business performance? Family-longevity goals' moderating role in Chinese family firms. *Journal of Business Research*, 66(2), 265-274.
- Kimenyi, M., Mwega, F. M., & Ndung'u, N. (2015). *The African lions: Kenya country case study* (No. 2015/134). WIDER Working Paper.
- King, R., & Peng, W. Q. (2013). The effect of industry characteristics on the control longevity of founding-family firms. *Journal of Family Business Strategy*, 4(4), 281-295.
- KIPPRA (2017) *Kenya Economic Report: Sustaining Kenya's Economic Development by deepening and expanding economic integration in the region*, accessed from <http://kippra.or.ke/wp-content/uploads/2017/05/KER-2017-Popular-Version-1.pdf> , 26th May 2018.
- Kirk, J., & Miller, M. L. (1986) *Reliability and validity in qualitative research*. Beverly Hills: Sage Publications.
- Kirshenblatt-Gimblett, B. (2006) Part 1, What Is Research Design? The Context of Design. Internet: Available: <http://www.nyu.edu/classes/bkg/methods/005847ch1.pdf>. (Accessed: 16 April, 2012).
- Kirzner, I.M., 1973. *Competition and Entrepreneurship*. University of Chicago Press, Chicago, IL
- Kistruck, G. M., Webb, J. W., Sutter, C. J., & Ireland, R. D. (2011). Microfranchising in Base-of-the-Pyramid markets: Institutional challenges and adaptations to the franchise model. *Entrepreneurship Theory and Practice*, 35(3), 503-531.
- Kithae, P. P., Gakure, R., & Munyao, L. (2012). The Place of Micro and Small Enterprises in Achievement of Kenya's Vision 2030. *Journal of US-China Public Administration*, 9(12), 1432-1440.
- Klein, A. (2002). Audit committee, board of director characteristics, and earnings management. *Journal of Accounting and Economics*, 33(3), 375-400.
- Klein, S. B., Astrachan, J. H., & Smyrnios, K. X. (2005). The F-PEC scale of family influence: Construction, validation, and further implication for theory. *Entrepreneurship Theory and Practice*, 29(3), 321-340.
- Klein, S.B. (2003). Strategic renewal during succession in family firms. In P. Poutziouris & L.P. Steier (Eds), *New frontiers in family business research: The leadership challenge* (pp. 196–215). Research Forum Proceedings of 14th FBN-ibera Research Forum, Lausanne.
- Kline, R.B. (2005), *Principles and Practice of Structural Equation Modeling* (2nd Edition ed.). New York: The Guilford Press.

- Kotlar, J., & De Massis, A. (2013). Goal setting in family firms: Goal diversity, social interactions, and collective commitment to family-centered goals. *Entrepreneurship Theory and Practice*, 37(6), 1263-1288.
- Kreiser, P. M., Marino, L. D., & Weaver, K. M. (2002). Assessing the psychometric properties of the entrepreneurial orientation scale: A multi-country analysis. *Entrepreneurship Theory and Practice*, 26(4), 71-93.
- Kreiser, P. M., Marino, L. D., Dickson, P., & Weaver, K. M. (2010). Cultural influences on entrepreneurial orientation: The impact of national culture on risk taking and proactiveness in SMEs. *Entrepreneurship Theory and Practice*, 34(5), 959-984.
- Kumar (2014) *Research Methodology: A step-by-step guide for beginners*, 4th ed., London: Sage
- SageKyrgidou, L. P., & Hughes, M. (2010). Strategic entrepreneurship: origins, core elements and research directions. *European Business Review*, 22(1), 43-63.
- La Porta, R., Lopez-de-Silanes, F., Shleifer, A., & Vishny, R. (1999). The quality of government. *Journal of Law, Economics, and Organization*, 15(1), 222-279.
- Lansberg, I. (1999). *Succeeding generations: Realizing the dream of families in business*. Boston: Harvard Business School Press.
- Lansberg, I., Perrow, E. L., & Rogolsky, S. (1988). Family business as an emerging field. *Family Business Review*, 1(1), 1-8.
- Le Breton-Miller, I., & Miller, D. (2008). To grow or to harvest? Governance, strategy and performance in family and lone founder firms. *Journal of Strategy and Management*, 1(1), 41-56.
- Leana, C. R., & Van Buren, H. J. (1999). Organizational social capital and employment practices. *Academy of management review*, 24(3), 538-555.
- Lee, J. (2006). Family firm performance: Further evidence. *Family business review*, 19(2), 103-114.
- Lester, R. H., Hillman, A., Zardkoohi, A., & Cannella Jr, A. A. (2008). Former government officials as outside directors: The role of human and social capital. *Academy of Management Journal*, 51(5), 999-1013.
- Lester, R., & Cannella, A. (2006). Interorganizational Familiness: How Family Firms Use Interlocking Directorates to Build Community-Level Social Capital. *Entrepreneurship Theory and Practice* *Entrepreneurship Theory & Pract*, 30(6), 755-775.
- Levie, J., & Lerner, M. (2009). Resource mobilization and performance in family and nonfamily businesses in the United Kingdom. *Family Business Review*, 22(1), 25-38.

- Liao, J., Welsch, H. P., & Pistrui, D. (2001). Environmental and Individual Determinants of Entrepreneurial Growth: An Empirical Examination. *Journal of Enterprising Culture*, 9(3), 253-272.
- Lin, N. (2001), *Social Capital: A Theory of Social Structure and Action*, Cambridge University Press, Cambridge.
- Lincoln, Y. S., Lynham, S. A., & Guba, E. G. (2011). *Paradigmatic controversies, contradictions, and emerging confluences, revisited*. *The Sage handbook of Qualitative Research*, 4, 97-128.
- Lincoln, Y., and Guba, E. (1985) *Naturalistic inquiry*. Newbury Park, CA: Sage Publications.
- Litz, R. (2008). Two Sides of a One-Sided Phenomenon: Conceptualizing the Family Business and Business Family as a Möbius Strip. *Family Business Review*, 21(3), 217-236.
- Litz, R. A. (1995). The family business: Toward definitional clarity. *Family Business Review*, 8(2), 71-81.
- Lladós, J., Ardevol, M., & Vilaseca, J. (2009). Innovative milieu, micro firms and local development in Barcelona. *IJESB International Journal of Entrepreneurship and Small Business*, 7(2), 214-214.
- Love, L.G., Priem, R.L., Lumpkin, G.T., 2002. Explicitly articulated strategy and firm performance under alternative levels of centralization. *Journal of Management*, 28 (5), 611–627.
- Low, M. B., & MacMillan, I. C. (1988). Entrepreneurship: Past research and future challenges. *Journal of Management*, 14(2), 139-161.
- Lumpkin, G. T., & Dess, G. G. (1996). Clarifying the entrepreneurial orientation construct and linking it to performance. *Academy of Management Review*, 21(1), 135-172.
- Lumpkin, G. T., & Dess, G. G. (2001). Linking two dimensions of entrepreneurial orientation to firm performance: The moderating role of environment and industry life cycle. *Journal of Business Venturing*, 16(5), 429-451.
- Lumpkin, G. T., & Dess, G. G. (2006). The effect of ‘simplicity’ on the strategy–performance relationship: A note. *Journal of Management Studies*, 43(7), 1583-1604.
- Lumpkin, G. T., Martin, W., & Vaughn, M. (2008). Family orientation: Individual-level influences on family firm outcomes. *Family Business Review*, 21(2), 127-138.
- Lumpkin, G. T., Steier, L., & Wright, M. (2011). Strategic entrepreneurship in family business. *Strategic Entrepreneurship Journal*, 5(4), 285-306.
- Machek, O., Hnilica, J., & Kolouchová, D. (2015). The Impact of Family Control on Profitability, Leverage and Liquidity: Evidence from the Czech Manufacturing Industry. In *Proc. of the*

7th International Scientific Conference Finance and Performance of Firms in Science, Education and Practice, 23.–24. 4 (883-892).

- Mageto, V. (2012) Cluster Concept in Kenya, accessed from http://www.academia.edu/9686308/Cluster_Concept_in_Kenya , on 05 September, 2015.
- Mahoney, J. T. (1995). The management of resources and the resource of management. *Journal of Business Research*, 33(2), 91-101.
- Mamman, A., Kanu, A. M., Alharbi, A., & Baydoun, N. (2015). *Small and Medium-sized Enterprises (SMEs) and Poverty Reduction in Africa: Strategic Management Perspective*. Newcastle: Cambridge Scholars Publishing.
- Markusen, A. (1996). Sticky places in slippery space: a typology of industrial districts. *Economic Geography*, 72(3), 293-313.
- Markusen, A. (2002). Sticky places in slippery space: a typology of industrial districts. In *The new industrial geography* (pp. 120-146). New York: Routledge.
- Markusen, A. (2003). An actor-centered approach to regional economic change. *Annals of the Association of Japanese Geographers*, 49(5), 395–408.
- Marsh, H. W., & Hocevar, D. (1985). Application of confirmatory factor analysis to the study of self-concept: First-and higher order factor models and their invariance across groups. *Psychological Bulletin*, 97(3), 562-582.
- Martin, L., & Lumpkin, T. (2003). From EO to “family orientation”: Generational differences in the management of family businesses. Paper presented at the 22nd Babson College Entrepreneurship Research Conference, Babson Park, MA.
- Mason, C., & Brown, R. (2014). Entrepreneurial ecosystems and growth-oriented entrepreneurship. *Final Report to OECD, Paris*.
- Maurer, I., & Ebers, M. (2006). Dynamics of social capital and their performance implications: Lessons from biotechnology start-ups. *Administrative Science Quarterly*, 51(2), 262-292.
- Maury, B. (2006). Family ownership and firm performance: Empirical evidence from Western European corporations. *Journal of Corporate Finance*, 12(2): 321–341.
- Mazzi, C. (2011). Family business and financial performance: Current state of knowledge and future research challenges. *Journal of Family Business Strategy*, 2(3), 166-181.
- McAdam, R., Reid, R., & Mitchell, N. (2010). Longitudinal development of innovation implementation in family-based SMEs: The effects of critical incidents. *International Journal of Entrepreneurial Behavior & Research*, 16(5), 437-456.
- McCormick, D. (1998) *Enterprise Clusters in Africa: On the way to industrialisation?* Discussion Paper, No. 366, Institute of Development Studies, University of Sussex, Brighton.

- McCormick, D. (1999). African enterprise clusters and industrialization: theory and reality. *World Development*, 27(9), 1531-1551.
- McGrath, R. G., & MacMillan, I. C. (2000). *The entrepreneurial mindset: Strategies for continuously creating opportunity in an age of uncertainty* (Vol. 284). Harvard Business Press.
- Meade, A. W., & Kroustalis, C. M. (2005). Problems of item parceling with CFA tests of measurement invariance. In *The 20th Annual Conference of the Society for Industrial and Organizational Psychology, Los Angeles, CA*.
- Melin, L., & Nordqvist, M. (2007). The reflexive dynamics of institutionalization: The case of the family business. *Strategic Organization*, 5(3), 321-333.
- Memili, E., Fang, H., Chrisman, J. J., & De Massis, A. (2015). The impact of small-and medium-sized family firms on economic growth. *Small Business Economics*, 45(4), 771-785.
- Mertens, D.M (2010). *Research and evaluation in education and psychology: Integrating diversity with quantitative, qualitative, and mixed methods* (3rd Ed.). Thousand Oaks CA: Sage
- Merz, G.R., and Sauber, M.H. (1995). "Profiles of Managerial Activities in Small Firms," *Strategic Management Journal* 16, 551-564.
- Michael-Tsabari, N., Labaki, R., & Zachary, R. (2014). Toward the Cluster Model: The Family Firm's Entrepreneurial Behavior Over Generations. *Family Business Review*, 27, 161-185.
- Miller, D. (1983). The correlates of entrepreneurship in three types of firms. *Management Science*, 29(7), 770-791.
- Miller, D. (2003). An asymmetry-based view of advantage. *Strategic Management Journal*, 24(10), 961-976.
- Miller, D., & Breton-Miller, I. (2005). Management Insights from Great and Struggling Family Businesses. *Long Range Planning*, 38, 517-530.
- Miller, D., & Breton-Miller, I. (2014). Deconstructing Socioemotional Wealth. *Entrepreneurship Theory and Practice*, 38 (4), 713-720.
- Miller, D., & Breton-Miller, L. (2006). Family governance and firm performance: Agency, stewardship, and capabilities. *Family Business Review*, 19(1), 73-87.
- Miller, D., & Friesen, P. H. (1982). Innovation in conservative and entrepreneurial firms: Two models of strategic momentum. *Strategic Management Journal*, 3(1), 1-25.
- Miller, D., & Le Breton-Miller, I. (2005). *Managing for the long run: Lessons in competitive advantage from great family businesses*. Boston: Harvard Business Press.

- Miller, D., and Le Breton–Miller, I. (2011). Governance, social identity, and entrepreneurial orientation in closely held public companies. *Entrepreneurship Theory and Practice*, 35(5), 1051-1076.
- Miller, D., Le Breton-Miller, I., & Scholnick, B. (2008). Stewardship vs. stagnation: An empirical comparison of small family and non-family businesses. *Journal of Management Studies*, 45(1), 51-78.
- Miller, D., Minichilli, A., & Corbetta, G. (2013). Is family leadership always beneficial? *Strategic Management Journal*, 34(5), 553-571.
- Milton, L. P. (2008). Unleashing the relationship power of family firms: Identity confirmation as a catalyst for performance. *Entrepreneurship Theory and Practice*, 32(6), 1063-1081.
- Minichilli, A., Corbetta, G., & MacMillan, I. C. (2010). Top management teams in family-controlled companies: ‘familiness’, ‘faultlines’, and their impact on financial performance. *Journal of Management Studies*, 47(2), 205-222.
- Ministry of Industrialisation (2010) *The Roadmap to Kenya’s Industrialization*, accessed from <http://www.industrialization.go.ke/images/downloads/the-roadmap-to-kenya-s-industrialization.pdf> , on 17th August, 2017
- Mintzberg, H., (1994). The rise and fall of strategic planning. New York: The Free Press.
- Mitchell, R. K., Agle, B. R., & Wood, D. J. (1997). Toward a theory of stakeholder identification and salience: Defining the principle of who and what really counts. *Academy of Management Review*, 22(4), 853-886.
- Montgomery, A. (2008). US Families 2025: in search of future families. *Futures*, 40 (4), 377 – 387.
- Moore, K. (2009). Paradigms and theory building in the domain of business families. *Family Business Review*, 22(2), 167-180.
- Morck, R., & Yeung, B. (2003). Agency problems in large family business groups. *Entrepreneurship Theory and Practice*, 27(4), 367-382.
- Morck, R., & Yeung, B. (2004). Family control and the rent-seeking society. *Entrepreneurship Theory and Practice*, 28(4), 391-409.
- Moreno, A. M., & Casillas, J. C. (2008). Entrepreneurial orientation and growth of SMEs: A causal model. *Entrepreneurship Theory and Practice*, 32(3), 507-528.
- Morris, M. W., & Peng, K. (1994). Culture and cause: American and Chinese attributions for social and physical events. *Journal of Personality and Social Psychology*, 67(6), 949.
- Mulaik, S. A. (1990). Blurring the distinctions between component analysis and common factor analysis. *Multivariate Behavioral Research*, 25(1), 53-59.

- Muñoz-Bullón, F., & Sanchez-Bueno, M. J. (2011). Is there new evidence to show that product and international diversification influence SMEs' performance? *EuroMed Journal of Business*, 6(1), 63-76.
- Murithi, W., Vershinina, N., and Rodgers, P. (2019) "Where less is more: Institutional voids and business families in Sub-Saharan Africa", *International Journal of Entrepreneurial Behavior & Research*, <https://doi.org/10.1108/IJEER-07-2017-0239>
- Mwai, K., Ntale, J. & Ngui, T. (2018). Effect of entrepreneurial orientation on the performance of family owned businesses: A case study of supermarkets in Nairobi County. *International Academic Journal of Innovation, Leadership and Entrepreneurship*, 2(2), 73-92
- Mwenzwa, E. M. and Misati, J. A. (2014). Kenya's Social Development proposals and challenges: Review of Kenya Vision 2030 First Medium – Term plan, 2008- 2012. *American International Journal of Contemporary Research*, 4(1), 246-253.
- Nadvi, K., & Schmitz, H. (1994). *Industrial clusters in less developed countries: review of experiences and research agenda*. Brighton: Institute of Development Studies, Discussion Paper no. 339.
- Nahapiet, J., & Ghoshal, S. (1998). Social capital, intellectual capital, and the organizational advantage. *Academy of Management Review*, 23(2), 242-266.
- Naldi, L., Cennamo, C., Corbetta, G., & Gomez-Mejia, L. (2013). Preserving Socioemotional Wealth in Family Firms: Asset or Liability? The Moderating Role of Business Context. *Entrepreneurship Theory and Practice*, 37 (6), 1341-1360.
- Naldi, L., Nordqvist, M., Sjöberg, K., and Wiklund, J. (2007). Entrepreneurial orientation, risk taking, and performance in family firms. *Family Business Review*, 20(1), 33-47.
- Naman, J. L., & Slevin, D. P. (1993). Entrepreneurship and the concept of fit: A model and empirical tests. *Strategic Management Journal*, 14(2), 137-153.
- National Baseline Survey (1999). National Micro and Small Enterprise Baseline Survey. Nairobi: ICEG and K-REP, accessed from <file:///H:/Downloads/MICRO%20&%20SMALL%20ENTERPRISE%20BASELINE%20SURVEY%201999.pdf> , on 09 March 2016.
- Nelly Trevinyo-Rodríguez, R. (2009). From a family-owned to a family-controlled business: Applying Chandler's insights to explain family business transitional stages. *Journal of Management History*, 15(3), 284-298.

- Neshamba, F. (2004) Business support services for small firms: Have the providers got it right? Paper presented at the 49th *International Council for Small Businesses (ICSB)* in Johannesburg, South Africa.
- Ngugi, P. K. (2013). *Challenges hindering sustainability of small and medium family enterprises after the exit of the founders in Kenya* (Doctoral dissertation).
- Niu, K. (2009). The Involvement of Firms in Industrial Clusters: A Conceptual Analysis, *International Journal of Management*, 26(3), 445-458
- Norrdqvist, M. and Melin, L. (2010) Entrepreneurial Families and Family Firms, *Entrepreneurship and Regional Development*, 22, (3-4), 2011-239
- Nordqvist, M., & Melin, L. (2010). The promise of the strategy as practice perspective for family business strategy research. *Journal of Family Business Strategy*, 1(1), 15-25.
- Nordqvist, M., Habbershon, T. G., & Melin, L. (2008). 6. Transgenerational entrepreneurship: exploring entrepreneurial orientation in family firms. *Entrepreneurship, Sustainable Growth and Performance: Frontiers in European Entrepreneurship Research*, 93–116. Cheltenham: Edward Elgar.
- O'Hara, W. T., & Mandel, P. (2002). The world's oldest family companies. *Family Business Magazine*, 37-49.
- Oakshott, L. (2012) *Essential Quantitative Methods*, (5th Ed.) Palgrave Macmillan: Hampshire.
- Oba, B. & Semerciöz, F. (2005). Antecedents of trust in industrial districts: An empirical analysis of inter-firm relations in a Turkish industrial district. *Entrepreneurship & Regional Development*, 17(3), 163–182.
- Oh, H., Chung, M. H., & Labianca, G. (2004). Group social capital and group effectiveness: The role of informal socializing ties. *Academy of Management Journal*, 47(6), 860-875.
- Oliver, P. (2010). *The student's guide to research ethics*. London: McGraw-Hill Education.
- Olson, P. D., Zuiker, V. S., Danes, S. M., Stafford, K., Heck, R. K., & Duncan, K. A. (2003). The impact of the family and the business on family business sustainability. *Journal of Business Venturing*, 18(5), 639-666.
- Omondi, D. (2015) Number of Companies registered in Kenya Increases by 53 per cent, *Standard Media Group*, accessed from <https://www.standardmedia.co.ke/article/2000181821/number-of-companies-registered-in-kenya-increases-by-53-per-cent>, on, 15 June, 2017
- Oseh, C. K. (2013). Factors associated with internationalization of small and medium enterprises in Thika town, Kenya. *European Journal of Management Sciences and Economics*, 1(3), 128-136.

- Osunde C (2017) Family Businesses and Its Impact on the Economy. *Journal of Business and Financial Affairs*, 6(1) 251. doi: 10.4172/2167-0234.1000251
- Owens, A. (2002). Inheritance and the life-cycle of family firms in the early industrial revolution. *Business History*, 44(1), 21-46.
- Oyelaran-Oyeyinka, B. (2017). *Learning to compete in African industry: Institutions and technology in development*. Farnham: Ashgate Publishing.
- Oyelaran-Oyeyinka, B., & McCormick, D. (2007). *Industrial clusters and innovation systems in Africa*. New York: United Nations University Press.
- Packalen, K. A. (2007). Complementing capital: The role of status, demographic features, and social capital in founding teams' abilities to obtain resources. *Entrepreneurship Theory and Practice*, 31(6), 873-891.
- Patton, M.Q. (1990). *Qualitative Evaluation and Research Methods*, 2nd Ed., Newbury Park CA: Sage.
- Pearce, J. A., Fritz, D. A., & Davis, P. S. (2010). Entrepreneurial orientation and the performance of religious congregations as predicted by rational choice theory. *Entrepreneurship Theory and Practice*, 34(1), 219-248.
- Pearson, A., & Lumpkin, G. (2011) Measurement in Family Business Research: How Do We Measure Up? *Family Business Review*, 24(4), 287-291.
- Pearson, A., Carr, J., & Shaw, J. (2008) Toward a Theory of Familiness: A Social Capital Perspective. *Entrepreneurship Theory and Practice*, 32(6), 949-969.
- Peng, M. W. (2001). The resource-based view and international business. *Journal of Management*, 27(6), 803-829.
- Peng, M. W., & Luo, Y. (2000). Managerial ties and firm performance in a transition economy: The nature of a micro-macro link. *Academy of Management Journal*, 43(3), 486-501.
- Pérez Rodríguez, M. J., & Basco, R. (2011). The cognitive legitimacy of the family business field. *Family Business Review*, 24(4), 322-342.
- Pérez-González, F. (2006). Inherited control and firm performance. *American Economic Review*, 96(5), 1559-1588.
- Pett, M. A., Lackey, N. R., & Sullivan, J. J. (2003). *Making sense of factor analysis: The use of factor analysis for instrument development in health care research*. California: Sage.
- Phillips, D. C. and Burbules, N. C. (2000). *Postpositivism and Educational Research*, New York: Rowman and Littlefield Publishing, Inc.

- Pittino, D., and Visintin, F. (2011). The propensity toward inter-organizational cooperation in small- and medium-sized family businesses. *Journal of Family Business Strategy*, 2(2), 57-68.
- Porter, M. E. (1998). Cluster and the new economics of competition. *Harvard Business Review* 76, 77-90
- Podsakoff P.M., MacKenzie S.B., Podsakoff N.P., and Lee J.Y. (2003). The mismeasure of man (agement) and its implications for leadership research. *Leadership Quarterly*, 14(6), 615–56.
- Polkinghorne, D. (2004). *Practice and the Human Sciences: The Case for a Judgement Based Practice of Care*. Albany, NY: SUNY.
- Porter, M. E. (2000). Location, competition, and economic development: Local clusters in a global economy. *Economic Development Quarterly*, 14(1), 15-34.
- Porter, M., & Cluster, E. (1998). The new Economics of Competition. *Harvard Business Review*, 76(6), 77-90.
- Portes, A. (1998). Social capital: Its origins and applications in modern sociology. *Annual Review of Sociology*, 24(1), 1-24.
- Powell, W. W., & Smith-Doerr, L. (1994). *Networks and Economic Life: The Handbook of Economic Sociology*. Princeton University Press, Princeton, NJ, 368–402.
- Poza, E. (2007). *Family Business* (2nd ed.). Mason, OH: Thomson Southwestern
- PricewaterHouse Coopers, (2014) Navigating the Owner’s agenda: Kenya Private Company Survey
- Putnam, R. D. (1993). The prosperous community. *The American Prospect*, 4(13), 35-42.
- Randerson, K., Dossena, G., & Fayolle, A. (2016). The futures of family business: family entrepreneurship, *Futures*, (75), 36–43.
- Randerson, K., Bettinelli, C., Fayolle, A., & Anderson, A. (2015). Family entrepreneurship as a field of research: Exploring its contours and contents. *Journal of Family Business Strategy*, 6(3), 143-154.
- Randerson, K. (2012). *Orientation entrepreneuriale: racines et bourgeons* (Doctoral dissertation, Université de Grenoble).
- Randøy, T., & Goel, S. (2003). Ownership structure, founder leadership, and performance in Norwegian SMEs: implications for financing entrepreneurial opportunities. *Journal of Business Venturing*, 18(5), 619-637.
- Rauch, A., Wiklund, J., Lumpkin, G., & Frese, M. (2009). Entrepreneurial Orientation and Business Performance: An Assessment of Past Research and Suggestions for the Future. *Entrepreneurship Theory and Practice*, 33(3), 761-787.

- Razali, N. M., & Wah, Y. B. (2011). Power comparisons of shapiro-wilk, kolmogorov-smirnov, lilliefors and anderson-darling tests. *Journal of Statistical Modeling and Analytics*, 2(1), 21-33.
- Reagans, R., Zuckerman, E., & McEvily, B. (2004). How to make the team: Social networks vs. demography as criteria for designing effective teams. *Administrative Science Quarterly*, 49(1), 101-133.
- Reay, T., Jaskiewicz, P., & Hinings, C. B. (2015). How Family, Business, and Community Logics Shape Family Firm Behavior and “Rules of the Game” in an Organizational Field. *Family Business Review*, 28(4), 292-311.
- Republic of Kenya (2007) Vision 2030, available from https://theredddesk.org/sites/default/files/vision_2030_brochure_july_2007.pdf, accessed on 4th September 2015
- Revilla, A. J., Pérez-Luño, A., & Nieto, M. J. (2016). Does family involvement in management reduce the risk of business failure? The moderating role of entrepreneurial orientation. *Family Business Review*, 29(4), 365-379.
- Reynolds, C. R., & Harding, R. E. (1983). Outcome in two large sample studies of factorial similarity under six methods of comparison. *Educational and Psychological Measurement*, 43, 723-728.
- Reynolds, P., Storey, D. J., & Westhead, P. (1994). Cross-national comparisons of the variation in new firm formation rates. *Regional Studies*, 28(4), 443-456.
- Rindfuss, R. R., Choe, M. K., Tsuya, N. O., Bumpass, L. L., & Tamaki, E. (2015). Do low survey response rates bias results? Evidence from Japan. *Demographic Research*, 32, 797-828.
- Robinson, J. P., Shaver, P. R., & Wrightman, L. S. (1991). *Criteria for scale selection and evaluation*. In J. P. Robinson, P. R. Shaver, & L. S. Wrightman (Eds.), *Measures of personality and socialpsychological attitudes* (pp. 1-16). New York: Academic Press.
- Rocha, H. O. (2004). Entrepreneurship and development: The role of clusters. *Small Business Economics*, 23(5), 363-400.
- Rocha, H. O., & Sternberg, R. (2005). Entrepreneurship: The role of clusters theoretical perspectives and empirical evidence from Germany. *Small Business Economics*, 24(3), 267-292.
- Roessl, D. (2005). Family businesses and interfirm cooperation. *Family Business Review*, 18(3), 203-214.

- Rogoff, E. G., & Heck, R. K. Z. (2003). Evolving research in entrepreneurship and family business: Recognizing family as the oxygen that feeds the fire of entrepreneurship. *Journal of business venturing*, 18(5), 559-566.
- Rosa, P., Howorth, C., & Discua Cruz, A. (2014). Habitual and portfolio entrepreneurship and the family in business. *The Sage Handbook of Family Business*, 364-382, London, England: Sage.
- Rosenfeld, S. A. (2002). *Creating Smart Systems: A guide to cluster strategies in less favoured regions*. Carrboro, North Carolina: Regional Technology Strategies
- Rossmann, G. B., & Wilson, B. L. (1985). Numbers and words: Combining quantitative and qualitative methods in a single large-scale evaluation study. *Evaluation review*, 9(5), 627-643.
- Rowley, T., Behrens, D., & Krackhardt, D. (2000). Redundant governance structures: An analysis of structural and relational embeddedness in the steel and semiconductor industries. *Strategic Management Journal*, 21(3), 369-386.
- Ruef, M., Aldrich, H. E., & Carter, N. M. (2003). The structure of founding teams: Homophily, strong ties, and isolation among US entrepreneurs. *American Sociological Review*, 68(2), 195-222.
- Russell Merz, G., & Sauber, M. H. (1995). Profiles of managerial activities in small firms. *Strategic Management Journal*, 16(7), 551-564.
- Rutherford, M., Kuratko, D., & Holt, D. (2008). Examining the Link between “Familiness” and Performance: Can the F-PEC Untangle the Family Business Theory Jungle? *Entrepreneurship Theory and Practice*, 36(6), 1089-1109.
- Salmon, U. (2017). *An exploration of familiness through a Bourdieusian mixed methods study of innovation in SME manufacturing firms in the United Kingdom* (Doctoral dissertation, University of Salford).
- Sanchez-Famoso, V., Akhter, N., Iturralde, T., Chirico, F., & Maseda, A. (2015). Is non-family social capital also (or especially) important for family firm performance? *Human Relations*, 68(11), 1713-1743.
- Santiago, A.L. (2000). Succession experiences in Philippine family businesses. In Van Eeden, S.M. & Venter, E. 2007. *Team related factors as antecedents to successful Sibling Partnerships – A conceptual model*. Paper presented at the 7th Annual International Family Enterprise Research Academy Conference (IFERA), European Business School, Oestrich-Winkel, Germany, 20-23 June.

- Saunders, M. L., & Lewis, P. (2009). P. & Thornhill, A. (2009). *Research Methods for Business Students, 4th edition*. Essex, Pearson Education Limited.
- Saunders, M., Lewis, P., and Thornhill, A. (2012) *Research Methods for Business Students*, 6th edition, Essex, Pearson Education Limited
- Schendel, D., & Hitt, M. A. (2007). Introduction to volume 1. *Strategic Entrepreneurship Journal*, 1(1-2), 1-6.
- Schickinger, A., Leitterstorf, M. P., & Kammerlander, N. (2018). Private equity and family firms: A systematic review and categorization of the field. *Journal of Family Business Strategy*, 9(4), 268-292.
- Scholderer, J., Brunsø, K., Bredahl, L., & Grunert, K. G. (2004). Cross-cultural validity of the food-related lifestyles instrument (FRL) within Western Europe. *Appetite*, 42(2), 197-211.
- Schreiber, J. B., Nora, A., Stage, F. K., Barlow, E. A., & King, J. (2006). Reporting structural equation modeling and confirmatory factor analysis results: A review. *The Journal of Educational Research*, 99(6), 323-338.
- Schumpeter, J. A. (1934). Change and the Entrepreneur. *Essays of JA Schumpeter*.
- Schumpeter, J. A. (1934). *The theory of economic development: An inquiry into profits, capital, credit, interest, and the business cycle* (Vol. 55). New Jersey: Transaction publishers, 1, 244.
- Schwab, K and Sala-i-Martin X (2018) *The Global Competitiveness Report (2017-2018)*, accessed from <http://www3.weforum.org/docs/GCR2017-2018/05FullReport/TheGlobalCompetitivenessReport2017%E2%80%932018.pdf> ,10th January, 2019.
- Sciascia, S., & Mazzola, P. (2008). Family involvement in ownership and management: Exploring nonlinear effects on performance. *Family Business Review*, 21(4), 331-345.
- Shane, S., & Venkataraman, S. (2000). The promise of entrepreneurship as a field of research. *Academy of Management Review*, 25(1), 217-226.
- Shanker, M. C., & Astrachan, J. H. (1996). Myths and realities: Family businesses' contribution to the US economy—A framework for assessing family business statistics. *Family Business Review*, 9(2), 107-123.
- Shapiro, S. S., & Wilk, M. B. (1965). An analysis of variance test for normality (complete samples). *Biometrika*, 52(3/4), 591-611.
- Sharma, P. (2002). Stakeholder mapping technique: Toward the development of a family firm typology. Paper presented at the Academy of Management meetings. Denver, CO.

- Sharma, P. (2004). An overview of the field of family business studies: Current status and directions for the future. *Family Business Review*, 17, (1), 1–36.
- Sharma, P. (2008). Commentary: Familiness: Capital stocks and flows between family and business. *Entrepreneurship Theory and Practice*, 32(6), 971-977.
- Sharma, P., & Carney, M. (2012). Value creation and performance in private family firms: Measurement and methodological issues, *Family Business Review*, 25(3), 233–242.
- Sharma, P., Chrisman, J. J., & Chua, J. H. (1997). Strategic management of the family business: Past research and future challenges. *Family Business Review*, 10 (1), 1-35.
- Sharma, P., Chrisman, J. J., & Gersick, K. E. (2012). 25 years of family business review: reflections on the past and perspectives for the future, *Family Business Review*, 25, 5-15.
- Sharma, P., Chrisman, J. J., Pablo, A. L., & Chua, J. H. (2001). Determinants of initial satisfaction with the succession process in family firms: A conceptual model. *Entrepreneurship Theory and Practice*, 25(3), 17-36.
- Shaw, J. D., Duffy, M. K., Johnson, J. L., & Lockhart, D. E. (2005). Turnover, social capital losses, and performance. *Academy of Management Journal*, 48(4), 594-606.
- Sheehan, K. B., & Hoy, M. G. (1999). Using e-mail to survey Internet users in the United States: Methodology and assessment. *Journal of Computer-Mediated Communication*, 4(3), Available: <http://www.ascusc.org/jcmc/vol4/issue3/sheehan.html>.
- Short, J. C., Moss, T. W., & Lumpkin, G. T. (2009). Research in social entrepreneurship: Past contributions and future opportunities. *Strategic Entrepreneurship Journal*, 3(2), 161-194.
- Short, J. C., Payne, G. T., Brigham, K. H., Lumpkin, G. T., & Broberg, J. C. (2009). Family firms and entrepreneurial orientation in publicly traded firms: A comparative analysis of the S&P 500. *Family Business Review*, 22(1), 9-24.
- Shrivastava, P. and Grant, J.H., (1985). Empirically derived models of strategic decision-making processes. *Strategic Management Journal*, 6(2), pp.97-113.
- Sills, S. J., & Song, C. (2002). Innovations in survey research: An application of web-based surveys. *Social Science Computer Review*, 20(1), 22-30.
- Simões Vieira, F.E. (2014). The effect on the performance of listed family and non-family firms. *Managerial Finance*, 40(3), 234-253.
- Simon, H. (1996) *Hidden Champions: Lessons from 500 of the Worlds Best Unknown Companies*. Harvard Business School Press. Boston, MA.
- Simon, H. A. (1996). The sciences of the artificial (Vol. 136). *MIT press, Cambridge* Steyaert C, Katz J (2004) *Reclaiming the space of entrepreneurship in society: geographical, discursive and*

- social dimensions. Entrepreneurship and Regional Development, 16(3), 179-196* Vaghely.
- Singapurwoko, A. (2013). Indonesian family business vs. non-family business enterprises: Which has better performance. *International Journal of Business and Commerce, 2(5), 35-43.*
- Sirmon, D. G., & Hitt, M. A. (2003). Managing resources: Linking unique resources, management, and wealth creation in family firms. *Entrepreneurship Theory and Practice, 27(4), 339-358.*
- Sivo, S. A., Saunders, C., Chang, Q., & Jiang, J. J. (2006). How low should you go? Low response rates and the validity of inference in IS questionnaire research. *Journal of the Association for Information Systems, 7(6), 351-414.*
- Skoneczna, M., Trzmielak, D. M., & Zalewska, A. (2018). Innovation in Family Businesses-the Financing Sources of Development. *Przedsiębiorczość i Zarządzanie, 19(4, cz. 3 Innowacyjność w polityce regionalnej, przedsiębiorstwie iw procesach transferu wiedzy), 183-194.*
- Slife, B. D. and Williams, R. N (1995). *What's behind the research? Discovering hidden assumptions in the behavioural science.* Thousand Oaks CA: Sage.
- Smith, C. B. (1997) Casting the net: Surveying an Internet population. *Journal of Computer Mediated Communication, 3(1).. Available: <http://onlinelibrary.wiley.com/doi/10.1111/j.1083-6101.1997.tb00064.x/full> (Accessed: 15 May, 2015.*
- Smith, M. (2008). Differences between family and nonfamily SMEs, a comparative study of Australia and Belgium. *Journal of Management & Organization, 14(1), 40–58.*
- Smyrnios, K., & Romano, C. (1994). *The Price Waterhouse / Commonwealth Bank family business survey 1994.* Department of Accounting, Monash University, Sydney.
- Snook, S. C., & Gorsuch, R. L. (1989). Component analysis versus common factor analysis: A Monte Carlo study. *Psychological Bulletin, 106(1), 148.*
- Stafford, K., Duncan, K. A., Dane, S., & Winter, M. (1999). A research model of sustainable family businesses. *Family Business Review, 12(3), 197-208.*
- Stam, W. (2008). *Does Networking Work? A Study of Social Capital and Performance among New Ventures in the Dutch Open Source Software Industry.* Amsterdam: FSW Ipskamp. PhD Thesis, VU Amsterdam
- Starkey, K., & Barnatt, C. (1997). Flexible Specialization and the Reconfiguration of Television Production in the UK. *Technology Analysis & Strategic Management, 9(3), 271-286.*
- Statistics Canada (2010) *Survey Methods and Practices.* Available: <http://www.statcan.gc.ca/pub/12-587-x/12-587-x2003001-eng.pdf> (Accessed: 15 August 2015.

- Steinmetz, H., Davidov, E., & Schmidt, P. (2011). Three approaches to estimate latent interaction effects: Intention and perceived behavioral control in the theory of planned Behaviour, *Methodology and Innovation*. Online 6(1): 95-110.
- Stimson, R. J., Stough, R. R., and Roberts, B. H. (2006). *Regional Economic Development: Analysis and Planning Strategy*. Springer Science and Business Media.
- Storper, M. (1997). *The Regional World: Territorial Development in a Global Economy*. New York and London: Guilford Press.
- Stough, R., Welter, F., Block, J., Wennberg, K., & Basco, R. (2015). Family business and regional science: “Bridging the gap”. *Journal of Family Business Strategy*, 6(4), 208-218.
- Tagiuri, R., & Davis, J. (1996). Bivalent attributes of the family firm. *Family Business Review*, 9(2), 199-208.
- Tagiuri, R., & Davis, J. A. (1992). On the goals of successful family companies. *Family Business Review*, 5(1), 43-62.
- Tallman, S., Jenkins, M., Henry, N., and Pinch, S. (2004). “Knowledge, clusters, and competitive advantage”. *Academy Management Review*. 29 (2), 258-271.
- Tanaka, J. S. (1993). *Multifaceted Conceptions of Fit in Structural Equation Models*. In K. A. Bollen & J. S. Long (Eds.), *Testing structural equation models* (pp. 10-39). Newbury Park, CA: Sage Publications, Inc.
- Teece, D., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal*, 18(7), 509-533.
- Thompson, B., & Daniel, L. G. (1996). Factor analytic evidence for the construct validity of scores: A historical overview and some guidelines, *Educational and Psychological Measurement*, 56, 197-208.
- Thurik, R., Wennekers, S., and Uhlaner, L.M. (2002) Entrepreneurship and Economic Performance: a Macro Perspective, *International Journal of Entrepreneurship Education* 1(2): 157-179.
- Tokarczyk, J., Hansen, E., Green, M., & Down, J. (2007). A Resource-Based View and Market Orientation Theory Examination of the Role of "Familianness" in Family Business Success. *Family Business Review*, 20(1), 17-31.
- Tranfield, D., Denyer, D., & Smart, P. (2003). Towards a methodology for developing evidence-informed management knowledge by means of systematic review. *British Journal of Management*, 14(3), 207-222.
- Tsai, W., & Ghoshal, S. (1998). Social capital and value creation: The role of intrafirm networks. *Academy of Management Journal*, 41(4), 464-476.

- Ucbasaran, D., Lockett, A., Wright, M., & Westhead, P. (2003). Entrepreneurial Founder Teams: Factors Associated with Member Entry and Exit. *Entrepreneurship Theory and Practice*, 28(20), 107-128.
- Ucbasaran, D., Westhead, P., & Wright, M. (2001). The focus of entrepreneurial research: contextual and process issues. *Entrepreneurship Theory and Practice*, 25(4), 57-80.
- Uhlaner, L., Kellermanns, F., Eddleston, K., & Hoy, F. (2010). The entrepreneuring family: A new paradigm for family business research. *Small Business Economics*, 1-11.
- Upton, N., Teal, E. J., & Felan, J. T. (2001). Strategic and business planning practices of fast growth family firms. *Journal of Small Business Management*, 39(1), 60-72.
- Urban, B. (2012), “The effect of pro-entrepreneurship architecture on organizational outcomes”, *Journal of Business Economics and Management*, 13(3), 518-545.
- Van Stel, A., Carree, M., & Thurik, R. (2005). The effect of entrepreneurial activity on national economic growth. *Small Business Economics*, 24(3), 311-321.
- Van Wyk, R. (2012). Constrictive vs. distinctive familiness and the culturing of familiness capital (FamCap). *African Journal of Business Management*, 6(36), 9892-9900.
- Vancouver, J. B., & Carlson, B. W. (2015). All things in moderation, including tests of mediation (at least some of the time). *Organizational Research Methods*, 18(1), 70-91.
- Valliere, D., & Peterson, R. (2009). Entrepreneurship and economic growth: Evidence from emerging and developed countries. *Entrepreneurship & Regional Development*, 21(5-6), 459-480.
- Venter, E. (2003). *The succession process in small and medium-sized family businesses in South Africa*. Unpublished doctoral thesis, University of Port Elizabeth, Port Elizabeth.
- Vershinina, N., Woldeesenbet Beta, K., & Murithi, W. (2018). How does national culture enable or constrain entrepreneurship? Exploring the role of Harambee in Kenya. *Journal of Small Business and Enterprise Development*, 25(4), 687-704.
- Vesper, K. H. (1984). *Three faces of corporate entrepreneurship: A pilot study*. University of Washington. Graduate School of Business.
- Villalonga, B., & Amit, R. (2006). How do family ownership, control and management affect firm value? *Journal of Financial Economics*, 80(2), 385-417.
- Villena, V. H., Revilla, E., & Choi, T. Y. (2011). The dark side of buyer–supplier relationships: A social capital perspective. *Journal of Operations Management*, 29(6), 561-576.

- Voss, Z., Voss, G., and Moorman, C. (2005) 'An Empirical Examination of the Complex Relationships between Entrepreneurial Orientation and Stakeholder Support'. *European Journal of Marketing*, 39(9/10): 1132-1150.
- Vought, K. L., Baker, L. T., & Smith, G. D. (2008). Practitioner commentary: moving from theory to practice in family business research. *Entrepreneurship Theory and Practice*, 32(6), 1111-1121.
- Wang, S., & He, Y. (2008). Compensating none dedicated cross-functional teams. *Organization Science*, 19(5), 753-765.
- Ward, J. L. (1988). The special role of strategic planning for family businesses. *Family Business Review*, 1(2), 105–117.
- Ward, J. L. 1987. *Keeping the Family Business Healthy: How to Plan for Continuing Growth, Profitability, and Family Leadership*. San Francisco: Jossey-Bass.
- Waweru, N. (2014). Determinants of quality corporate governance in Sub-Saharan Africa: evidence from Kenya and South Africa. *Managerial Auditing Journal*, 29(5), 455-485.
- Webb, J. W., Ketchen, D. J., & Ireland, R. D. (2010). Strategic entrepreneurship within family-controlled firms: Opportunities and challenges. *Journal of Family Business Strategy*, 1(2), 67-77.
- Welter, F., & Smallbone, D. (2011). Institutional perspectives on entrepreneurial behavior in challenging environments. *Journal of Small Business Management*, 49(1), 107-125.
- Wennberg, K., & Lindqvist, G. (2010). The effect of clusters on the survival and performance of new firms. *Small Business Economics*, 34(3), 221-241.
- Westhead, P. and Cowling, M. (1998) Family Firm Research: The Need for a Methodological Rethink. *Entrepreneurship Theory and Practice*, Fall, pp31-56.
- Westhead, P., & Cowling, M. (1997). Performance contrasts between family and non-family unquoted companies in the UK. *International Journal of Entrepreneurial Behavior & Research*, 3(1), 30-52.
- Westhead, P., & Howorth, C. (2007). 'Types' of private family firms: an exploratory conceptual and empirical analysis. *Entrepreneurship and Regional Development*, 19(5), 405-431.
- Wiklund, J., & Shepherd, D. (2005). Entrepreneurial orientation and small business performance: a configurational approach. *Journal of Business Venturing*, 20(1), 71-91.
- Williams, B., Onsmann, A., & Brown, T. (2010). Exploratory factor analysis: A five-step guide for novices. *Australasian Journal of Paramedicine*, 8(3), 1-13.

- Witmer, D. F., Colman, R. W., & Katzman, S. L. (1999). *From Paper-andPencil to Screen-and-Keyboard* (pp. 145-162). Thousand Oaks, CA: Sage.
- Woolcock, M., & Narayan, D. (2000). Social capital: Implications for development theory, research, and policy. *The World Bank Research Observer*, 15(2), 225-249.
- World Bank (2013) *Kenya Economic Update: Time to Shift, Accelerating growth and poverty reduction in the new Kenya*, accessed from <http://www.worldbank.org/content/dam/Worldbank/document/Africa/Kenya/kenya-economic-update-june-2013.pdf>, 12th December, 2018.
- World Bank (2018) *Doing Business 2018; Reforming to create jobs*, 15th ed., Accessed from <http://www.doingbusiness.org/content/dam/doingBusiness/media/Annual-Reports/English/DB2018-Full-Report.pdf>, 14th January 2019
- Wright, M., Filatotchev, I., Hoskisson, R. E. and Peng, M. W. (2005). ‘Strategy research in emerging economies: challenging the conventional wisdom’. *Journal of Management Studies*, 42(1), 1–33
- Yin, R. K. (2003). *Case Study Research: Design and Methods*. 3rd ed. London: SAGE Publications.
- Yiu, D. W., & Lau, C. M. (2008). Corporate entrepreneurship as resource capital configuration in emerging market firms. *Entrepreneurship Theory and Practice*, 32(1), 37-57.
- Zahra, S. A. (1991). Predictors and financial outcomes of corporate entrepreneurship: An exploratory study. *Journal of Business Venturing*, 6(4), 259-285.
- Zahra, S. A. (1993). Environment, corporate entrepreneurship, and financial performance: A taxonomic approach. *Journal of Business Venturing*, 8(4), 319-340.
- Zahra, S. A. (2005). Entrepreneurial risk taking in family firms. *Family BusinessReview*, 18(1), 23-40.
- Zahra, S. A. (2008). The virtuous cycle of discovery and creation of entrepreneurial opportunities. *Strategic Entrepreneurship Journal*, 2(3), 243-257.
- Zahra, S. A., & Garvis, D. M. (2000). International corporate entrepreneurship and firm performance: The moderating effect of international environmental hostility. *Journal of Business Venturing*, 15(5-6), 469-492.
- Zahra, S. A., & Neubaum, D. O. (1998). Environmental adversity and the entrepreneurial activities of new ventures. *Journal of Developmental Entrepreneurship*, 3(2), 123-140.
- Zahra, S. A., Hayton, J. C., & Salvato, C. (2004). Entrepreneurship in family vs. non–family firms: a resource–based analysis of the effect of organizational culture. *Entrepreneurship Theory and Practice*, 28(4), 363-381.

- Zahra, S. A., Jennings, D. F., & Kuratko, D. F. (1999). The antecedents and consequences of firm-level entrepreneurship: The state of the field. *Entrepreneurship: Theory and Practice*, 24(2), 45-45.
- Zahra, S. A., Rawhouser, H. N., Bhawe, N., Neubaum, D. O., & Hayton, J. C. (2008). Globalization of social entrepreneurship opportunities. *Strategic Entrepreneurship Journal*, 2(2), 117-131.
- Zahra, S., Ireland, R., Gutierrez, I., & Hitt, M. (2000). Privatization and Entrepreneurial Transformation: Emerging Issues and a Future Research Agenda. *The Academy of Management Review*, 25(3), 509-509.
- Zellweger, T. (2007). Time horizon, costs of equity capital, and generic investment strategies of firms. *Family Business Review*, 20(1), 1-15.
- Zellweger, T. M., & Nason, R. S. (2008). A stakeholder perspective on family firm performance. *Family Business Review*, 21(3), 203-216.
- Zellweger, T., & Astrachan, J. (2008). On the Emotional Value of Owning a Firm. *Family Business Review*, 21(4), 347-363.
- Zellweger, T., & Sieger, P. (2010). Entrepreneurial orientation in long-lived family firms. *Small Bus Econ Small Business Economics*, 38(1), 67-84.
- Zellweger, T. M., Eddleston, K. A., & Kellermanns, F. W. (2010). Exploring the concept of familiness: Introducing family firm identity. *Journal of family business strategy*, 1(1), 54-63.
- Zellweger, T., Muhlebach, C., and Sieger, P. (2010). *How much and what kind of entrepreneurial orientation is needed for family business continuity?* In M. Nordqvist and T. Zellweger (Eds.), *Transgenerational entrepreneurship: Exploring growth and performance in family firms across generations* (pp. 70–97). London: Edward Elgar.
- Zellweger, T., Nason, R., & Nordqvist, M. (2011). From Longevity of Firms to Transgenerational Entrepreneurship of Families: Introducing Family Entrepreneurial Orientation. *Family Business Review*, 25(2), 136-155.
- Zellweger, T., Sieger, P., & Mühlebach, C. (2010). How much and what kind of entrepreneurial orientation is needed for family business continuity? In M. Nordqvist & T. Zellweger (Eds.), *Transgenerational Entrepreneurship: Exploring Growth and Performance in Family Firms Across Generations*, Edward Elgar, London, 195-220.
- Zellweger, T. M., Kellermanns, F. W., Chrisman, J. J., & Chua, J. H. (2012). Family control and family firm valuation by family CEOs: The importance of intentions for transgenerational control. *Organization Science*, 23(3), 851-868.

- Zellweger, T. M., Nason, R. S., & Nordqvist, M. (2012). From longevity of firms to transgenerational entrepreneurship of families introducing family entrepreneurial orientation. *Family Business Review*, 25(2), 136-155.
- Zeng D., Z (2008). Knowledge, technology, and cluster-based growth in Africa: findings from 11 case studies of enterprise clusters in Africa in Zeng DZ ed. *Knowledge, Technology, and Cluster-Based Growth in Africa*. Washington: The World Bank. pp. 1-13
- Zikmund, W. (2000) *Business Research Methods* (6th Ed.). Fort Worth: The Dryden Press.
- Zoogah, D. B. (Ed.). (2014). *Advancing research methodology in the African context: Techniques, methods, and designs*. Bingley, UK: Emerald Group Publishing.
- Zoogah, D. B., & Nkomo, S. M. (2013). Management research in Africa: Past, present and future. In T. R. Lituchy, B. J. Punnett, & B. B. Puplampu (Eds.), *Management in Africa: Macro and Micro Perspectives* (pp. 9-31). New York, NY: Routledge.
- Zoogah, D. B., Peng, M. W., & Woldu, H. (2015). Institutions, resources, and organizational effectiveness in Africa. *Academy of Management Perspectives*, 29(1), 7-31.
- Zulueta, F. M., & Costales Jr, N. E. B. (2004) *Methods of research, thesis writing and applied statistics*. Manila: National Book Store.

11: APPENDICES

APPENDIX 1(A): SYSTEMATIC REVIEW.

Appendix 1 (a) Identification of Key Words and search streams

Entrepreneurship	Family Business	Firm Performance	Regional development
Entrepreneurship, enterprise, innovative, creative, orientation/intensity Small and medium enterprises (SMEs)	Family-owned business, family firm, family enterprise, family-owned firm, private business/enterprise, privately-owned business/enterprise, loosely held firm/business	Outcome, Results, Harmony, financial, economic, profitability, productivity	Growth, Improvement, economic development, social development, national development, clusters
“Entrepreneurship OR “Enterprise” AND “Family Firm” OR “Family business” AND “SMEs”	“Family firm” OR “Family Business” AND “Objectives” OR “Priorities” OR “Goals”	“Family firm” OR “Family Business” AND “Firm Performance” OR “Outcome”	“Regional Development” AND “Entrepreneurship OR “Enterprise” AND “Family Firm” OR “Family business” AND
“Innovation” OR “Creativity” AND “Family firm” AND “Family Business”	“Privately-owned business” OR “Closely held firm” AND “Objectives” OR “Priorities” OR “Goals”	“Family firm” OR “Family Business” AND “Financial” OR “Economic” AND “non-economic” AND “Harmony”	“Family Firm” OR “Family business” AND “Regional Development” OR “Economic” OR “Social” AND “Clusters”
“Entrepreneurial Orientation” OR “Entrepreneurial Intensity” AND “Family Firm” OR “Family Business”	“Family firm” OR “Family Business” AND “Economic goals” OR “non-economic goals”	“Family firm” OR “Family Business” AND “Productivity” AND “Harmony”	“Family Firm” OR “Family business” AND “National Development” OR “Economic” OR “Social” AND “Clusters”

Appendix 1 (b): Inclusion and Exclusion Criteria

The decision to either include or exclude an article will be based on several aspects such as the context, methodology or type of source.

Inclusion criteria	Reason for Inclusion
Publications that are relevant and peer reviewed	Expected to be of good quality and sound conceptual or empirical arguments
Studies conducted between 1988-2015	To ensure that the research is up-to-date I will focus on studies done during this period. However, any prior studies will be considered on their strength and contribution to the field.
Journal article should be empirical analysing primary data either quantitative or qualitative and major	
The research will widely consider articles from US, Canada, Europe, Africa and other relevant markets such as Africa.	As majority of research in the field is spread in different regions such as the US and Canada, the research will consider them but will be interested more in research conducted in a European and African context.
The research will consider resources from other disciplines especially economics, psychology, sociology and regional studies.	As the subject of study is multidisciplinary then this will be considered to increase level of understanding of different theories and methods of conducting the study.
Journal with higher level of rating (3-4) will be highly scrutinized	As it is assumed that these journal publishes quality research, they will be the main benchmark for the study. However, the researcher will try and reduce biasness of articles that are not from this category as they could inform the research.
In additional to searching for general journal articles this study will pay attention to area specific journals. Specific Journals are closely aligned to the area of study will be given greater attention.	It is assumed that these journals will contain a large number of subject specific research that will inform this research.

Exclusion Criteria	Reason for Exclusion
Some of the resources that will not be considered are book general journal reviews, lists of authors or books	This only gives general information that is not relevant to the objectives of the study unless it is quite specific to the area of study
Any resources that will be perceived to be out of context such as ethnic minority businesses or enterprise, ethnic entrepreneurship, entrepreneurship education,	They target quite specific group and others broad subjects that might be contribute to the study.

Appendix 1(c) Databases used and outcomes of the SLR Search

Identified Databases

The next step will be to identify the appropriate resources and databases for the research field. Based on the availability and accessibility at DMU the following were chosen

Subject specific data bases such as

- ABI/inform Global (from ProQuest)- subject specific database with a wide variety of relevant resources in my subject area
- Business Source Complete (Ebsco)-subject specific database with over 8,350 scholarly business journals and other sources
- Emerald-subject specific database that gives access to over 111 essential management journals

Web Bibliographical databases such as

- Web of science-offers a wide range of databases that cover the sciences and social sciences of peer-reviewed literature
- Scopus – contains a variety of abstracts and databases with an extensive overview of published materials across different fields
- Zetoc – a comprehensive research database that provides a variety of databases through the British library’s electronic table of content.

The next stage was to search the journal articles using the key search strings identified. The following data bases were searched based on their availability and accessibility to the researcher. This search was conducted using the search criteria set above.

i) ABI/Inform Global (ProQuest)

Search string	Date	Date range	No.of articles	No. of relevant articles
Entrepreneur* AND Family Business* OR Family Firm OR "Family-owned firms"	21/04/2015	1988-2015	58	34
"Family Business*" OR "Family Firm*" OR " Family-owned firm" AND "Economic Objectives" OR "Financial goals" OR "noneconomic objective*" or "nonfinancial goal*"	21/04/2015	1988-2015	104	65
Family Business OR Family Firm OR "Family-owned firm" AND "Region* cluster" OR "Association*"	21/04/2015	1988-2015	32	15
Total				114

ii) Business Source Complete (EBsco)

Search string	Date	Date range	No. of articles	No. of relevant articles
Entrepreneur* AND Family Business* OR Family Firm OR "Family-owned firms"	22/04/2015	1988-2015	69	32
"Family Business*" OR "Family Firm*" OR " Family-owned firm" AND "Economic Objectives" OR "Financial goals" OR "noneconomic objective*" or "nonfinancial goal*"	22/04/2015	1988-2015	50	23
Family Business OR Family Firm OR "Family-owned firm" AND "Region* cluster" OR "Association*"	22/04/2015	1988-2015	17	6
Total				61

iii) Emerald Full text

Search string	Date	Date range	No. of articles	No. of relevant articles
“Entrepreneur*” AND “Family Business*” OR “Family Firm” OR “Family-owned firms”	22/04/2015	1988-2015	139	48
"Family Business*" OR "Family Firm*" OR " Family-owned firm" AND “Economic Objectives” OR “Financial goals” OR “non-economic objective*” OR “non-financial goal*”	22/04/2015	1988-2015	261	50
Family Business OR Family Firm OR “Family-owned firm” AND “Region* cluster” OR “Association*”	22/04/2015	1988-2015	47	14
Total				112

iv) Web of Science

Search string	Date	Date range	No. of articles retrieved	No. of relevant articles
Entrepreneur* AND Family Business* OR Family Firm OR “Family-owned firms”	24/04/2015	1988-2015	699	148
"Family Business*" OR "Family Firm*" OR " Family-owned firm" AND “Economic Objectives” OR “Financial goals” OR “noneconomic objective*” or “nonfinancial goal*”	24/04/2015	1988-2015	125	67
Family Business OR Family Firm OR “Family-owned firm” AND “Region* cluster” OR “Association*”	24/04/2015	1988-2015	74	23
Total				268

v) Science direct

Search string	Date	Date range	No.of articles	No. of relevant articles
Entrepreneur* AND Family Business* OR Family Firm OR “Family-owned firms”	22/04/2015	1988-2015	639	118
"Family Business*" OR "Family Firm*" OR "Family-owned firm" AND “Economic Objectives” OR “Financial goals”	22/04/2015	1988-2015	368	77
"Family Business*" OR "Family Firm*" OR "Family-owned firm" AND “noneconomic objective*” or “nonfinancial goal*”				
Family Business OR Family Firm OR “Family-owned firm” AND “Region* cluster” OR “Association*”	22/04/2015	1988-2015	67	24
Total				219

vi) Final list of relevant articles

Journal	Number of relevant articles
ABI/Inform Global (ProQuest)	76
Business Source Complete (EBsco)	48
Emerald Full text	65
Web of Science	177
Science direct	128
Total	494

APPENDIX 2 (A): SUMMARY OF THE QUESTIONNAIRES ITEMS AND SOURCES

Constructs and Dimensions definitions / operationalization	Related Literatures and themes	Assumptions	Questionnaire Items and sources from related literature
<p>Entrepreneurial orientation Dimensions</p> <p>EO refers to the processes, practices and decision-making activities that lead to new entry (Lumpkin and Dess (1996, P. 136)</p>	<p>Reflects a firm's tendency toward product innovation, proactiveness, and risk-taking behaviours (e.g., Covin and Slevin, 1991; Wiklund and Shepherd, 2003, 2005).</p> <p>Dimensions: Innovation, Risk-taking, Proactiveness, competitive aggressiveness, and autonomy</p>	<p>Entrepreneurial orientations differ between family and nonfamily firms (Zellweger et al., 2012)</p>	<p>The EO Will be measured by adopting questions used Casillas and Moreno, (2010) that is based on similar items used in several prior studies (Covin and Slevin, 1993; Kellermanns and Eddleston, 2006; Lumpkin, 1998, Lumpkin and Dess, 2001; Lumpkin and Dess 1996; Miller, 1983; Miller, 1987; Shaker and Zahra, 1996; Wiklund and Shepherd, 2005; Zara, 1993)</p>
<p>Participative decision-making strategy</p> <p>” refers generally to strategic decision making through teamwork” (Eddleston and Kellermanns, 2007)</p>	<p>Heterogeneous knowledge and experiences on the part of participants (Foss et al., 2008)</p> <p>“Strategic decisions are made through consensus-seeking versus individualistic or autocratic processes by the formally responsible executive” (Covin et al., 2006: 59; Dess et al., 1997)</p> <p>Encourage family employees to participate in developing long-term goals and strategies (Upton et al., 2001)</p>	<p>“Entrepreneurship as a creative team act in which heterogeneous managerial mental models interact to create and arrange resources to produce a Collective output that is creatively superior to individual output.” Foss et al. (2008: 73)</p> <p>Participative strategy facilitates the bundling of such synergistic knowledge sets into new capabilities, allowing the family firm to innovate and grow (Chirico</p>	<p>The participative strategy process will be measured by five items used by Kellermanns and Eddleston, 2006) that was adapted from an information processing structure scale originally developed by Thomas and McDaniel (1990) and based on the work of Duncan (1973, 1974) to assess the level of participation in an organisation's strategy-making process. Also, this item has been used in several other studies (De Clercq, Dimov, and Thongpapanl, 2010; Kellermanns and Eddleston, 2006; Kellermanns et al. 2008; Miller (1993)</p>

	Encouraging individuals to voice their opinions mitigates conflict and enhances knowledge sharing Folger's (1977)	and Salvato, 2008; Sirmon and Hitt, 2003).	
<p>Bridging Social Capital From an organisational perspective, social capital reflects “the character of social relationships within the organisation, realised through members’ levels of collective goal orientation and shared trust” (Leana and Van Buren, 1999, p. 540)</p>	<p>“is in its internal structure-in the linkages among individuals or groups with the collectivity” (Alder and Kwon, 2002)</p> <p>the norms and networks that enable people to act collectively (Woolcock and Narayan, 2000, p 3)</p> <p>“emanating from strong, repeated social connections that results in norms of reciprocity yielding trust” (Gedajlovic et al., 2013)</p> <p>bridging social capital refers to external linkages between a collective focal actor and nonredundant resources that ultimately lead to positive outcomes (Burt, 1992; Gedajlovic et al., 2013)</p>	Bridging social capital always leads to positive outcomes (Gedajlovic et al., 2013)	the top-level social relations with external entities such as community and political leaders, government agencies and managers from other firms will be captured using Acquaah (2007)
<p>Firm Involvement /participation in industry clusters</p> <p>refers the to the level of firm’s engagement which generate and influence firm’s behaviours/activities that have an influence on the cluster environment that</p>	<p>Increase capacity for innovation and enhance competitiveness within the cluster as a result of their unique resources and capabilities (Cucculelli and Storai, 2015; Teece et al., 1999)</p> <p>Development of social capital and social network within space allowing sharing of knowledge and (Lambooy, 2010; Pearson et</p>	Family firms are a particular and unique type of actors as they have specific characteristics emerging from the interaction between family and business logic, thus this alters firm behaviours (the creations, development, and allocation of resources) (Stough et al.	The Involvement of firms within industry clusters will be measured by eight item likert scale that are developed and adapted from items identified by prior studies Rosenfeld (2002) and suggested by studies such as Basco (2013); Johannisson, et al. (2009), Naldi et al., 2013; Niu (2009), Nordqvist and Melin, 2010; Pittiono and Visitin, 2011; Tokarczyk, Hansen., Green and Down, 2007;

<p>emerge from the interaction with regional factors through regional proximity or within associations (Niu, 2009)</p> <p>“Industry cluster is a socially and geographically proximate group of interconnected companies associated institutions in a particular field, linked by commonalities and complementarities (Porters, 1998, cited in Niu, p. 446)</p>	<p>al., 2008; Sharma, 2008)</p> <p>Proximity- quality, sense or fact of being near or next in space, time or relationship (Torre and Wallet, 2014).</p> <p>NB: In order to evaluate an organisation’s performance outcome, Niu recommends that the term “industrial cluster involvement” is better suited. It is important to note that the actual focus of this approach is not on the whole “industry cluster” but the effect of individual firm’s outcome because of being involved with other firms within the cluster (2009)</p>	<p>2015).</p> <p>As a result of this, family firms involved in an industry cluster will have a direct or indirect influence on the cluster environment (i.e. the nature and types of social networks and capital) (Johannisson, et al. 2007; Naldi et al., 2013)</p> <p>Finally, the proportion of family firms within an industry cluster/ region (i.e. representativeness of family firms among all firms within a cluster or region) influence the regional wealth creation or destruction (Basco, 2015).</p>	<p>Arregle, Hitt, Sirmon and Very, 2007 Roessl, 2005; Gallo, Arino, manez, and Cappuyns, 2002</p>
<p>Firm Performance/growth</p> <p>The change in employee number, sales revenue, and return on assets (Liao, Harold and Pistrui, 2001)</p>	<p>firm performance as an increase in profitability (Lee, 2006), sales revenue Growth in sales (increasing in return on sales year on year) (Casillas and Moreno, 2010)</p> <p>Growth in employment (increase in number of employees’ year on year)</p> <p>Growth of net worth (Naldi et al., 2007;</p>	<p>Firm performance (and growth) will differ between family and nonfamily firms (Mazzi, 2011)</p>	<p>The study will measure growth by using six performance adopted from related questions that are used in prior studies (e. Kellermanns and Eddleston, 2006; Kellermanns et al. 2008)</p> <p>Though the performance measurements are subjective this is a necessary measure as the firms in the sample are closely held and the unwillingness to report objective data could not be expected (Love et al., 2002;</p>

	<p>Wiklund and Shepherd, 2003)</p> <p>Growth In profitability, growth in market share (Kellermanns and Eddleston, 2006; Kellermanns et al. 2008</p>		<p>Eddleston and Kellermanns, 2007)</p>
<p>Family Involvement</p> <p>Refers to the degree to which “family members are involved in the business through ownership, management, and participation of members, of different generations that gives them the ability and willingness to influence the strategic direction (e.g. adoption of goals that meet purely family needs) (Chrisman et al., 2010,p. 271)</p>	<p>Self-identification of the firm as either family or non-family firm (Zellweger et al 2012)</p> <p>The percentage of family ownership The number of family members who are managers in each firm, and he number of generations of family members Involved in the business (Chrisman, 2010; Kellermanns and Eddleston, 2006; Kellermanns et al. 2008; Zahra, 2005)</p> <p>Level of participation of each family member/employee in shaping the firm’s strategy (Eddleston and Kellermanns, 2007; Eddleston, Otondo, and Kellermanns, 2008a).</p>	<p>“the long-term nature of family firms’ ownership allows them to dedicate the resources required for innovation and risk taking, thereby fostering entrepreneurship” (Zahra et al., 2004: 363).</p>	<p>The study will utilise variables adapted from Chrisman, Chua, Pearson and Barnett, (2010), and Casillas and Moreno, (2010) to assess the components of family involvement among the firms in the sample that are frequently used by prior studies in the literature (Astrachan et al., 2002; Chua et al., 1999; Eddleston and Kellermanns, 2007; Eddleston, Otondo, and Kellermanns, 2008a; Kellermanns and Eddleston, 2006; Klein et al., 2005; Zellweger et al., 2012)</p>

<p>Regional Development</p> <p>“is the application of economic processes and resources available in the region result in the sustainable development of and desired economic outcomes for a region (Stimson, Stough and Roberts, 2006, p. 6)</p>	<p>Regional development is conceptualised in three ways as: economic growth or economic development or development (see Rocha, 2004, p.365, Table 1)</p> <p>Economic growth is defined as “the increase in the output of the economy, reflecting its capacity to produce goods and services” (Barro, 1991; Memili <i>et al.</i>, 2015 p771),</p> <p>Economic development is about enhancing the factors of productive capacity- such as land, labour, capital, and technology-of a national, state or local economy (U.S Department of Commerce, 2000 p.1).</p> <p>Economic growth is mainly captured based on the “variations in GDP” (Allen and Thomas, 2000)</p> <p>Economic development is mainly captured through either GDP or job creation (US Department, 2000) or the rise in the productivity of labour (Bernstein, 1983, cited in Allen and Thomas, 2000).</p>	<p>Family firms are unique economic actors that can influence regional factors and processes differently from nonfamily firms (Basco, 2015; Stough et al., 2015)</p>	<p>The study will measure the impact of family firms on regional development using three regional output dimensions that include GDP, job opportunities, and wealth creation (Basco 2015, Stough et al., 2015; Madden, 2007; Rocha, 2004; US Department, 2000)</p>
---	---	--	--

APPENDIX 2: RESEARCH QUESTIONNAIRE

The Role of Small and Medium Enterprises in Developing Economies

I am a doctoral research student in the Faculty of Business and Law, De Montfort University, United Kingdom. Currently, I’m undertaking a research on the “Role of SMEs on the economic development”. This self-administered questionnaire is designed to collect data in order to understand the impact that different stakeholders and firm participation within the regional environment has on the economic and social development. The data collected will be used only for the purposes of this research and will be treated with utmost anonymity and confidentiality. There is potential of the data being used in publications and thus your consent and cooperation in assisting is highly appreciated. Therefore, your sincerity and openness will go a long way in ensuring that this project is a success. Thank you for your anticipated participation.

If you have any questions or clarifications about this study please contact William Murithi, on email murithiwilliam@gmail.com or on phone. +254 715430384.

Instruction: Please mark or tick the appropriate box

SECTION 1: PROFILE OF RESPONDENTS

1	What is your position in the firm: CEO <input type="checkbox"/> Managing Director <input type="checkbox"/> General/operations Manager <input type="checkbox"/> Sales/Marketing Manager <input type="checkbox"/> Finance/Accounting Manager <input type="checkbox"/> HRM Manager <input type="checkbox"/>
2	Age (Years) 18-24 <input type="checkbox"/> 25-34 <input type="checkbox"/> 35-44 <input type="checkbox"/> 45-54 <input type="checkbox"/> 55-64 <input type="checkbox"/> 65+ <input type="checkbox"/>
3	Gender Male <input type="checkbox"/> Female <input type="checkbox"/>
4	Education Level Secondary <input type="checkbox"/> Diploma <input type="checkbox"/> Degree <input type="checkbox"/> Postgraduate <input type="checkbox"/>
5	Ethnicity Kenyan-Indigenous <input type="checkbox"/> Kenyan-Indian <input type="checkbox"/> Asian <input type="checkbox"/> White <input type="checkbox"/>
	Others Please Specify

SECTION 2: FIRM CHARACTERISTICS

- How long has the firm been operating for (since incorporation)
 Less than 5 years 5-9years 10-14years 15-19years
 20- 24 years Over 25 years

2. What is the type/nature of business ownership?

- Sole proprietorship Private Company
 Legal Partnership Publicly Traded Company Registered Trust

Other (please specify).....

If you describe /or have selected family business, please answer the following questions (if not skip to SECTION 3)

I. Are you a member of the owning family or extended family YES NO

II. How many family members are actively involved as senior managers and/or employees (Including you) in the business?
 Family Members Employees

III. How many shares does the family own in the business (tick appropriately)
 <20% 20-49% 50%-75% 75%- 100%

IV. Which generations of the family are involved in operating the business today? (Tick all appropriate boxes)

1st 2nd 3rd 4th 5th and More

V. Is the current CEO/managing director likely to retire in the next ten years?
 Yes No

VI. Who is likely to take up the CEO position in the next ten years? (Please tick where appropriate)
 Family Member: Nonfamily member:

PART 3: PARTICIPATIVE STRATEGY

How would you describe the decision-making process in the firm over the last three years?
(1-Strongly disagree, 2-Disagree, 3- Somewhat Disagree, 4-Neither Agree nor disagree, 5-Somewhat agree, 6-Agree, 7-Strongly Agree)

	SD	D	SD	N	SA	A	SA
Decision-making in our business is participative	1	2	3	4	5	6	7
The top decision makers in our firm interact with all employees on an informal basis	1	2	3	4	5	6	7
All employees in our firm participate in strategic decision making on a regular basis	1	2	3	4	5	6	7
Decision making in our firm is interactive	1	2	3	4	5	6	7
There is free and open exchange of ideas among employees about any strategic issues	1	2	3	4	5	6	7

ENTREPRENEURIAL ORIENTATION

Listed below are several issues found to be of concern to enterprises. Please, circle the number that most likely describes the position of your company on the following statements (1-Strongly Disagree, 2-Disagree, 3- Somewhat Disagree, 4-Neither Agree nor Disagree, 5-Somewhat agree, 6-Agree, 7-Strongly Agree)

Entrepreneurial Orientation Dimensions	SD	D	SD	N	SA	A	SA
Our firm strongly emphasizes on R&D, technological leadership and innovations	1	2	3	4	5	6	7
Our firm has introduced very many new lines of products/services (in the past five years)	1	2	3	4	5	6	7
The changes in the firm products or services lines have usually been quite dramatic/radical	1	2	3	4	5	6	7
Our firm prefers to design its own unique new processes and methods of production	1	2	3	4	5	6	7
Our Top Management Team (TMT) favours experimentation and original approaches to problem solving	1	2	3	4	5	6	7
Our TMT has a strong tendency for high-risk projects	1	2	3	4	5	6	7
Our TMT believes that owing to the nature of the environment; bold, wide-ranging acts are necessary to achieve the firms objectives	1	2	3	4	5	6	7
Our firm typically adopts a bold posture in order to maximise the probability of exploiting opportunities	1	2	3	4	5	6	7
Our TMT is quick to spend money on potential solutions if problems are holding us back	1	2	3	4	5	6	7
Our firm may avoid any contact with competitors, because it could be negative for the firm.	1	2	3	4	5	6	7
Our firm typically initiates actions which competitors then respond to	1	2	3	4	5	6	7
Our firm is very often the first business to introduce new products/services, administrative techniques, operating technologies, etc.	1	2	3	4	5	6	7
Our TMT has a strong tendency towards the firm being ahead of others in introducing novel ideas or products	1	2	3	4	5	6	7
Our firm typically adopts a very competitive 'undo-the-competitors' posture	1	2	3	4	5	6	7
Our firm is very aggressive and intensely competitive	1	2	3	4	5	6	7

PART 4: FIRM PARTICIPATION WITHIN THE INDUSTRY (Internal and External)

In the last three years, indicate the extent to which the Top Management Team (TMT) in the business developed and used personal and social networking relationships. In your rating take into consideration that **1 is to express that there is very little to 7 Very extensive involvement.**

	SD	D	SD	N	SA	A	SA
Our top level managers have actively been involved in establishing sustainable relationships with community leaders (such as county commissioners, chiefs, pastors, imams and their representatives)	1	2	3	4	5	6	7
Our top level managers have actively been involved in establishing sustainable relationship with political leaders (such as county officials, ministers, and politicians)	1	2	3	4	5	6	7
Our top level managers have actively been involved in establishing sustainable relationship with other government agencies and officials (such as KRA, central bank, NEMA, Investment boards).	1	2	3	4	5	6	7

In regard to the business location and region of operations, indicate to what extent you agree or disagree with the following statements (**1-Strongly Disagree, 2-Disagree, 3- Somewhat Disagree, 4-Neither Agree nor Disagree, 5-Somewhat agree, 6-Agree, 7-Strongly Agree**)

	SD	D	SD	N	SA	A	SA
Our firm participates in ensuring access to institutes of public or private research in areas related to our products or processes, expert individual researchers are available or accessible within the industry cluster.	1	2	3	4	5	6	7
Our firm is located near sources of primary and secondary supplies, materials, and services that minimise transaction costs and maximise interaction.	1	2	3	4	5	6	7
The top management team in our firm participate in free, open exchanges and knowledge transfer forums on a regular basis within the association and industry clusters	1	2	3	4	5	6	7
Our firm has frequently had formal cooperation among cluster members, for example, joint ventures, production, marketing, training or problem solving.	1	2	3	4	5	6	7
Our firm participates in activities among local business and civic associations in the region	1	2	3	4	5	6	7
Our firm encourages continual formation of new business ventures by workers and managers within the region	1	2	3	4	5	6	7
Generally our firm participates in planning for a shared vision for future within the region	1	2	3	4	5	6	7
Our firm participates in developing new and enhanced technologies and products that are conceived, developed and adopted or brought to market and the innovations are dispersed to other local firms within the region.	1	2	3	4	5	6	7

SECTION 6: OUTPUT: ORGANISATION PERFORMANCE

How would you rate your firms’ performance as compared to the industry average in the last three (3) years? (**1 well below average to 7 well above average**)

	WBA	SBL	BV	AV	AB	SAA	AA
Growth in profitability	1	2	3	4	5	6	7
Growth in Sales	1	2	3	4	5	6	7
Growth of net worth	1	2	3	4	5	6	7
Growth in Market share	1	2	3	4	5	6	7
Ability to fund growth from profitability	1	2	3	4	5	6	7
Growth in number of employees	1	2	3	4	5	6	7

SECTION 7: REGIONAL DEVELOPMENT

How would you rate your firm’s economic contribution to the economic growth of the region as compared to the industry the firm performance (**1-Very Marginal, 2-Marginal, 3-Less Significant 4-Satisfactory, 5-Largely, 6-vSignificant 7-Very Significantly**)

	VM	M	LS	S	L	LS	VS
Our firm contributes to Gross Development product	1	2	3	4	5	6	7
Our firm plays a substantial role to meeting the economic transformation agenda for the region	1	2	3	4	5	6	7
The employees are well informed about our economic transformation agenda	1	2	3	4	5	6	7
Our firm allocates a % of our income for community activities	1	2	3	4	5	6	7
Our firm has created substantial number of new positions in the last 3-5 years	1	2	3	4	5	6	7
We have added substantial number of employees to our firm	1	2	3	4	5	6	7
We have paid dividends every year	1	2	3	4	5	6	7
We pay our fair share of tax every year	1	2	3	4	5	6	7

SECTION 8: THIS SECTION SHOULD BE FILLED APPROPRIATELY

Respondent Full Name and Business Card (phone numbers, email and details)	Organisation Head (CEO/MD/GM) Business card (Full Names, Phone number and email).
Respondents Signature and Date	

COMPANY RUBBER STAMP HERE

Please indicate whether you would like to receive a summarised report of the findings

YES **NO**

THANK YOU FOR COMPLETING THE SURVEY

APPENDIX 3: (A) INTRODUCTION LETTER



To Whom It May Concern:

25th August 2016

Dear Sir/Madam,

RE: WILLIAM MURTHI

I am writing this letter on behalf of Mr William Murithi who is a doctoral research candidate at De Montfort University, UK. William is travelling to Kenya to undertake an initial phase data collection from a number of public and private organisations in Nairobi, Kenya.

William's doctoral research focusses on strategic entrepreneurship and regional development; in particular, it examines the role of SMEs' (both family and nonfamily firms) involvement in clusters and regional development taking the case of Kenya. His study seeks to advance scholarship and provide implications for strategic entrepreneurship and regional development which are of central interest to development and business scholars, policy makers and entrepreneurs.

William is visiting your organisation to have insight into these core issues with management and expert staff members. All the information, data and materials gathered for this study will be kept confidential and anonymous, and used only for research purposes. We take this opportunity to thank you in advance for your support and co-operation in the course of this study.

Yours Faithfully,

A handwritten signature in black ink, appearing to be "KW", written over a light blue horizontal line.

Dr Kassa Woldesenbet

Lead Supervisor and Senior Research Fellow


APPENDIX 3: (B) DATA COLLECTION CLEARANCE FROM NACOSTI.

THIS IS TO CERTIFY THAT:
MR. WILLIAM KARANI MURITHI
of DE MONTFORT UNIVERSITY , 0-100
NAIROBI, has been permitted to conduct
research in Nairobi County

Permit No : NACOSTI/P/16/51579/13581
Date Of Issue : 26th September,2016
Fee Received :ksh 2000

on the topic: INVESTIGATION OF THE
ROLE OF FIRMS IN REGIONAL ECONOMIC
DEVELOPMENT

for the period ending:
26th September,2017




[Signature]
Applicant's
Signature


[Signature]
Director General
National Commission for Science,
Technology & Innovation

CONDITIONS

1. You must report to the County Commissioner and the County Education Officer of the area before embarking on your research. Failure to do that may lead to the cancellation of your permit.
2. Government Officer will not be interviewed without prior appointment.
3. No questionnaire will be used unless it has been approved.
4. Excavation, filming and collection of biological specimens are subject to further permission from the relevant Government Ministries.
5. You are required to submit at least two(2) hard copies and one (1) soft copy of your final report.
6. The Government of Kenya reserves the right to modify the conditions of this permit including its cancellation without notice



REPUBLIC OF KENYA



National Commission for Science,
Technology and Innovation
RESEACH CLEARANCE
PERMIT

Serial No.A **11070**

CONDITIONS: see back page

APPENDICES 4: STATISTICAL TEST FOR NORMALITY FOR THE TWO TYPES OF FIRMS

Appendix 4 (a) Examination of the manifest variables using the Kolmogorov-Smirnov test

(a) Firm Entrepreneurial Orientation (FEO)

Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
EO-IProc	.227	307	.000	.876	307	.000
EO-ROri	.170	307	.000	.931	307	.000
EO-RExp	.230	307	.000	.868	307	.000
EO-REnv	.208	307	.000	.888	307	.000
EO-PPos	.220	307	.000	.878	307	.000
EO-PIntroP	.166	307	.000	.917	307	.000
EO-CAIdeas	.211	307	.000	.878	307	.000
EO-CAPost	.148	307	.000	.930	307	.000
EO-CAComp	.209	307	.000	.897	307	.000

a. Lilliefors Significance Correction

(b) Firm Decision-making strategy (FDMS)

Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
DecMakersInter	.385	307	.000	.621	307	.000
DecEmpPartRe	.380	307	.000	.629	307	.000
g						
DecInteract	.158	307	.000	.891	307	.000
DecOpenExc	.293	307	.000	.785	307	.000
DecOpen	.269	307	.000	.744	307	.000

a. Lilliefors Significance Correction

(c) Bridging social capital

Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
TMT-Com	.203	307	.000	.907	307	.000
TMT-Pol	.180	307	.000	.905	307	.000
TMT-Gov	.212	307	.000	.895	307	.000

a. Lilliefors Significance Correction

(d) Firm involvement in Industry Clusters (FIICs)

Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
IC-R&D	.189	307	.000	.892	307	.000
IC-NewVC	.200	307	.000	.904	307	.000
ICSharVi	.205	307	.000	.906	307	.000
IC-TechInn	.256	307	.000	.856	307	.000
IC-KnowS	.270	307	.000	.834	307	.000
IC-Part	.255	307	.000	.867	307	.000

a. Lilliefors Significance Correction

(e) Firm Performance (FP)

Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Growth-Prof	.178	307	.000	.918	307	.000
Growth-Sal	.182	307	.000	.921	307	.000
Growth-Netw	.187	307	.000	.913	307	.000
Growth-MktSh	.170	307	.000	.922	307	.000
Growth-fund	.212	307	.000	.910	307	.000
Growth-Emp	.271	307	.000	.885	307	.000

a. Lilliefors Significance Correction

(e) Regional Development (RD)

Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
RED-GDP	.214	307	.000	.911	307	.000
RED-EconTran	.212	307	.000	.920	307	.000
RED-EmpEm	.203	307	.000	.918	307	.000
RED-ComEmp	.186	307	.000	.913	307	.000
RED-EmpCrea	.187	307	.000	.924	307	.000
RED-EmpOppo	.188	307	.000	.923	307	.000

a. Lilliefors Significance Correction

Appendix 4(b): Examination of the Means of the two groups Family and nonfamily firms (Levene’s test)

Variables	Family Business		NFBs		t-test	Outcome
	Mean	SD	Mean	SD	t-test (sig.)	
EO-IProc	4.85	1.806	5.14	1.640	.048	Stat. Significant
O-RExp	4.91	1.628	5.11	1.559	.332	Not Significant
EO-ROri	4.07	1.844	4.32	1.687	.119	Not Significant
EO-REnv	4.59	1.701	5.23	1.494	.021	Stat. Significant
EO-PPos	4.92	1.611	5.16	1.532	.229	Not Significant
EO-PIntroP	4.42	1.831	4.58	1.622	.053	Not Significant
EO-CAIdeas	4.78	1.819	5.31	1.409	.002	Stat. Significant
EO-CAPost	4.21	1.768	4.43	1.656	.417	Not Significant
EO-CAComp	4.74	1.780	4.98	1.565	.052	Not Significant
DecPart	4.85	1.733	5.39	1.199	.000	Stat. Significant
DecEmpPartReg	4.85	1.690	5.30	1.360	.000	Stat. Significant

Family Business and Regional Development

DecRegInte	3.97	1.869	4.01	1.497	.000	Stat. Significant
DecInteractive	4.42	1.813	4.93	1.191	.000	Stat. Significant
DecOpenExch	4.60	1.752	5.06	1.243	.000	Stat. Significant
TMT-Com	3.96	1.814	3.85	1.914	.203	Not Significant
TMT-Pol	3.37	1.778	3.46	1.877	.348	Not Significant
TMT -Gov	4.35	1.624	4.61	1.769	.079	Not Significant
IC-R&D	4.52	1.718	4.80	1.709	.773	Not Significant
IC-KnowS	5.10	1.497	5.46	1.452	.926	Not Significant
IC-Part	5.17	1.469	5.36	1.367	.950	Not Significant
IC-NewVC	4.63	1.590	5.00	1.515	.208	Not Significant
ICSharVi	4.37	1.755	4.58	1.678	.391	Not Significant
IC-TechInn	4.90	1.622	5.22	1.572	.356	Not Significant
Growth-Prof	4.80	1.385	4.90	1.365	.694	Not Significant
Growth-Sal	4.98	1.428	4.89	1.358	.860	Not Significant
Growth-Netw	4.80	1.426	4.99	1.297	.859	Not Significant
Growth-MktSh	4.73	1.380	4.73	1.434	.577	Not Significant
Growth-fund	4.46	1.559	4.60	1.441	.398	Not Significant
RED-GDP	4.22	1.606	4.19	1.596	.670	Not Significant
RED-EconTran	4.10	1.561	4.28	1.539	.583	Not Significant
RED-EmpEm	4.20	1.572	4.57	1.532	.633	Not Significant
RED-ComEmp	3.77	1.798	3.72	1.768	.932	Not Significant
RED-EmplCrea	3.98	1.701	4.10	1.721	.518	Not Significant
RED-EmpOppo	3.93	1.758	3.85	1.784	.440	Not Significant

APPENDIX 5: INITIAL FACTORS ANALYSIS FOR IDENTIFICATION OF LATENT CONSTRUCTS

Appendix 5 (a): Exploratory Factor analysis

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.905
Bartlett's Test of Approx. Chi-Square	6059.186
Sphericity	df
	561
	Sig.
	.000

Appendix 5 (b): Communalities

	Initial	Extraction
EO-RExp	1.000	.582
EO-REnv	1.000	.680
EO-PPos	1.000	.625
EO-PIntroP	1.000	.559
EO-CAIdeas	1.000	.665
EO-CAPost	1.000	.520
EO-CAComp	1.000	.598
EO-ROri	1.000	.533
EO-IProc	1.000	.499
Dec-MakersInter	1.000	.613
Dec- EmpPartReg	1.000	.645
Dec-Regul	1.000	.623
Dec-Inter	1.000	.837
Dec-OpenExc	1.000	.758
TMT-Com	1.000	.737
TMT-Pol	1.000	.776
TMT -Gov	1.000	.546

IC-R&D	1.000	.558
IC-KnowS	1.000	.671
IC-Part	1.000	.552
IC-NewVC	1.000	.660
ICSharVi	1.000	.673
IC-TechInn	1.000	.674
Growth-Prof	1.000	.816
Growth-Sal	1.000	.816
Growth-Netw	1.000	.835
Growth-MktSh	1.000	.750
Growth-fund	1.000	.693
RED-GDP	1.000	.717
RED-EconTran	1.000	.769
RED-EmpEm	1.000	.692
RED-ComEmp	1.000	.633
RED-EmplCrea	1.000	.702
RED-EmpOppo	1.000	.608

Extraction Method: Principal Component Analysis.

Appendix 5 (c): Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	
1	11.338	33.346	33.346	11.338	33.346	33.346	
2	4.041	11.884	45.230	4.041	11.884	45.230	
3	2.311	6.797	52.027	2.311	6.797	52.027	
4	1.906	5.606	57.634	1.906	5.606	57.634	

Family Business and Regional Development

5	1.622	4.771	62.404	1.622	4.771	62.404	
6	1.396	4.105	66.509	1.396	4.105	66.509	
7	1.064	3.130	69.640				
8	.869	2.555	72.194				
9	.790	2.324	74.518				
10	.641	1.884	76.403				
11	.613	1.804	78.207				
12	.584	1.719	79.926				
13	.569	1.675	81.600				
14	.547	1.609	83.210				
15	.483	1.420	84.630				
16	.453	1.334	85.964				
17	.421	1.238	87.202				
18	.407	1.197	88.399				
19	.401	1.178	89.577				
20	.365	1.074	90.651				
21	.348	1.022	91.673				
22	.331	.975	92.648				
23	.312	.917	93.565				
24	.300	.883	94.448				
25	.284	.836	95.285				
26	.257	.756	96.041				
27	.234	.690	96.730				
28	.214	.630	97.361				
29	.189	.557	97.918				
30	.173	.508	98.426				
31	.153	.451	98.877				

32	.152	.446	99.323				
33	.127	.373	99.696				
34	.103	.304	100.000				

Total Variance Explained

Component	Rotation Sums of Squared Loadings ^a
	Total
1	8.205
2	6.828
3	7.860
4	6.993
5	5.840
6	3.853
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	
21	
22	

23	
24	
25	
26	
27	
28	
29	
30	
31	
32	
33	
34	

Extraction Method: Principal Component Analysis.

a. When components are correlated, sums of squared loadings cannot be added to obtain a total variance.

Component Matrixa

	Component					
	1	2	3	4	5	6
EO-RExp	.529	.422				
EO-REnv	.550	.410		-.376		
EO-PPos	.619	.364				
EO-PIIntroP	.636					
EO-CAIdeas	.700					
EO-CAPost	.621					
EO-CAComp	.702					
EO-ROri	.466	.343		-.321		
EO-IProc	.600					

Dec-MakersInter	.513	.455		.357		
Dec- EmpPartReg	.388	.575		.389		
Dec-Regul	.480	.432		.446		
Dec-Inter	.549	.493		.499		
Dec-OpenExc	.473	.526		.480		
TMT-Com	.420					.555
TMT-Pol	.385				.413	.534
TMT -Gov	.521				.334	.321
IC-R&D	.528		.459			
IC-KnowS	.614		.439			
IC-Part	.428		.469			-.329
IC-NewVC	.594		.490			
ICSharVi	.671		.420			
IC-TechInn	.633		.500			
Growth-Prof	.580	-.474	-.371			
Growth-Sal	.601	-.490			.325	
Growth-Netw	.624	-.468	-.318			
Growth-MktSh	.627	-.494				
Growth-fund	.578	-.410				
RED-GDP	.593	-.461			-.328	
RED-EconTran	.663	-.436			-.332	
RED-EmpEm	.609	-.380			-.399	
RED-ComEmp	.567				-.416	
RED-EmplCrea	.685				-.371	
RED-EmpOppo	.668					

Appendix 5 (d): Pattern Matrix

	Component					
	1	2	3	4	5	6
Label	FEO	Firm Performance	RD	FIIC	FSDM	FBSC
Cronbach's Alpha	0.890	0.928	0.897	0.869	0.883	0.772
Component Average	0.724	0.864	0.795	0.763	0.824	0.776
EO-RExp	.750					
EO-REnv	.906					
EO-PPos	.754					
EO-PIIntroP	.649					
EO-CAIdeas	.713					
EO-CAPost	.620					
EO-CAComp	.625					
EO-ROri	.827					
EO-IProc	.668					
Dec-MakersInter					.726	
Dec- EmpPartReg					.794	
Dec-Regul					.783	
Dec-Inter					.924	
Dec-OpenExc					.891	
TMT-Com						.841
TMT-Pol						.892
TMT -Gov						.594
IC-R&D				.736		
IC-KnowS				.793		

IC-Part				.840		
IC-NewVC				.776		
ICSharVi				.703		
IC-TechInn				.730		
Growth-Prof		.921				
Growth-Sal		.893				
Growth-Netw		.917				
Growth-MktSh		.771				
Growth-fund		.820				
RED-GDP			.830			
RED-EconTran			.841			
RED-EmpEm			.806			
RED-ComEmp			.863			
RED-EmplCrea			.775			
RED-EmpOppo			.656			

Extraction Method: Principal Component Analysis.

Rotation Method: Promax with Kaiser Normalization.^a

a. Rotation converged in 6 iterations.

Appendix 5(e): Structure Matrix

	Component					
	1	2	3	4	5	6
EO-RExp	.738				.469	
EO-REnv	.800			.373	.346	
EO-PPos	.782			.394	.452	
EO-PIntroP	.723	.315	.452	.341	.411	
EO-CAIdeas	.796	.347	.477	.381	.461	
EO-CAPost	.694		.441	.435	.348	

EO-CAComp	.751	.399	.446	.469	.414	
EO-ROri	.701					
EO-IProc	.691	.335	.408	.330	.311	
Dec-MakersInter	.471			.320	.777	
Dec-EmpPartReg	.407				.791	
Dec-Regul	.384			.331	.784	
Dec-Inter	.446			.342	.911	
Dec-OpenExc	.423				.869	
TMT-Com			.355	.309		.850
TMT-Pol						.879
TMT -Gov	.334	.427	.364	.376		.695
IC-R&D	.390		.331	.739		
IC-KnowS	.394	.303	.372	.808	.391	
IC-Part				.711		
IC-NewVC	.425		.376	.805	.359	
ICSharVi	.493	.303	.436	.807	.362	.372
IC-TechInn	.380		.511	.804	.314	.336
Growth-Prof	.300	.899	.481			
Growth-Sal	.324	.895	.475			.373
Growth-Netw	.320	.912	.522			
Growth-MktSh	.348	.853	.553	.337		.347
Growth-fund		.821	.497	.304		
RED-GDP		.537	.821			.353
RED-EconTran	.331	.544	.868	.384		.366
RED-EmpEm		.473	.814	.451		
RED-ComEmp	.319		.769	.387		.312
RED-EmplCrea	.437	.504	.827	.424		

RED-EmpOppo	.418	.529	.763	.398		
-------------	------	------	------	------	--	--

Extraction Method: Principal Component Analysis.

Rotation Method: Promax with Kaiser Normalization.

Appendix 5(f): Component Correlation Matrix

Component	1	2	3	4	5	6
1	1.000	.355	.426	.478	.511	.231
2	.355	1.000	.564	.318	.164	.320
3	.426	.564	1.000	.477	.249	.334
4	.478	.318	.477	1.000	.362	.357
5	.511	.164	.249	.362	1.000	.174
6	.231	.320	.334	.357	.174	1.000

APPENDIX 6: CONFIRMATORY FACTOR ANALYSIS

Appendix 6 (a) KMO and Bartlett’s Test

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.905
Bartlett's Test of Approx. Chi-Square Sphericity	6436.220
df	496
Sig.	.000

Appendix 6 (b): Communalities

Communalities

	Initial	Extraction
EO-REnv	1.000	.564
EO-PPos	1.000	.581
EO-PExp	1.000	.459
EO-PIIntroP	1.000	.592
EO-CAIdeas	1.000	.701
EO-CAPost	1.000	.622
EO-CAComp	1.000	.628
DecMakersInter	1.000	.607
DecEmpPartReg	1.000	.644
DecInteract	1.000	.625
DecOpenExc	1.000	.829
DecOpen	1.000	.749
TMT-Com	1.000	.737
TMT-Pol	1.000	.760
TMT -Gov	1.000	.567
IC-R&D	1.000	.567

IC-KnowS	1.000	.679
IC-Part	1.000	.555
IC-NewVC	1.000	.652
ICSharVi	1.000	.644
IC-TechInn	1.000	.652
Growth-Prof	1.000	.820
Growth-Sal	1.000	.826
Growth-Netw	1.000	.837
Growth-MktSh	1.000	.752
Growth-fund	1.000	.688
RED-GDP	1.000	.740
RED-EconTran	1.000	.786
RED-EmpEm	1.000	.707
RED-ComEmp	1.000	.647
RED-EmplCrea	1.000	.694
RED-EmpOppo	1.000	.602

Extraction Method: Principal Component Analysis.

Appendix 6 (c): Total Variance Explained

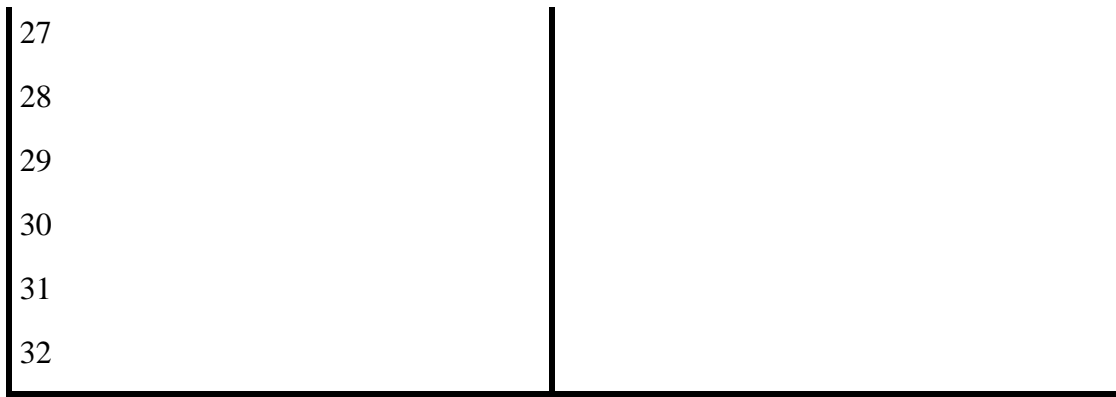
Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	10.653	33.290	33.290	10.653	33.290	33.290
2	3.864	12.074	45.364	3.864	12.074	45.364
3	2.261	7.064	52.428	2.261	7.064	52.428
4	1.855	5.796	58.225	1.855	5.796	58.225
5	1.559	4.871	63.096	1.559	4.871	63.096

6	1.321	4.127	67.223	1.321	4.127	67.223
7	1.026	3.205	70.429			
8	.891	2.783	73.211			
9	.733	2.292	75.503			
10	.649	2.027	77.530			
11	.616	1.926	79.456			
12	.558	1.745	81.201			
13	.539	1.684	82.885			
14	.479	1.496	84.381			
15	.460	1.438	85.819			
16	.419	1.310	87.129			
17	.412	1.288	88.417			
18	.384	1.201	89.618			
19	.357	1.116	90.734			
20	.341	1.067	91.800			
21	.323	1.009	92.810			
22	.315	.983	93.793			
23	.281	.879	94.672			
24	.270	.845	95.517			
25	.249	.778	96.295			
26	.219	.683	96.978			
27	.207	.648	97.626			
28	.189	.591	98.217			
29	.172	.536	98.753			
30	.163	.508	99.261			
31	.134	.418	99.679			
32	.103	.321	100.000			

Total Variance Explained

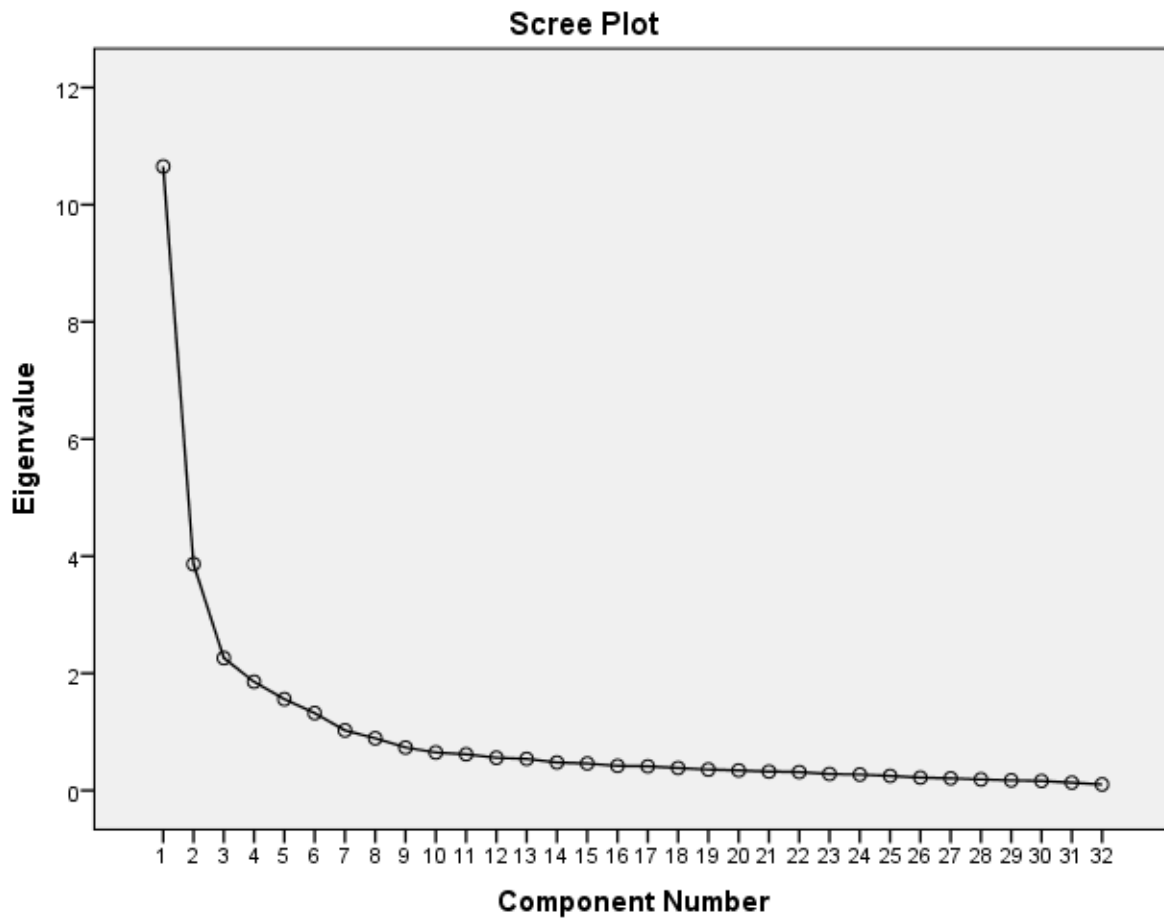
Component	Rotation Sums of Squared Loadings ^a
	Total
1	7.352
2	6.646
3	7.299
4	6.660
5	5.328
6	4.052
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	
21	
22	
23	
24	
25	
26	



Extraction Method: Principal Component Analysis.

a. When components are correlated, sums of squared loadings cannot be added to obtain a total variance.

[Appendix 6 \(d\): Scree Plot with the latent variance](#)



Appendix 6(e): Component Matrix

Component Matrix^a

	Component					
	1	2	3	4	5	6
RED-EmpICrea	.690				-.357	
RED-EconTran	.676	-.403			-.363	
EO-CAIdeas	.670					
ICSharVi	.666		.362			
RED-EmpOppo	.663					
EO-CAComp	.661			-.312		
Growth-MktSh	.643	-.464				
IC-TechInn	.643		.445			
Growth-Netw	.638	-.436	-.385			
RED-EmpEm	.633	-.350			-.340	
IC-KnowS	.629		.365			
Growth-Sal	.620	-.469	-.325		.333	
RED-GDP	.614	-.433			-.373	
Growth-Prof	.607	-.437	-.420			
IC-NewVC	.603		.417			
Growth-fund	.599	-.383	-.318			
EO-PIIntroP	.595					
EO-CAPost	.582			-.403		
RED-ComEmp	.573				-.445	
EO-PPos	.566	.379				
IC-R&D	.551		.426			
TMT -Gov	.534					.401
EO-REnv	.509	.392		-.330		
DecMakersInte r	.498	.482		.317		

EO-PExp	.475	.359				
DecEmpPartRe g	.377	.585		.366		
DecOpen	.442	.570		.421		
DecOpenExc	.530	.554		.423		
DecInteract	.451	.477		.409		
IC-Part	.440		.441			-.310
TMT-Pol	.424			.355		.531
TMT-Com	.458		.333	.350		.497

Extraction Method: Principal Component Analysis.^a

a. 6 components extracted.

[Appendix 6\(f\): Pattern Matrix](#)

Pattern Matrix^a

	Component					
	FEO	FP	RD	FIC	FDMS	FBSC
EO-CAPost	.827					
EO-CAIdeas	.804					
EO-PIntroP	.763					
EO-REnv	.759					
EO-CAComp	.729					
EO-PPos	.716					
EO-PExp	.621					
Growth-Prof		.921				
Growth-Netw		.919				
Growth-Sal		.910				
Growth-fund		.806				
Growth-MktSh		.782				

RED-ComEmp			.851			
RED-EconTran			.840			
RED-GDP			.830			
RED-EmpEm			.803			
RED-EmplCrea			.723			
RED-EmpOppo			.635			
IC-Part				.840		
IC-KnowS				.787		
IC-NewVC				.754		
IC-TechInn				.710		
IC-R&D				.703		
ICSharVi				.663		
DecOpenExc					.903	
DecPart					.879	
DecEmpPartReg					.799	
DecRegInter					.795	
DecInter					.715	
TMT-Pol						.881
TMT-Com						.826
TMT -Gov						.640
Average of Latent Factor	0.746	0.868	0.780	0.663	0.715	0.782

Extraction Method: Principal Component Analysis.

Rotation Method: Promax with Kaiser Normalization.^a

a. Rotation converged in 7 iterations.

Appendix 6(g): Structure and Component matrix

Structure Matrix

	Component					
	1	2	3	4	5	6
EO-CAIdeas	.828	.337	.418	.372	.426	
EO-CAComp	.782	.397	.399	.410	.366	
EO-CAPost	.777		.359	.381		
EO-PPos	.750			.399	.439	
EO-PIntroP	.750	.320	.402		.346	
EO-REnv	.728			.399	.367	
EO-PExp	.648			.352	.391	
Growth-Netw	.337	.914	.502			
Growth-Sal	.323	.903	.469			.358
Growth-Prof	.336	.902	.466			
Growth-MktSh	.361	.856	.539	.321		.350
Growth-fund	.309	.821	.491	.302		
RED-EconTran	.325	.507	.877	.386		.441
RED-GDP		.505	.838			.424
RED-EmpEm		.473	.821	.453		
RED-EmplCrea	.462	.533	.800	.406		
RED-ComEmp	.302		.777	.393		.356
RED-EmpOppo	.435	.533	.740	.377		
IC-KnowS	.402	.312	.364	.810	.399	
IC-NewVC	.473		.356	.798	.337	
IC-TechInn	.417		.486	.791		.359
ICSharVi	.518		.412	.783	.332	.380
IC-R&D	.430		.338	.740		.321
IC-Part				.713		

DecOpenExc	.454			.328	.907	
DecOpen	.408				.863	
DecEmpPartRe g	.377				.796	
DecInteract	.352			.320	.787	
DecMakersInte r	.457			.319	.771	
TMT-Pol				.301		.869
TMT-Com			.394	.343		.852
TMT -Gov	.335	.385	.382	.384		.722

Extraction Method: Principal Component Analysis.

Rotation Method: Promax with Kaiser Normalization.

Component Correlation Matrix

Component	1	2	3	4	5	6
1	1.000	.374	.405	.493	.483	.234
2	.374	1.000	.549	.313	.158	.315
3	.405	.549	1.000	.447	.200	.384
4	.493	.313	.447	1.000	.353	.375
5	.483	.158	.200	.353	1.000	.183
6	.234	.315	.384	.375	.183	1.000

Extraction Method: Principal Component Analysis.

Rotation Method: Promax with Kaiser Normalization.

Appendix 6(h): Component Score Matrix

Component Score Coefficient Matrix

	Component					
	1	2	3	4	5	6
EO-REnv	.183	-.013	-.047	.028	-.004	.026
EO-PPos	.172	.007	-.031	.018	.023	-.009
EO-PExp	.149	.022	-.057	.026	.024	-.007
EO-PIntroP	.185	-.004	.045	-.051	-.004	.001
EO-CAIdeas	.195	-.006	.034	-.034	.008	.015
EO-CAPost	.201	-.022	.028	-.002	-.038	-.012
EO-CAComp	.176	.025	.016	-.001	-.007	-.017
DecMakersInter	.019	.007	-.002	.000	.205	.017
DecEmpPartReg	.006	-.011	-.022	-.001	.230	.012
DecInteract	-.024	.005	.003	.019	.230	.003
DecOpenExc	-.006	.003	.021	-.002	.260	-.027
DecOpen	.000	-.002	.002	-.019	.253	-.003
TMT-Com	-.013	-.025	.024	-.001	.006	.408
TMT-Pol	-.009	.006	-.021	-.008	.005	.435
TMT -Gov	.034	.025	-.007	.012	-.016	.316
IC-R&D	.033	-.021	-.005	.201	-.030	.030
IC-KnowS	-.023	.024	-.014	.228	.047	-.018
IC-Part	-.048	.028	-.016	.243	-.021	-.037
IC-NewVC	.025	-.023	-.001	.217	.009	-.006
ICSharVi	.038	-.004	-.001	.190	.000	.040
IC-TechInn	-.002	-.018	.042	.203	.003	.014
Growth-Prof	.006	.231	-.014	-.024	.006	.009
Growth-Sal	.000	.228	-.024	.005	-.014	.041

Growth-Netw	-.007	.231	-.004	-.001	.013	-.020
Growth-MktSh	.015	.195	.011	.005	-.029	.029
Growth-fund	-.016	.203	.013	.018	.019	-.056
RED-GDP	-.006	.010	.211	-.052	-.007	.069
RED-EconTran	-.007	.000	.213	-.014	-.010	.057
RED-EmpEm	-.041	.011	.203	.046	.010	-.051
RED-ComEmp	-.001	-.066	.217	.008	.003	.035
RED-EmplCrea	.036	.028	.185	.005	-.005	-.091
RED-EmpOppo	.028	.041	.162	.001	.012	-.077

Extraction Method: Principal Component Analysis.

Rotation Method: Promax with Kaiser Normalization.

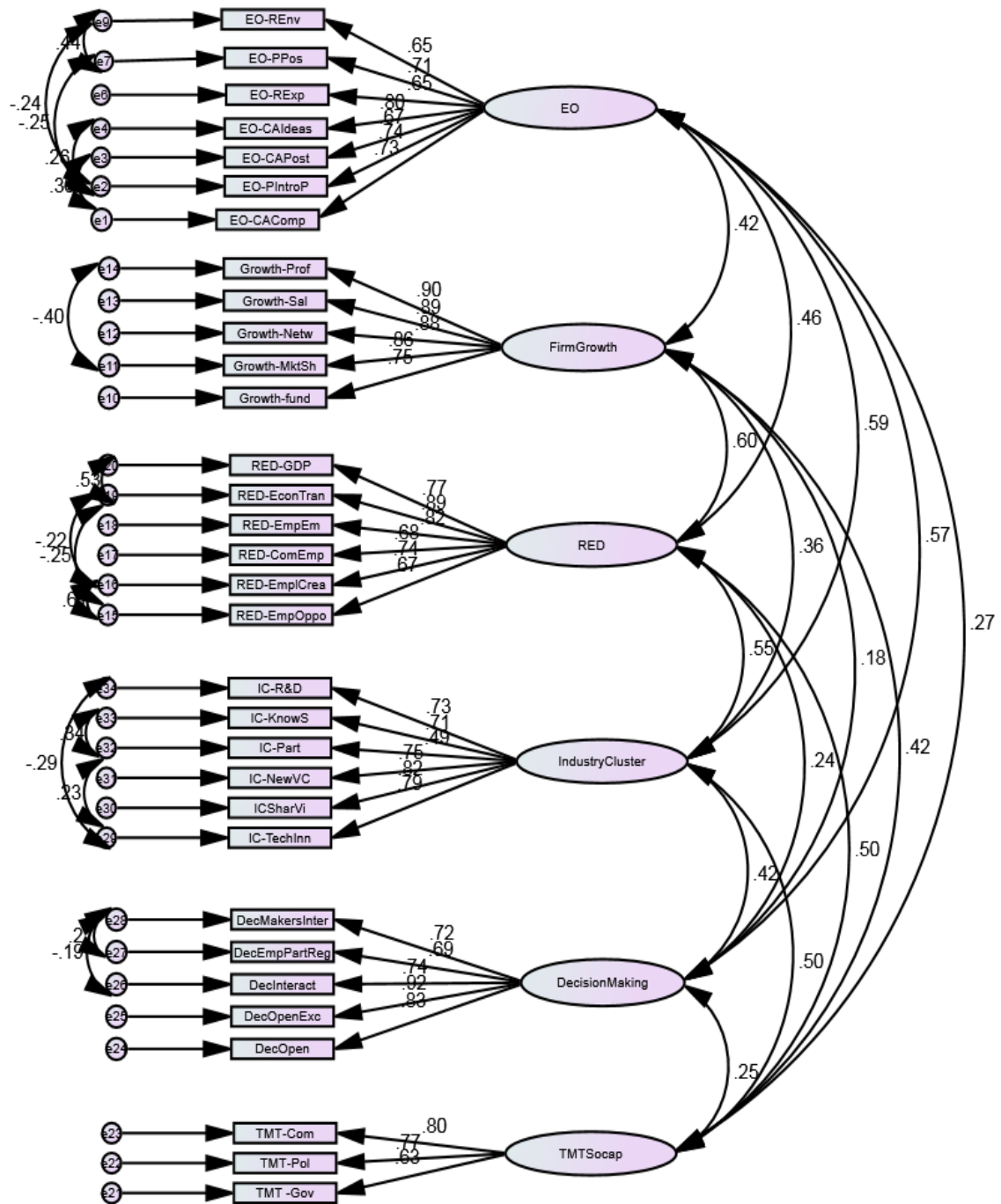
Component Score Covariance Matrix

Component	1	2	3	4	5	6
1	2.656	2.198	3.424	2.562	2.684	3.326
2	2.198	2.144	2.339	2.135	2.930	2.289
3	3.424	2.339	4.424	3.343	3.656	4.185
4	2.562	2.135	3.343	2.930	3.376	3.231
5	2.684	2.930	3.656	3.376	5.153	3.385
6	3.326	2.289	4.185	3.231	3.385	4.915

Extraction Method: Principal Component Analysis.

Rotation Method: Promax with Kaiser Normalization.

Appendix 6 (i) Simple Obtained Decent Model for the 32 manifest variables for CFA



APPENDIX 7: TESTING FOR RELIABILITY FOR THE SIX LATENT FACTORS

Appendix 7(a): Reliability Test for 32 manifest variables (Cronbach’s Alpha test)

All 32 variables

Reliability Statistics

Cronbach's Alpha	N of Items
.933	32

Appendix 7 (b): Reliability Test for 7 Entrepreneurial orientation factors

Reliability Statistics

Cronbach's Alpha	N of Items
.880	7

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
EO-RExp	28.87	58.861	.602	.870
EO-REnv	28.94	58.141	.624	.867
EO-PPos	28.84	57.642	.671	.862
EO-PIIntroP	29.39	56.379	.653	.864
EO-CAIdeas	28.81	55.313	.760	.850
EO-CAPost	29.57	56.553	.648	.865
EO-CAComp	29.02	56.056	.695	.858

Appendix 7 (c): Reliability Test for 5 managerial decision making variables

Reliability Statistics

Cronbach's Alpha	N of Items
.883	5

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
DecPart	18.71	27.253	.664	.870
DecEmpPartRe g	18.77	26.533	.685	.866
DecRegInte	19.89	25.712	.659	.874
DecInteractive	19.16	24.863	.835	.831
DecOpenExch	19.01	25.778	.766	.847

Appendix 7 (d): Reliability Test for 3 managerial social capital variables

Reliability Statistics

Cronbach's Alpha	N of Items
.772	3

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
TMT-Com	7.93	9.197	.662	.629
TMT-Pol	8.40	9.555	.643	.651
TMT - Gov	7.32	11.283	.521	.781

Appendix 7 (e): Reliability Test for 6 firm involvement in industrial clusters variables

Reliability Statistics

Cronbach's Alpha	N of Items
.869	6

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
IC-R&D	25.04	37.966	.635	.853

IC-KnowS	24.40	39.209	.699	.841
IC-Part	24.44	42.424	.541	.866
IC-NewVC	24.87	38.347	.705	.840
ICSharVi	25.22	36.528	.720	.836
IC-TechInn	24.63	37.887	.706	.839

Appendix 7 (f): Reliability Test for 5 firm performance variables

Reliability Statistics

Cronbach's Alpha	N of Items
.928	5

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Growth-Prof	19.11	24.848	.837	.907
Growth-Sal	19.04	24.632	.845	.905
Growth-Netw	19.05	24.801	.858	.903
Growth-MktSh	19.23	24.997	.793	.915
Growth-fund	19.42	25.068	.730	.928

Appendix 7 (f): Reliability Test for 6 Regional development Variables

Reliability Statistics

Cronbach's Alpha	N of Items
.902	6

Item-Total Statistics

	Scale if Deleted	Mean Item	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
RED-GDP	24.63		60.673	.724	.885
RED- EconTran	24.61		60.062	.783	.879
RED-EmpEm	24.40		61.000	.733	.884
RED- ComEmp	25.08		60.389	.641	.896
RED- EmplCrea	24.77		58.270	.767	.880
RED- EmpOppo	24.94		58.532	.722	.886

APPENDIX 8: TESTING FOR COLLINEARITY AND MULTI-COLLINEARITY FOR THE 32 OBSERVED VARIABLES IN THE 6 LATENT CONSTRUCTS FOR CFA STRUCTURAL MODEL

Appendix 8 (a) Test for Multicollinearity for the dependent Variables

Model Summary and Parameter Estimates

Dependent Variable: RD

Equation	Model Summary					Parameter Estimates	
	R Square	F	df1	df2	Sig.	Constant	b1
Linear	.213	82.405	1	305	.000	1.350	.517
Logarithmic	.187	70.024	1	305	.000	1.005	1.851
Inverse	.144	51.211	1	305	.000	5.025	-5.162
Quadratic	.222	43.372	2	304	.000	2.553	-.099
Cubic	.223	28.923	3	303	.000	1.808	.554
Compound	.225	88.567	1	305	.000	1.537	1.191
Power	.217	84.366	1	305	.000	1.308	.654
S	.186	69.803	1	305	.000	1.712	-1.928
Growth	.225	88.567	1	305	.000	.430	.174
Exponential	.225	88.567	1	305	.000	1.537	.174
Logistic	.225	88.567	1	305	.000	.651	.840

Model Summary and Parameter Estimates

Dependent Variable: IndustryCluster

Equation	Model Summary					Parameter Estimates	
	R Square	F	df1	df2	Sig.	Constant	b1

Linear	.416	217.532	1	305	.000	1.462	.745
Logarithmic	.363	174.085	1	305	.000	.977	2.659
Inverse	.273	114.455	1	305	.000	6.733	-7.326
Quadratic	.431	115.050	2	304	.000	3.011	-.048
Cubic	.433	77.050	3	303	.000	4.366	-1.235
Compound	.407	209.075	1	305	.000	1.981	1.203
Power	.388	193.273	1	305	.000	1.678	.688
S	.326	147.789	1	305	.000	2.032	-2.007
Growth	.407	209.075	1	305	.000	.684	.184
Exponential	.407	209.075	1	305	.000	1.981	.184
Logistic	.407	209.075	1	305	.000	.505	.832

Dependent Variable: Firm performance

Equation	Model Summary					Parameter Estimates	
	R Square	F	df1	df2	Sig.	Constant	b1
Linear	.271	113.481	1	305	.000	2.532	.447
Logarithmic	.269	112.165	1	305	.000	2.259	1.565
Inverse	.243	97.786	1	305	.000	5.564	-4.258

Quadratic	.272	56.855	2	304	.000	2.291	.582
Cubic	.274	38.093	3	303	.000	1.561	1.246
Compound	.245	99.156	1	305	.000	2.611	1.122
Power	.261	107.917	1	305	.000	2.385	.418
S	.258	106.113	1	305	.000	1.767	-1.190
Growth	.245	99.156	1	305	.000	.960	.115
Exponential	.245	99.156	1	305	.000	2.611	.115
Logistic	.245	99.156	1	305	.000	.383	.891

Appendix 8 (b) Linearity test for Independent variables

The Variance Inflation factor (VIF) is one of the basic parameters used to measure the degree of collinearity present in the observed independent variables of the latent constructs (Craney and Surles, 2002). It defined as follows

$$VIF=1/TOLi$$

Where: VIF = variance inflation factor; and $TOLi$ = tolerance of variable i (i.e. $1 - R^2$ the coefficient of determination (R^2) of the variable). The tolerance value is the amount of a variable unexplained by the other independent variables in the same model, therefore large VIF denotes high collinearity (Hair *et al*, 2006).

Dependent Variable: Firm Entrepreneurial Orientation

Coefficients ^a								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	2.050	.217		9.435	.000		
	TMTSocap	.138	.040	.161	3.430	.001	.918	1.090
	DecisionMa king	.522	.044	.557	11.873	.000	.918	1.090

. Dependent Variable: FEO

Dependent Variable: Firm Decision-Making Strategy

Coefficients ^a								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.957	.261		3.668	.000		
	TMTSocap	.096	.044	.104	2.178	.030	.897	1.114
	EO	.607	.051	.569	11.873	.000	.897	1.114

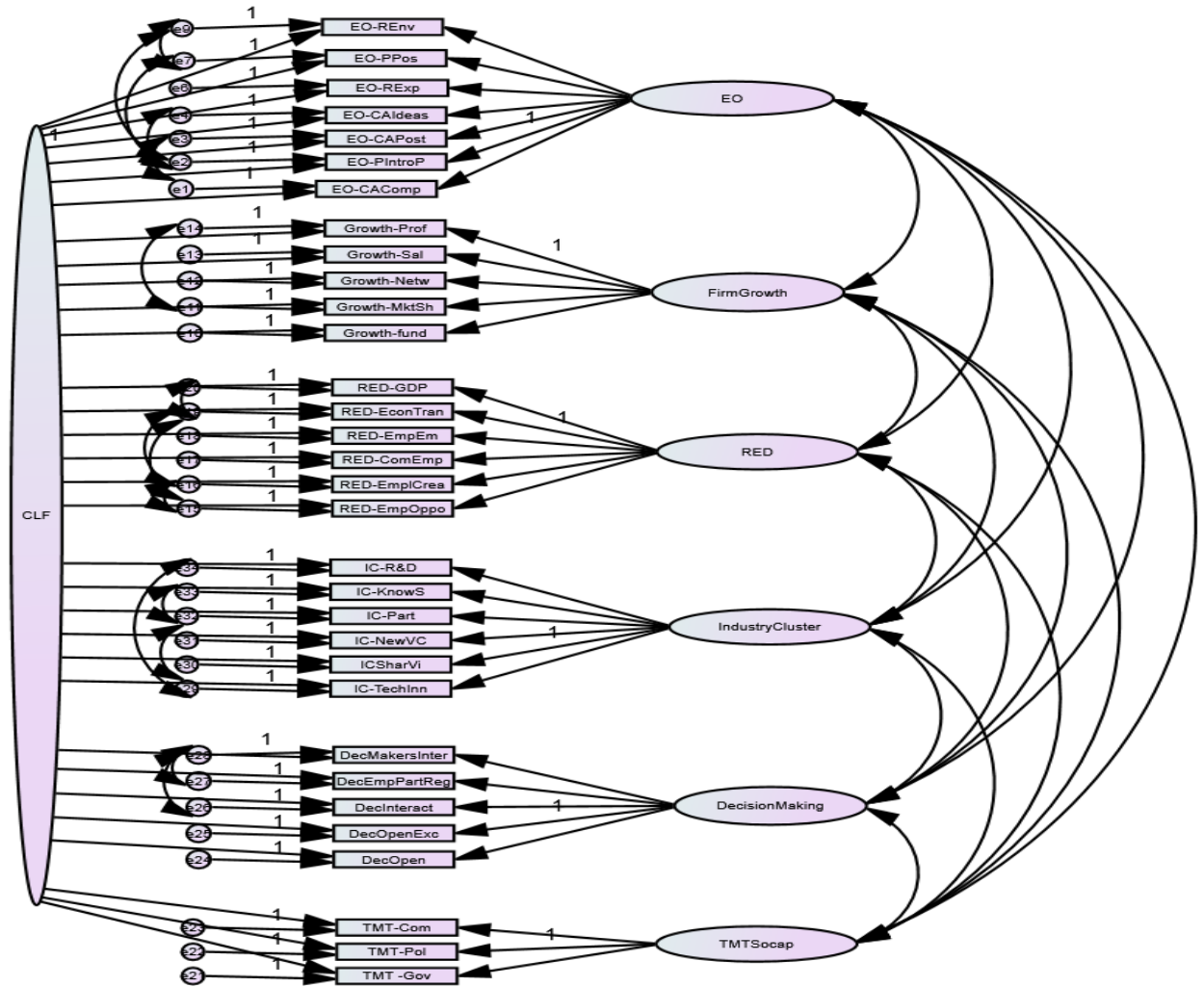
a. Dependent Variable: DecisionMaking

Dependent Variable: Firm bridging Social capital

Coefficients ^a								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	2.063	.325		6.351	.000		
	EO	.270	.079	.232	3.430	.001	.637	1.570
	DecisionMaking	.161	.074	.147	2.178	.030	.637	1.570

a. Dependent Variable: TMTSocap

APPENDIX 9: TESTING FOR COMMON METHOD BIASED AND OUTLIERS FOR CFA MODEL



Measurement for GOF after modifications

Table 7. 22: Goodness of fit for the Common method Test for the model with CMB adjusted

Item	Chi-Square	DF	Ratio x ² : df	RMSEA	IFI	TLI	CFI
Model fit	-	-	-	.039	.971	.963	.970
P	-						

Measurement for GOF after modifications

CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	126	587.074	402	.000	1.460
Saturated model	528	.000	0		
Independence model	32	6712.358	496	.000	13.533

RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	.102	.896	.864	.682
Saturated model	.000	1.000		
Independence model	.832	.217	.167	.204

Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.913	.892	.971	.963	.970
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

Parsimony-Adjusted Measures

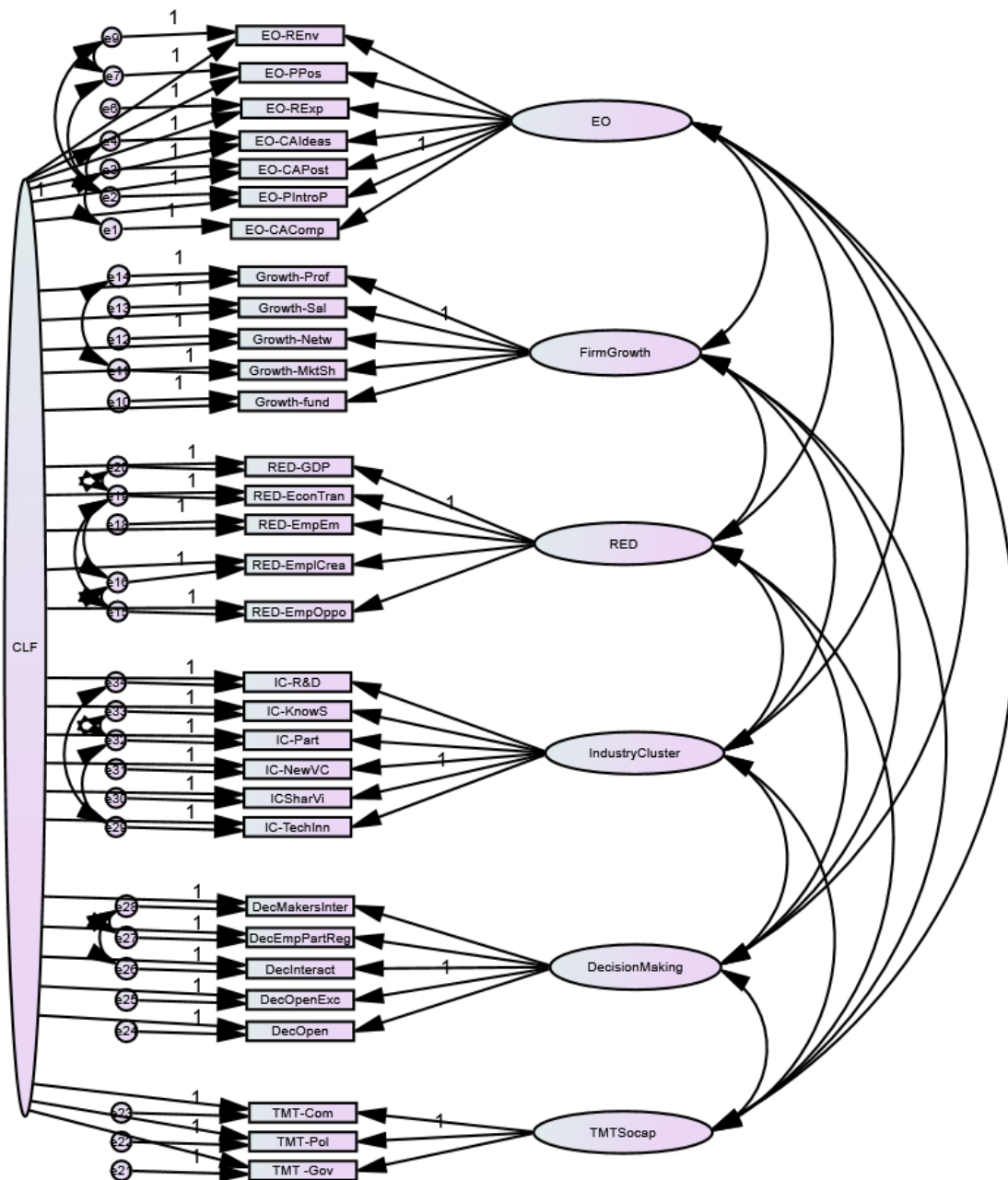
Model	PRATIO	PNFI	PCFI
Default model	.810	.740	.786
Saturated model	.000	.000	.000
Independence model	1.000	.000	.000

RMSEA

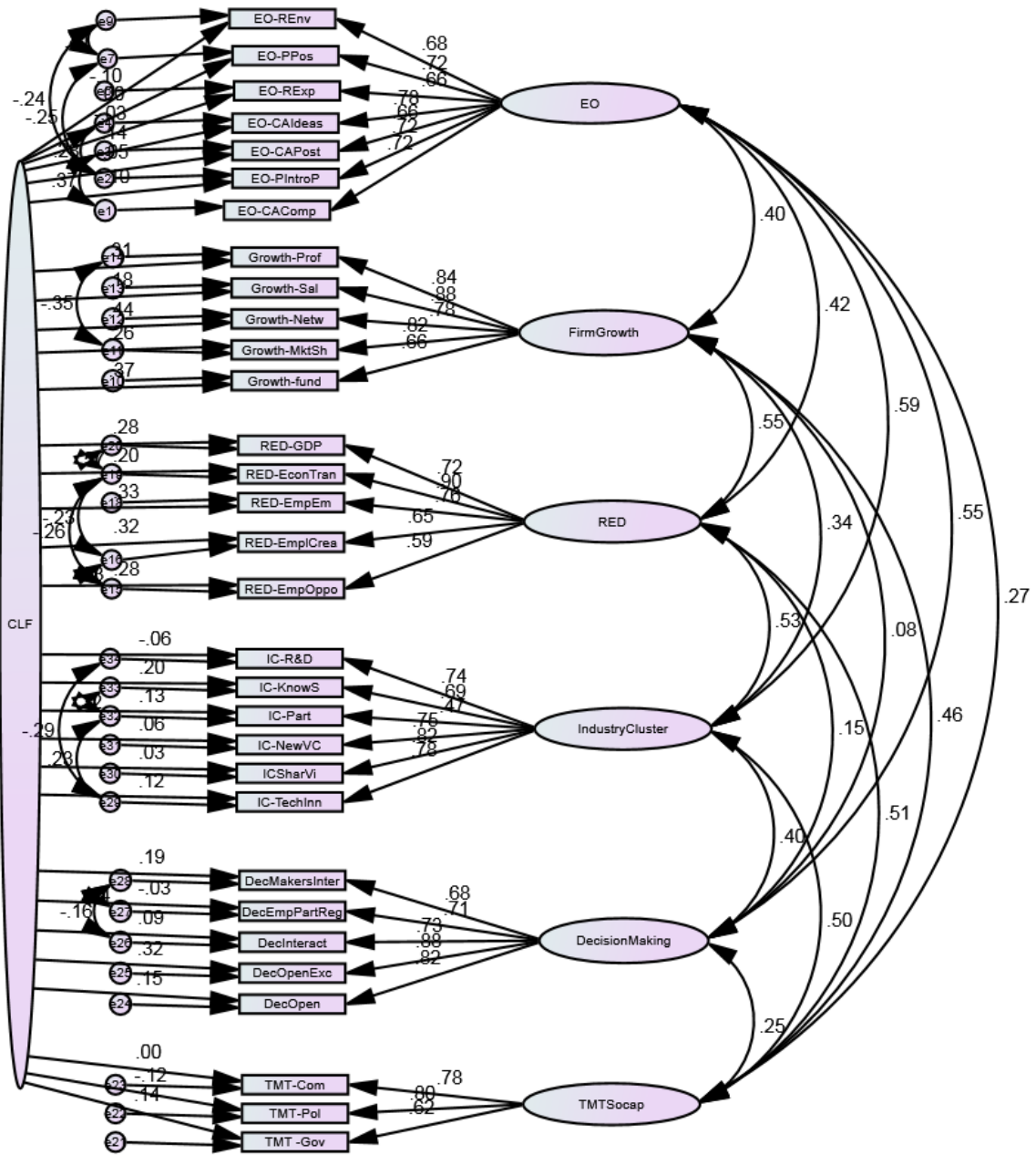
Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.039	.032	.045	.998
Independence model	.202	.198	.207	.000

APPENDIX 10: TESTING FOR MEASUREMENT AND STRUCTURAL GROUP INVARIANCE TEST ACROSS GROUPS

Appendix 10 (a): Structural model with the CLF retained



Appendix 10 (b): Standardised Model



Measurements for Model GOF Fit Summary

RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	.143	.898	.865	.677
Saturated model	.000	1.000		
Independence model	.825	.222	.170	.208

Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.914	.894	.970	.963	.970
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

Parsimony-Adjusted Measures

Model	PRATIO	PNFI	PCFI
Default model	.804	.736	.780
Saturated model	.000	.000	.000
Independence model	1.000	.000	.000

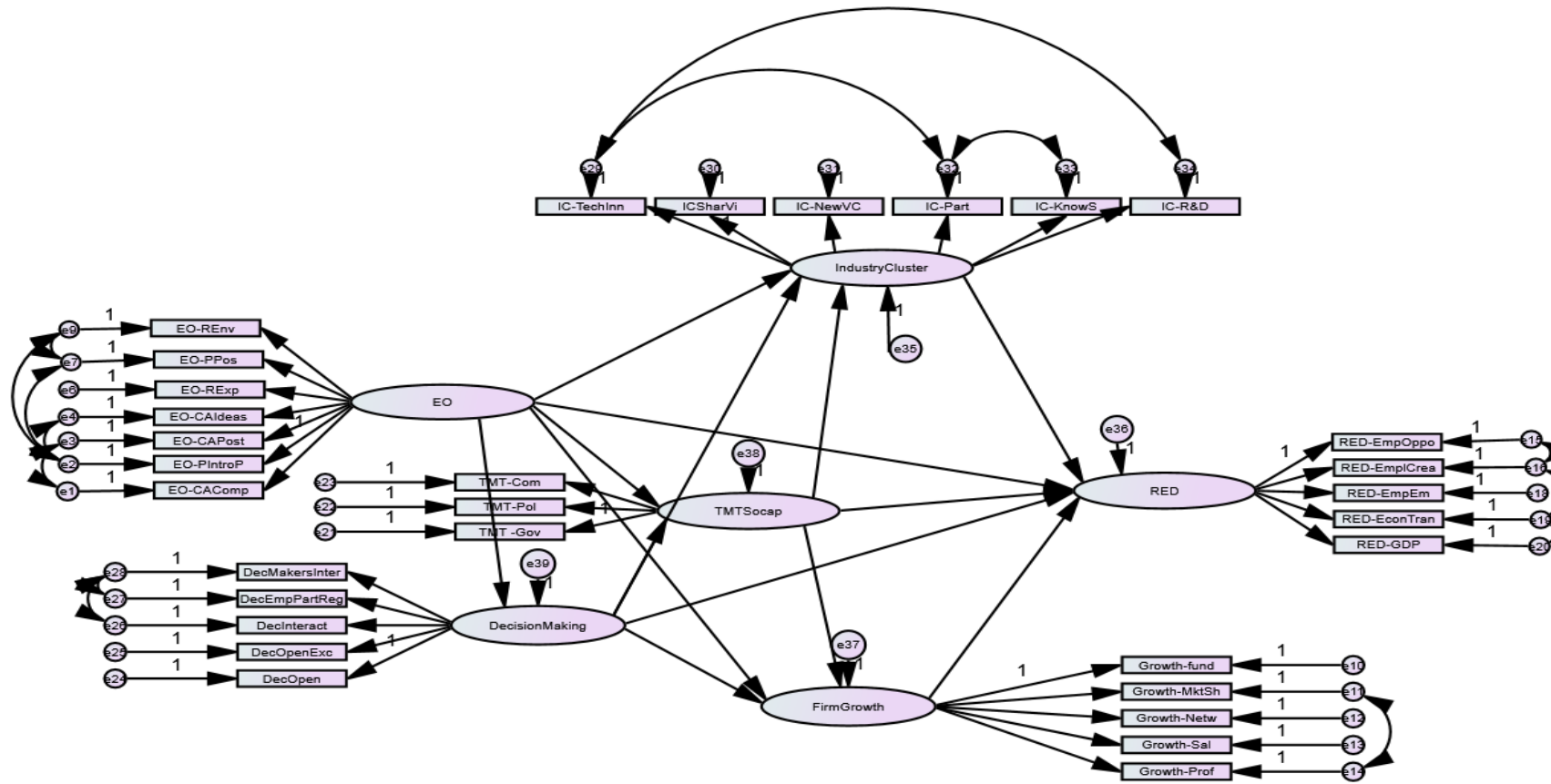
Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.040	.033	.047	.994
Independence model	.206	.201	.210	.000

Appendix 10 (c): Standardised correlation matrix for the 32 variables

Standardized Residual Covariances (All - Default model)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
EO15	0																																
IndCI1	0.665	-0.045																															
IndCI3	0.811	0.336	0.151																														
IndCI4	-0.119	0.361	0.066	0.029																													
IndCI6	0.656	0.229	0.775	0.952	0.05																												
IndCI7	1.64	-0.23	-0.328	-0.441	-0.118	0.023																											
IndCI8	0.598	0.065	-0.075	-0.038	-0.176	0.411	0.085																										
DecPat	2.209	-0.241	1.614	0.295	1.3	0.896	1.1	0.135																									
DecTeam	-0.504	-0.687	1.321	-1.552	1.198	0.132	-0.556	0.081	-0.023																								
DecReg	-0.133	0.022	1.76	-0.949	0.788	1.488	0.557	0.113	-0.045	0.066																							
DecInt	-0.038	-0.564	1.317	-1.579	0.561	0.43	-0.752	0.206	0.033	0.228	0.282																						
DecOpen	-0.094	-0.976	0.525	-1.462	-0.136	-0.545	-1.02	-0.228	0.287	0.084	0.289	0.122																					
SocComm	0.418	-0.242	0.63	0.151	-0.29	-0.288	0.282	0.807	-0.379	0.442	-0.107	-0.743	-0.001																				
SocPol	-0.247	-0.918	-0.249	0.263	-0.708	-0.178	-0.433	0.438	-0.525	0.652	0.035	-0.038	0.157	-0.048																			
SolGov	2.21	1.223	1.364	2.006	0.411	1.09	1.717	1.755	0.069	0.251	-0.247	0.311	0.009	-0.353	0.042																		
RED1_GDP	1.468	-0.858	-0.671	-0.066	-1.428	-0.814	-0.264	0.13	-0.513	0.132	-0.2	-0.653	1.174	0.79	1.936	0.153																	
RED2_EcoT	0.45	-0.332	-0.906	0.385	-0.978	-0.361	0.065	0.546	-0.319	0.754	-0.271	-0.502	-0.197	0.216	1.505	0.23	0.182																
RED3_EmEmp	0.123	0.859	0.287	1.663	0.259	0.247	1.217	0.399	-0.03	0.593	0.153	-0.36	-0.358	-0.966	0.494	0.313	0.393	0.194															
RED5_EmpCre	3.374	1.262	0.819	0.243	1.332	0.812	1.509	1.097	0.996	1.297	0.816	0.422	0.197	-0.731	0.663	-0.255	0.041	-0.088	0.161														
RED6_EmpOpp	4.11	1.558	0.941	0.926	0.939	0.6	1.28	1.576	1.408	1.946	1.396	1.356	1.04	-0.083	0.735	-0.299	0.014	-0.294	0.159	0.129													
PerProf	1.925	-0.763	-0.404	0.015	-1.078	-0.136	-0.715	0.956	0.064	1.517	0.246	0.128	-1.087	0.271	0.36	0.899	-0.547	-0.759	0.469	1.577	0.19												
PerSales	2.008	0.247	0.495	0.628	-0.809	0.789	0.232	0.997	0.108	0.85	-0.211	-0.009	-0.768	0.363	1.328	0.926	-0.188	-0.127	1.24	1.694	0.286	0.112											
PerfNetw	1.82	-0.108	0.193	0.503	-0.027	0.877	0.026	1.4	0.564	0.755	0.349	0.237	-0.895	0.275	1.002	0.448	0.025	-0.357	1.237	1.509	0.21	0.209	0.249										
PerMkt	2.461	0.753	0.933	0.555	0.135	1.712	0.973	0.891	0.053	0.444	-0.296	-0.905	-0.041	0.417	1.618	1.444	0.612	0.168	2.03	2.384	0.201	0.074	0.237	0.155									
PerFund	2.387	0.929	0.572	1.572	-0.134	1.635	0.777	1.297	0.688	1.503	0.324	0.942	-0.73	-0.264	1.506	0.925	0.818	0.617	1.934	2.266	0.277	0.071	0.453	-0.026	0.177								
EO7	-0.694	-0.145	0.863	0.655	0.941	-0.034	-0.178	1.742	1.353	-0.231	0.124	-0.505	-0.521	-0.782	2.546	-1.425	-0.811	0.26	1.274	0.958	-0.801	-0.82	-0.124	-0.404	0.503	-0.125							
EO8	-0.17	-0.264	0.912	0.305	0.469	0.162	-0.884	1.374	0.747	0.827	0.593	0.886	-0.407	-1.047	1.953	-0.919	-0.994	-0.361	1.556	1.545	-0.037	-0.472	-0.172	-0.014	0.692	-0.073	0.006						
EO5	-0.475	-0.822	-0.24	-0.541	-1.04	-0.402	-1.5	2.609	1.204	1.165	0.979	0.922	-1.132	-2.279	0.031	-1.235	-1.612	-2.162	1.628	1.472	-0.705	-0.58	-0.237	-0.667	1.155	0.934	1.11	-0.034					
EO13	0.347	-0.328	-0.164	-0.346	-0.534	-0.043	0.554	1.524	0.114	-0.575	-0.05	0.248	0.229	0.001	3.015	0.571	0.318	0.197	2.434	2.121	0.172	-0.088	0.579	0.547	0.26	0.251	-0.186	-0.126	0.198				
EO14	0.07	0.756	0.216	-0.597	2.265	1.647	0.256	0.742	-0.723	-0.937	-0.372	-0.748	-0.082	0.094	1.794	0.331	-0.04	0.015	3.452	3.053	0.045	-0.306	0.309	0.628	0.449	-1.159	-0.765	-1.213	0.992	0.079			
EO12	0.115	-0.531	-0.819	-2.025	-0.274	1.214	-0.568	0.416	-0.725	-0.591	-0.232	-0.497	-0.578	-0.149	1.535	1.35	0.899	-1.013	1.795	1.892	0.524	-0.467	0.901	1.333	0.895	0.076	-0.006	-0.46	0.208	1.564	0.147		

APPENDIX 11: PATH ANALYSIS FOR THE STRUCTURAL EQUATION MODEL



Measurements for Model Fit Summary

RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	.143	.885	.859	.723
Saturated model	.000	1.000		
Independence model	.825	.222	.170	.208

Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.903	.889	.963	.957	.963
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.042	.036	.049	.976
Independence model	.206	.201	.210	.000

Regression Weights: (All - Default model)

			Estimate	S.E.	C.R.	P	Label
DecisionMaking	<---	EO	.554	.067	8.298	***	
TMTSocap	<---	EO	.163	.074	2.197	.028	
TMTSocap	<---	DecisionMaking	.120	.073	1.639	.101	
IndustryCluster	<---	EO	.454	.075	6.028	***	
FirmGrowth	<---	EO	.356	.070	5.104	***	
FirmGrowth	<---	DecisionMaking	-.124	.064	-1.941	.052	
IndustryCluster	<---	DecisionMaking	.078	.067	1.171	.242	
IndustryCluster	<---	TMTSocap	.419	.076	5.503	***	
FirmGrowth	<---	TMTSocap	.358	.071	5.018	***	
RED	<---	IndustryCluster	.252	.070	3.583	***	
RED	<---	FirmGrowth	.427	.070	6.086	***	
RED	<---	EO	.090	.073	1.225	.221	
RED	<---	DecisionMaking	-.047	.058	-.799	.424	
RED	<---	TMTSocap	.185	.074	2.480	.013	
EO12	<---	EO	1.000				
EO14	<---	EO	.908	.085	10.655	***	
EO13	<---	EO	1.015	.067	15.261	***	
EO5	<---	EO	.815	.078	10.399	***	
EO8	<---	EO	.873	.085	10.248	***	
EO7	<---	EO	.826	.087	9.484	***	
PerFund	<---	FirmGrowth	1.000				
PerMkt	<---	FirmGrowth	1.087	.069	15.856	***	
PerfNetw	<---	FirmGrowth	1.066	.064	16.573	***	
PerSales	<---	FirmGrowth	1.096	.066	16.628	***	
PerProf	<---	FirmGrowth	1.102	.066	16.691	***	
RED6_EmpOpp	<---	RED	1.000				

			Estimate	S.E.	C.R.	P	Label
RED5_EmpCre	<---	RED	1.065	.062	17.301	***	
RED3_EmEmp	<---	RED	1.096	.095	11.523	***	
RED2_EcoT	<---	RED	1.193	.103	11.566	***	
RED1_GDP	<---	RED	1.050	.096	10.904	***	
SolGov	<---	TMTSocap	1.000				
SocPol	<---	TMTSocap	1.316	.133	9.891	***	
SocComm	<---	TMTSocap	1.392	.139	9.979	***	
DecOpen	<---	DecisionMaking	1.000				
DecInt	<---	DecisionMaking	1.109	.057	19.571	***	
DecReg	<---	DecisionMaking	.990	.068	14.488	***	
DecTeam	<---	DecisionMaking	.843	.064	13.141	***	
DecPat	<---	DecisionMaking	.851	.061	13.876	***	
IndCl8	<---	IndustryCluster	1.000				
IndCl7	<---	IndustryCluster	1.108	.074	14.976	***	
IndCl6	<---	IndustryCluster	.922	.068	13.578	***	
IndCl4	<---	IndustryCluster	.543	.060	8.997	***	
IndCl3	<---	IndustryCluster	.827	.065	12.693	***	
IndCl1	<---	IndustryCluster	.988	.085	11.645	***	
EO15	<---	EO	.950	.083	11.411	***	

Standardized Regression Weights: (All - Default model)

			Estimate
DecisionMaking	<---	EO	.568
TMTSocap	<---	EO	.191
TMTSocap	<---	DecisionMaking	.137
IndustryCluster	<---	EO	.454
FirmGrowth	<---	EO	.403

		Estimate
FirmGrowth	<--- DecisionMaking	-.136
IndustryCluster	<--- DecisionMaking	.076
IndustryCluster	<--- TMTSocap	.356
FirmGrowth	<--- TMTSocap	.345
RED	<--- IndustryCluster	.273
RED	<--- FirmGrowth	.408
RED	<--- EO	.097
RED	<--- DecisionMaking	-.049
RED	<--- TMTSocap	.170
EO12	<--- EO	.742
EO14	<--- EO	.675
EO13	<--- EO	.800
EO5	<--- EO	.650
EO8	<--- EO	.706
EO7	<--- EO	.650
PerFund	<--- FirmGrowth	.752
PerMkt	<--- FirmGrowth	.863
PerfNetw	<--- FirmGrowth	.883
PerSales	<--- FirmGrowth	.886
PerProf	<--- FirmGrowth	.899
RED6_EmpOpp	<--- RED	.661
RED5_EmpCre	<--- RED	.728
RED3_EmEmp	<--- RED	.824
RED2_EcoT	<--- RED	.904
RED1_GDP	<--- RED	.770
SolGov	<--- TMTSocap	.629
SocPol	<--- TMTSocap	.772

			Estimate
SocComm	<---	TMTSocap	.801
DecOpen	<---	DecisionMaking	.832
DecInt	<---	DecisionMaking	.917
DecReg	<---	DecisionMaking	.738
DecTeam	<---	DecisionMaking	.686
DecPat	<---	DecisionMaking	.719
IndCl8	<---	IndustryCluster	.792
IndCl7	<---	IndustryCluster	.820
IndCl6	<---	IndustryCluster	.751
IndCl4	<---	IndustryCluster	.487
IndCl3	<---	IndustryCluster	.708
IndCl1	<---	IndustryCluster	.729
EO15	<---	EO	.726

Covariances: (All - Default model)

	Estimate	S.E.	C.R.	P	Label
e15 <--> e16	.972	.132	7.362	***	
e2 <--> e4	.288	.104	2.783	.005	
e16 <--> e19	-.180	.061	-2.968	.003	
e15 <--> e19	-.227	.065	-3.521	***	
e19 <--> e20	.363	.090	4.030	***	
e32 <--> e33	.431	.082	5.261	***	
e7 <--> e9	.590	.103	5.730	***	
e29 <--> e34	-.333	.081	-4.098	***	
e27 <--> e28	.239	.076	3.144	.002	
e26 <--> e28	-.216	.072	-3.016	.003	
e11 <--> e14	-.167	.035	-4.750	***	

	Estimate	S.E.	C.R.	P	Label
e29 <--> e32	.277	.079	3.512	***	
e3 <--> e1	.510	.106	4.824	***	
e2 <--> e7	-.316	.086	-3.680	***	
e2 <--> e9	-.329	.092	-3.596	***	

Correlations: (All - Default model)

	Estimate
e15 <--> e16	.626
e2 <--> e4	.262
e16 <--> e19	-.234
e15 <--> e19	-.260
e19 <--> e20	.540
e32 <--> e33	.336
e7 <--> e9	.436
e29 <--> e34	-.292
e27 <--> e28	.215
e26 <--> e28	-.191
e11 <--> e14	-.393
e29 <--> e32	.231
e3 <--> e1	.357
e2 <--> e7	-.250
e2 <--> e9	-.236

Variances: (All - Default model)

	Estimate	S.E.	C.R.	P	Label
EO	1.597	.234	6.838	***	
e39	1.028	.126	8.171	***	
e38	1.059	.193	5.493	***	

	Estimate	S.E.	C.R.	P	Label
e37	.888	.121	7.354	***	
e35	.833	.118	7.045	***	
e36	.669	.119	5.643	***	
e2	1.307	.148	8.802	***	
e3	1.574	.146	10.767	***	
e4	.924	.107	8.674	***	
e6	1.452	.131	11.111	***	
e7	1.228	.120	10.254	***	
e9	1.493	.139	10.749	***	
e10	.961	.083	11.555	***	
e11	.506	.055	9.229	***	
e12	.400	.040	9.896	***	
e13	.412	.042	9.819	***	
e14	.358	.044	8.227	***	
e15	1.760	.168	10.487	***	
e16	1.370	.140	9.775	***	
e18	.773	.091	8.514	***	
e19	.435	.095	4.576	***	
e20	1.037	.115	9.040	***	
e21	1.770	.169	10.455	***	
e22	1.355	.175	7.727	***	
e23	1.251	.182	6.876	***	
e24	.677	.070	9.656	***	
e25	.353	.058	6.111	***	
e26	1.241	.115	10.791	***	
e27	1.210	.108	11.219	***	
e28	1.029	.095	10.776	***	

	Estimate	S.E.	C.R.	P	Label
e29	.949	.103	9.258	***	
e30	.953	.101	9.391	***	
e31	1.048	.099	10.554	***	
e32	1.514	.128	11.875	***	
e33	1.085	.099	10.971	***	
e34	1.373	.136	10.126	***	
e1	1.295	.126	10.290	***	

Squared Multiple Correlations: (All - Default model)

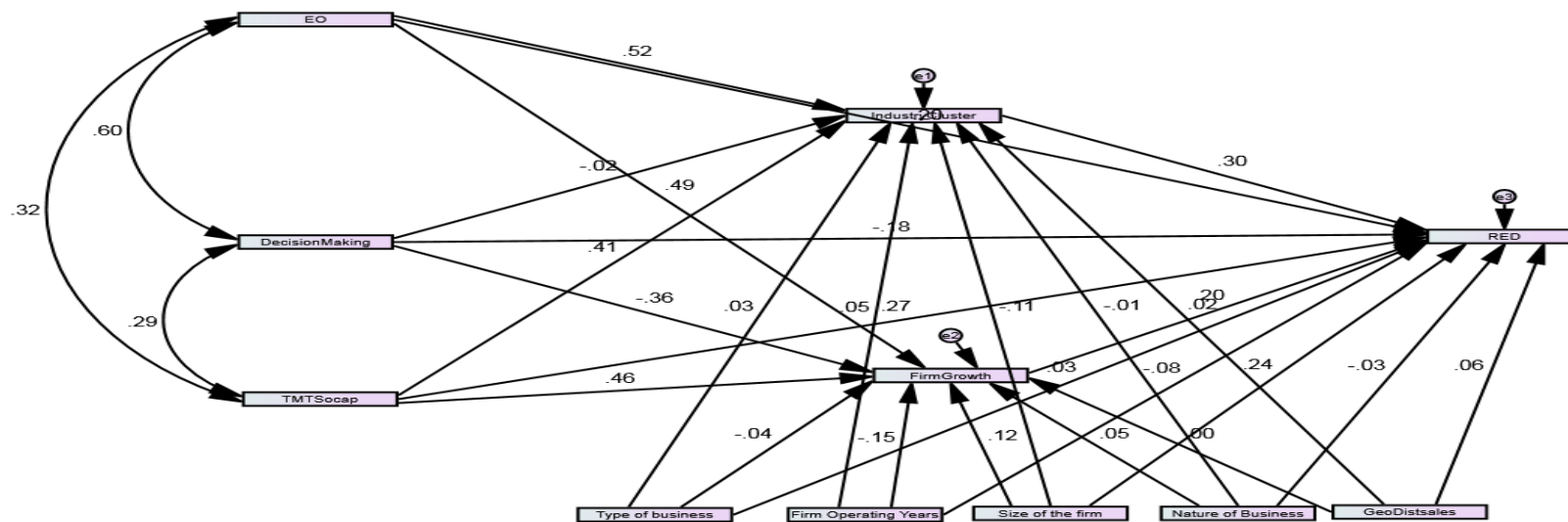
	Estimate
DecisionMaking	.323
TMTSocap	.085
IndustryCluster	.479
FirmGrowth	.289
RED	.510
EO15	.526
IndCl1	.532
IndCl3	.502
IndCl4	.237
IndCl6	.565
IndCl7	.673
IndCl8	.627
DecPat	.516
DecTeam	.471
DecReg	.545
DecInt	.841

	Estimate
DecOpen	.692
SocComm	.642
SocPol	.597
SolGov	.395
RED1_GDP	.592
RED2_EcoT	.817
RED3_EmEmp	.680
RED5_EmpCre	.530
RED6_EmpOpp	.437
PerProf	.809
PerSales	.785
PerfNetw	.780
PerMkt	.745
PerFund	.565
EO7	.422
EO8	.498
EO5	.422
EO13	.640
EO14	.455
EO12	.550

APPENDIX 12: HYPOTHESIS TESTING-

Appendix 12 (a): Effects of firm EO, TMT decision making and TMTSocap on regional economic development between family firms and nonfamily firms.

Standardised Model – before modifications -Control variables on Industry cluster-firm growth and RED



Measurement Model fit summary

Item	Chi-Square	DF	Ratio x ² : df	RMSEA	IFI	TLI	CFI	GFI
Model fit	242.484	26	9:1	.165	.804	.573	.798	0.877
P	.000							

RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	.206	.877	.688	.346
Saturated model	.000	1.000		
Independence model	.406	.564	.477	.470

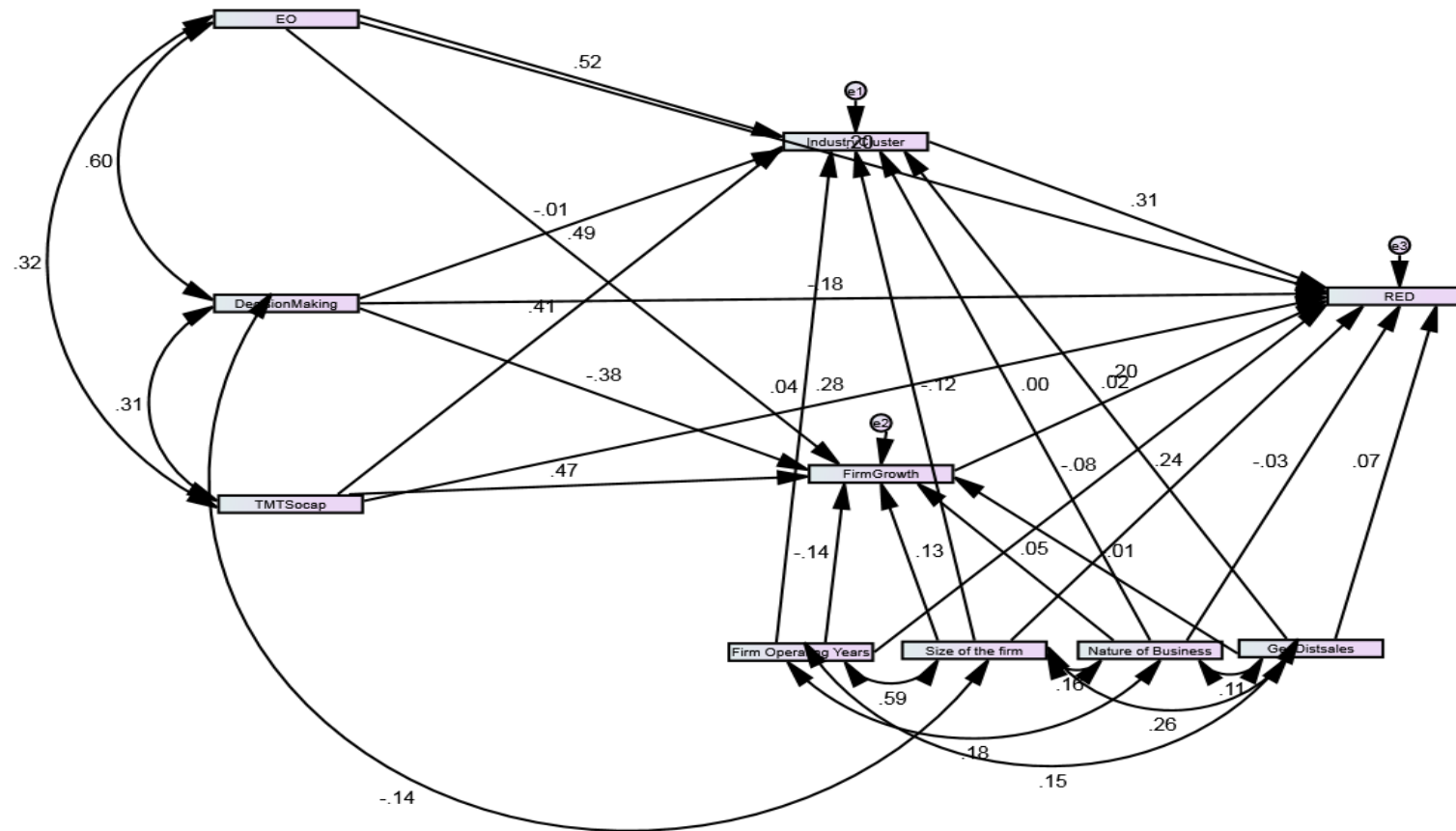
Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.785	.546	.804	.573	.798
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.165	.146	.184	.000
Independence model	.253	.240	.266	.000

Appendix 12 (b) Standardised Model – After modifications



Measurement Model fit Summary

RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	.108	.973	.874	.212
Saturated model	.000	1.000		
Independence model	.448	.541	.439	.443

Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.961	.852	.978	.913	.977
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.037	.028	.045	.997
Independence model	.124	.120	.128	.000

Regression Weights: (All - Default model)

	Estimate	S.E.	C.R.	P	Label
FirmGrowth <--- GeoDist	-.005	.042	-.130	.897	par_7
IndustryCluster <--- GeoDist	.024	.043	.561	.575	par_8
FirmGrowth <--- NatureBus	.081	.070	1.152	.249	par_9
IndustryCluster <--- NatureBus	-.006	.073	-.079	.937	par_11
FirmGrowth <--- FirmSize	.141	.062	2.284	.022	par_12
IndustryCluster <--- FirmSize	-.150	.064	-2.349	.019	par_13
IndustryCluster <--- FirmAge	.030	.032	.936	.349	par_15
FirmGrowth <--- FirmAge	-.080	.031	-2.596	.009	par_17
IndustryCluster <--- TMTSocap	.412	.040	10.309	***	par_25
FirmGrowth <--- EO	.488	.054	9.013	***	par_28
IndustryCluster <--- EO	.603	.056	10.778	***	par_29
IndustryCluster <--- DecisionMaking	-.014	.053	-.268	.788	par_30
FirmGrowth <--- TMTSocap	.399	.039	10.302	***	par_31
FirmGrowth <--- DecisionMaking	-.347	.051	-6.769	***	par_32
RED <--- EO	.218	.069	3.178	.001	par_1

			Estimate	S.E.	C.R.	P	Label
RED	<---	DecisionMaking	-.187	.054	-3.439	***	par_2
RED	<---	TMTSocap	.261	.050	5.248	***	par_3
RED	<---	IndustryCluster	.288	.055	5.268	***	par_4
RED	<---	FirmGrowth	.218	.056	3.867	***	par_5
RED	<---	GeoDist	.070	.041	1.694	.090	par_6
RED	<---	NatureBus	-.057	.069	-.826	.409	par_10
RED	<---	FirmSize	.291	.062	4.682	***	par_14
RED	<---	FirmAge	-.051	.031	-1.674	.094	par_16

Standardized Regression Weights: (All - Default model)

			Estimate
FirmGrowth	<---	GeoDist	-.006
IndustryCluster	<---	GeoDist	.022
FirmGrowth	<---	NatureBus	.050
IndustryCluster	<---	NatureBus	-.003
FirmGrowth	<---	FirmSize	.127
IndustryCluster	<---	FirmSize	-.115
IndustryCluster	<---	FirmAge	.044
FirmGrowth	<---	FirmAge	-.139
IndustryCluster	<---	TMTSocap	.412
FirmGrowth	<---	EO	.493
IndustryCluster	<---	EO	.518
IndustryCluster	<---	DecisionMaking	-.013
FirmGrowth	<---	TMTSocap	.469
FirmGrowth	<---	DecisionMaking	-.376
RED	<---	EO	.198
RED	<---	DecisionMaking	-.182
RED	<---	TMTSocap	.277
RED	<---	IndustryCluster	.305
RED	<---	FirmGrowth	.197
RED	<---	GeoDist	.067
RED	<---	NatureBus	-.032
RED	<---	FirmSize	.236
RED	<---	FirmAge	-.081

Covariances: (All - Default model)

			Estimate	S.E.	C.R.	P	Label
EO	<-->	DecisionMaking	.859	.094	9.147	***	par_18
EO	<-->	TMTSocap	.494	.093	5.331	***	par_19
DecisionMaking	<-->	TMTSocap	.517	.098	5.279	***	par_20
FirmSize	<-->	FirmAge	1.217	.135	9.033	***	par_21
NatureBus	<-->	FirmSize	.119	.041	2.872	.004	par_22
GeoDist	<-->	NatureBus	.093	.049	1.883	.060	par_23
GeoDist	<-->	FirmSize	.322	.072	4.451	***	par_24
NatureBus	<-->	FirmAge	.257	.082	3.142	.002	par_26
GeoDist	<-->	FirmAge	.355	.140	2.546	.011	par_27
DecisionMaking	<-->	FirmSize	-.179	.046	-3.894	***	par_33

Correlations: (All - Default model)

			Estimate
EO	<-->	DecisionMaking	.604
EO	<-->	TMTSocap	.320
DecisionMaking	<-->	TMTSocap	.312
FirmSize	<-->	FirmAge	.594
NatureBus	<-->	FirmSize	.164
GeoDist	<-->	NatureBus	.108
GeoDist	<-->	FirmSize	.259
NatureBus	<-->	FirmAge	.183
GeoDist	<-->	FirmAge	.147
DecisionMaking	<-->	FirmSize	-.141

Variances: (All - Default model)

	Estimate	S.E.	C.R.	P	Label
EO	1.324	.107	12.356	***	par_166
DecisionMaking	1.527	.122	12.511	***	par_167
TMTSocap	1.798	.146	12.356	***	par_168
GeoDist	1.466	.119	12.356	***	par_169
NatureBus	.498	.040	12.356	***	par_170
FirmSize	1.055	.084	12.512	***	par_171
FirmAge	3.975	.322	12.356	***	par_172
e1	.766	.062	12.356	***	par_173
e2	.718	.058	12.356	***	par_174
e3	.700	.057	12.356	***	par_175

Residual Covariances (Nonfamily firm - Default model)

	Firm Age	Firm Size	NatureBus	GeoDist	TMT Socap	Decision Making	EO	FirmGrowth	Industry Cluster	RED
FirmAge	.000									
FirmSize	.037	.020								
NatureBus	.000	.014	.000							
GeoDist	.000	.011	.000	.000						
TMT Socap	.696	.412	.008	.097	.000					
Decision Making	.107	.088	-.024	.133	-.048	-.050				
EO	.100	.131	.051	.138	.000	-.034	.000			
FirmGrowth	.233	.201	.043	.072	.019	-.017	.025	.036		
Industry Cluster	.163	.221	.039	.122	-.021	-.044	.011	-.084	-.029	
RED	.307	.228	.035	.073	.125	.021	.065	.058	.052	.138

Outcome of Group differences family firms and Nonfamily firm

Standardized Residual Covariances (Nonfamily firm - Default model)

	Firm Age	Firm Size	NatureBus	GeoDist	TMT Socap	Decision Making	EO	FirmGrowth	Industry Cluster	RED
FirmAge	.000									
FirmSize	.199	.168								
NatureBus	.000	.224	.000							
GeoDist	.000	.114	.000	.000						
TMT Socap	3.413	3.867	.107	.781	.000					
Decision Making	-.685	1.067	-.413	1.403	-.426	-.440				

	Firm Age	Firm Size	NatureBus	Geo Dist	TMT Socap	Decision Making	EO	FirmGrowth	Industry Cluster	RED
EO	-.636	1.593	.853	1.444	.000	-.359	.000			
FirmGrowth	1.379	2.272	.676	.702	.148	-.196	.257	.274		
Industry Cluster	.837	2.177	.525	1.034	-.142	-.400	-.092	-.710	-.163	
RED	1.645	2.263	.491	.636	.875	.220	.626	.500	.386	.861

APPENDIX 13: HYPOTHESIS TESTING BASED ON FIRM IDENTITY (FAMILY AND NONFAMILY FIRMS)

			Family Firm		Nonfamily firm		z-score
			Estimate	P	Estimate	P	
FirmGrowth	<---	GeoDist	0.098	0.156	-0.063	0.222	-1.867*
IndustryCluster	<---	GeoDist	0.040	0.543	0.000	0.997	-0.468
FirmGrowth	<---	NatureBus	0.064	0.624	0.086	0.291	0.145
IndustryCluster	<---	NatureBus	0.055	0.659	-0.040	0.647	-0.624
FirmGrowth	<---	FirmSize	0.162	0.108	0.101	0.190	-0.478
IndustryCluster	<---	FirmSize	-0.288	0.003	-0.075	0.371	1.664*
IndustryCluster	<---	FirmAge	0.106	0.028	0.011	0.794	-1.476
FirmGrowth	<---	FirmAge	-0.117	0.021	-0.048	0.219	1.079
IndustryCluster	<---	TMTSocap	0.541	0.000	0.330	0.000	-2.582***
nFirmGrowth	<---	EO	0.394	0.000	0.603	0.000	1.939*
IndustryCluster	<---	EO	0.475	0.000	0.700	0.000	2.052**
IndustryCluster	<---	DecisionMaking	0.021	0.752	-0.055	0.511	-0.714
FirmGrowth	<---	TMTSocap	0.427	0.000	0.364	0.000	-0.775
FirmGrowth	<---	DecisionMaking	-0.342	0.000	-0.339	0.000	0.029
RED	<---	EO	0.278	0.002	0.109	0.287	-1.250
RED	<---	DecisionMaking	-0.236	0.000	-0.107	0.201	1.181
RED	<---	TMTSocap	0.138	0.097	0.291	0.000	1.463
RED	<---	IndustryCluster	0.364	0.000	0.274	0.000	-0.805

RED	<---	FirmGrowth	0.297	0.000	0.195	0.010	-0.898
RED	<---	GeoDist	0.033	0.605	0.083	0.118	0.590
RED	<---	NatureBus	-0.097	0.422	-0.059	0.488	0.262
RED	<---	FirmSize	0.242	0.013	0.357	0.000	0.913
RED	<---	FirmAge	-0.082	0.094	-0.047	0.248	0.549
Notes: *** p-value < 0.01; ** p-value < 0.05; * p-value < 0.10							

Firm EO and Firm Growth, INduCluster, and RED

There is a strong positive relationship between firm TMT EO and Firm Growth, however, non-family firms (0.634) have a higher positive relationship compared to family firms (0.389), there is a significant difference between the two (z=0.0245)

There is a strong positive relationship between firm TMT EO and Firm Involvement within clusters, However, nonfamily (0.681) firms are more likely to be involved within the cluster than family firms (0.485), However, there is no significant differences between the two(z=0.1767)

There is a positive relationship between firm TMT EO and RED, where family firms (0.278) and nonfamily (0.108), However there is no significant difference between the two (z=-1.232).

Decision making and Firm Growth, Industry cluster

There is a negative relationship between TMT decision making within the firm and firm growth, family firms (-0.349) and non-family firms (-0.371), However there is no significant difference between the two (z=-0.218)

Family firms have a positive relationship between TMT decision making and Industry cluster involvement (0.053), while nonfamily firms have a negative relationship between decision TMTmaking and Firm involvement within Industry Cluster (-0.032). However, there is no significant difference between the two (z.-0.809)

There is a negative relationship between firm TMT decision making and RED, where family firms (-0.236) and nonfamily (-0.107), However there is no significant difference between the two ($z=-1.204$).

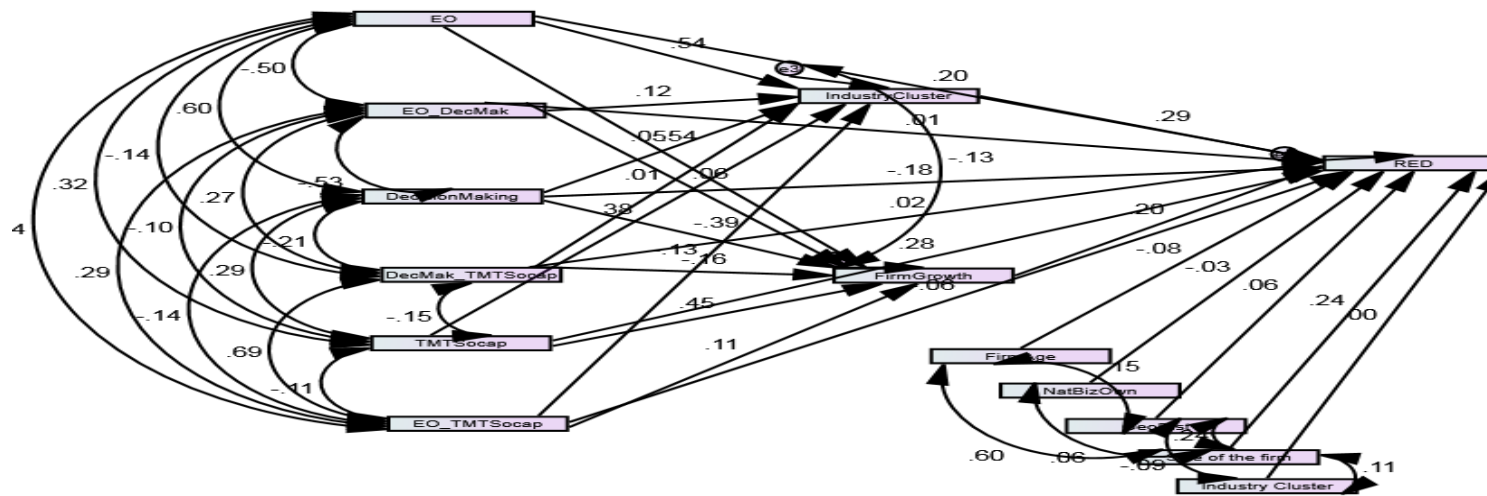
TMTSocap and Firm Growth and Inducluster

There is a significant positive relationship between TMT social Capital and Firm Growth, with Family firms (0.446, $p>0.05$) and nonfamily firms (0.366, $p>0.05$), but not significantly different between the two types of firms ($p=-0.996$).

There is significant positive relationship between TMT Bridging Social Capital and firm Involvement within Industry, with family firms (0.510, $p>0.05$), and nonfamily firms (0.316, $p >0.05$) however, there is a significant difference between family firms and nonfamily firms, ($p>-0.02396$)

There is a positive relationship between firm TMT Bridging Social Capital and RED, where family firms (0.138) and nonfamily (0.291), However there is no significant difference between the two ($z=-1.204$).

APPENDIX 14: INTERACTION EFFECTS MODEL



Measurement Model fit Summary

RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	.080	.965	.916	.404
Saturated model	.000	1.000		
Independence model	.373	.550	.481	.477

Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.945	.886	.973	.943	.972
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.054	.036	.072	.326
Independence model	.226	.216	.236	.000

Regression Weights: (All - Default model)

		Estimate	S.E.	C.R.	P	Label
FirmGrowth	<--- EO	.540	.056	9.613	***	par_18
IndustryCluster	<--- EO	.622	.057	10.840	***	par_19
FirmGrowth	<--- DecisionMaking	-.368	.053	-6.886	***	par_20
IndustryCluster	<--- DecisionMaking	.058	.055	1.070	.285	par_21
FirmGrowth	<--- TMTSocap	.390	.039	9.988	***	par_22
IndustryCluster	<--- TMTSocap	.372	.040	9.345	***	par_23
IndustryCluster	<--- EO_DecMak	.111	.043	2.615	.009	par_39
FirmGrowth	<--- EO_DecMak	.049	.042	1.188	.235	par_40
IndustryCluster	<--- DecMak_TMTSocap	.012	.065	.181	.856	par_41
FirmGrowth	<--- DecMak_TMTSocap	-.174	.063	-2.752	.006	par_42
IndustryCluster	<--- EO_TMTSocap	-.147	.062	-2.393	.017	par_43
FirmGrowth	<--- EO_TMTSocap	.109	.060	1.800	.072	par_44
RED	<--- IndustryCluster	.278	.056	5.003	***	par_1
RED	<--- FirmGrowth	.221	.057	3.892	***	par_2
RED	<--- FirmAge	-.052	.030	-1.720	.085	par_3

			Estimate	S.E.	C.R.	P	Label
RED	<---	NatureBus	-.061	.068	-.894	.371	par_4
RED	<---	GeoDist	.065	.041	1.587	.113	par_5
RED	<---	FirmSize	.297	.060	4.950	***	par_7
RED	<---	InduClus	-.002	.052	-.030	.976	par_8
RED	<---	EO	.223	.074	3.012	.003	par_15
RED	<---	TMTSocap	.260	.050	5.200	***	par_16
RED	<---	DecisionMaking	-.179	.057	-3.167	.002	par_17
RED	<---	EO_TMTSocap	-.071	.060	-1.184	.236	par_45
RED	<---	DecMak_TMTSocap	.029	.063	.457	.648	par_46
RED	<---	EO_DecMak	.012	.042	.281	.779	par_47

Standardized Regression Weights: (All - Default model)

			Estimate
FirmGrowth	<---	EO	.540
IndustryCluster	<---	EO	.539
FirmGrowth	<---	DecisionMaking	-.392
IndustryCluster	<---	DecisionMaking	.054
FirmGrowth	<---	TMTSocap	.453
IndustryCluster	<---	TMTSocap	.376
IndustryCluster	<---	EO_DecMak	.124
FirmGrowth	<---	EO_DecMak	.064
IndustryCluster	<---	DecMak_TMTSocap	.010
FirmGrowth	<---	DecMak_TMTSocap	-.163
IndustryCluster	<---	EO_TMTSocap	-.125
FirmGrowth	<---	EO_TMTSocap	.107
RED	<---	IndustryCluster	.294
RED	<---	FirmGrowth	.203
RED	<---	FirmAge	-.082
RED	<---	NatureBus	-.034
RED	<---	GeoDist	.062
RED	<---	FirmSize	.243
RED	<---	InduClus	-.001
RED	<---	EO	.204
RED	<---	TMTSocap	.278
RED	<---	DecisionMaking	-.175
RED	<---	EO_TMTSocap	-.064
RED	<---	DecMak_TMTSocap	.025
RED	<---	EO_DecMak	.014

Covariances: (All - Default model)

			Estimate	S.E.	C.R.	P	Label
FirmAge	<-->	GeoDist	.351	.139	2.529	.011	par_6
FirmAge	<-->	FirmSize	1.228	.136	9.040	***	par_9
NatureBus	<-->	FirmSize	.043	.032	1.345	.179	par_10
GeoDist	<-->	FirmSize	.297	.073	4.075	***	par_11
FirmSize	<-->	InduClus	.102	.044	2.300	.021	par_12
GeoDist	<-->	InduClus	-.100	.064	-1.554	.120	par_13
TMTSocap	<-->	DecisionMaking	.472	.098	4.822	***	par_24
EO	<-->	DecisionMaking	.851	.094	9.029	***	par_25
DecisionMaking	<-->	EO_DecMak	-.969	.118	-8.203	***	par_26
DecisionMaking	<-->	DecMak_TMTSocap	-.281	.077	-3.632	***	par_27
DecisionMaking	<-->	EO_TMTSocap	-.192	.080	-2.394	.017	par_28
EO	<-->	TMTSocap	.494	.093	5.337	***	par_29
TMTSocap	<-->	EO_DecMak	-.209	.115	-1.827	.068	par_30
TMTSocap	<-->	DecMak_TMTSocap	-.224	.084	-2.679	.007	par_31
TMTSocap	<-->	EO_TMTSocap	-.164	.087	-1.881	.060	par_32
EO	<-->	EO_DecMak	-.858	.109	-7.840	***	par_33
EO	<-->	DecMak_TMTSocap	-.180	.072	-2.506	.012	par_34
EO	<-->	EO_TMTSocap	-.178	.075	-2.374	.018	par_35
EO_DecMak	<-->	DecMak_TMTSocap	.434	.095	4.569	***	par_36
EO_DecMak	<-->	EO_TMTSocap	.487	.100	4.873	***	par_37
DecMak_TMTSocap	<-->	EO_TMTSocap	.842	.085	9.946	***	par_38
e1	<-->	e3	-.092	.042	-2.179	.029	par_14

Correlations: (All - Default model)

			Estimate
FirmAge	<-->	GeoDist	.146
FirmAge	<-->	FirmSize	.599
NatureBus	<-->	FirmSize	.060
GeoDist	<-->	FirmSize	.239
FirmSize	<-->	InduClus	.106
GeoDist	<-->	InduClus	-.088
TMTSocap	<-->	DecisionMaking	.287
EO	<-->	DecisionMaking	.603
DecisionMaking	<-->	EO_DecMak	-.531
DecisionMaking	<-->	DecMak_TMTSocap	-.212
DecisionMaking	<-->	EO_TMTSocap	-.138
EO	<-->	TMTSocap	.320
TMTSocap	<-->	EO_DecMak	-.105
TMTSocap	<-->	DecMak_TMTSocap	-.155
TMTSocap	<-->	EO_TMTSocap	-.108
EO	<-->	EO_DecMak	-.501
EO	<-->	DecMak_TMTSocap	-.145

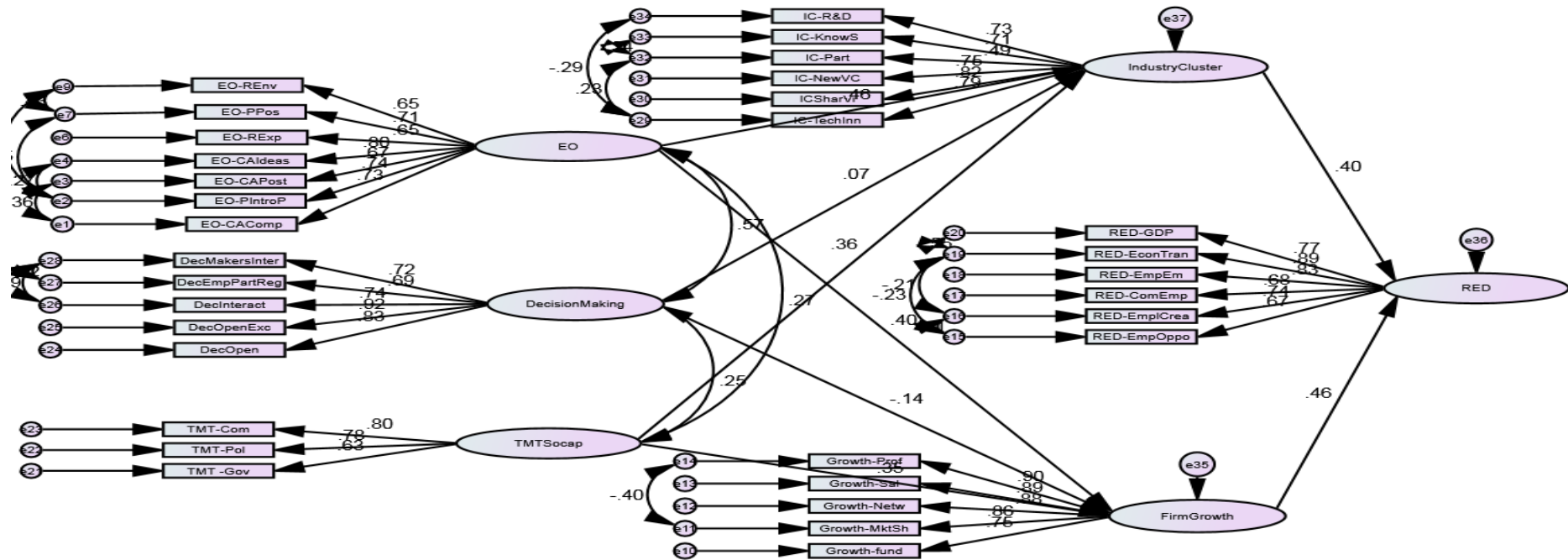
			Estimate
EO	<-->	EO_TMTSocap	-.137
EO_DecMak	<-->	DecMak_TMTSocap	.271
EO_DecMak	<-->	EO_TMTSocap	.290
DecMak_TMTSocap	<-->	EO_TMTSocap	.691
e1	<-->	e3	-.126

Variances: (All - Default model)

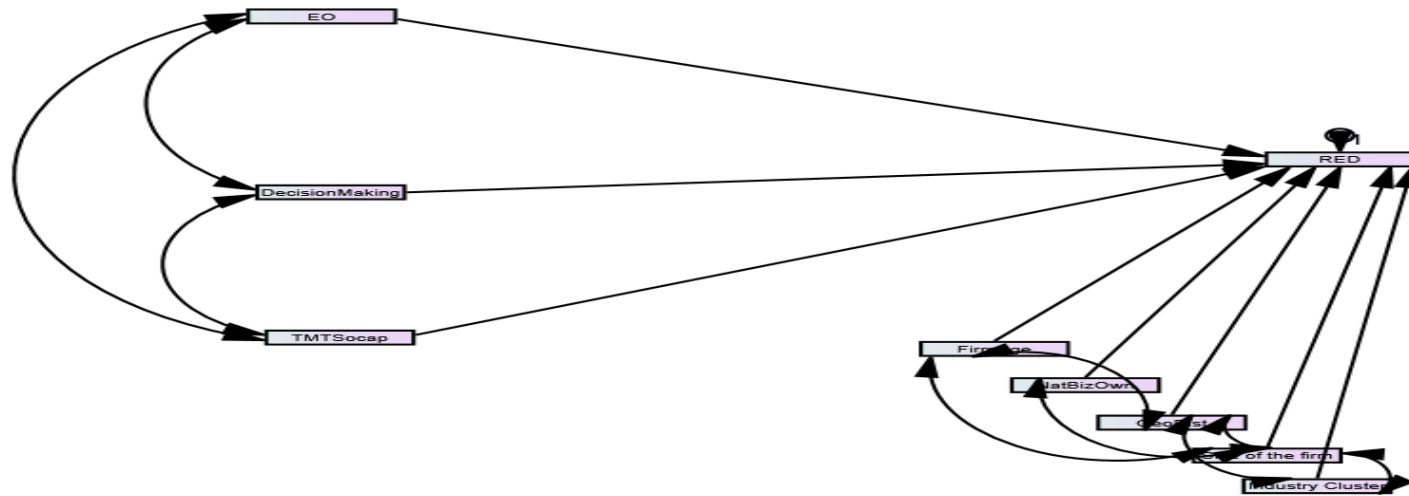
	Estimate	S.E.	C.R.	P	Label
FirmAge	3.975	.321	12.369	***	par_48
NatureBus	.498	.040	12.369	***	par_49
GeoDist	1.465	.118	12.371	***	par_50
FirmSize	1.057	.085	12.437	***	par_51
InduClus	.870	.070	12.369	***	par_52
EO	1.324	.107	12.369	***	par_53
TMTSocap	1.798	.145	12.369	***	par_54
DecisionMaking	1.506	.122	12.369	***	par_55
EO_DecMak	2.210	.179	12.369	***	par_56
DecMak_TMTSocap	1.163	.094	12.369	***	par_57
EO_TMTSocap	1.276	.103	12.369	***	par_58
e1	.718	.058	12.369	***	par_59
e3	.749	.061	12.369	***	par_60
e2	.696	.056	12.369	***	par_61

APPENDIX 15: MEDIATION EFFECT OF INDUSTRY CLUSTER INVOLVEMENT AND FIRM PERFORMANCE

Appendix 15 (a) Structural mediation model



Appendix 15 (b): Direct mediation Model



Summary of Measurement Model Fit

RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	.108	.962	.909	.406
Saturated model	.000	1.000		
Independence model	.344	.699	.624	.559

Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.909	.828	.937	.878	.935
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.081	.058	.106	.016
Independence model	.232	.217	.249	.000

Regression Weights: (Group number 1 - Default model)

	Estimate	S.E.	C.R.	P	Label
RED <--- FirmAge	-.060	.032	-1.871	.061	
RED <--- NatureBus	-.041	.072	-.568	.570	
RED <--- GeoDist	.076	.043	1.751	.080	
RED <--- FirmSize	.277	.064	4.343	***	
RED <--- InduClus	.009	.055	.154	.877	
RED <--- EO	.499	.056	8.855	***	
RED <--- TMTSocap	.466	.040	11.583	***	
RED <--- DecisionMaking	-.266	.052	-5.097	***	

Standardized Regression Weights: (Group number 1 - Default model)

	Estimate
RED <--- FirmAge	-.095
RED <--- NatureBus	-.023
RED <--- GeoDist	.073
RED <--- FirmSize	.227
RED <--- InduClus	.006
RED <--- EO	.457
RED <--- TMTSocap	.498
RED <--- DecisionMaking	-.260

Covariances: (Group number 1 - Default model)

	Estimate	S.E.	C.R.	P	Label
EO <--> DecisionMaking	.851	.094	9.029	***	
DecisionMaking <--> TMTSocap	.472	.098	4.822	***	
EO <--> TMTSocap	.494	.093	5.337	***	
FirmAge <--> GeoDist	.351	.139	2.529	.011	
FirmAge <--> FirmSize	1.228	.136	9.040	***	
NatureBus <--> FirmSize	.043	.032	1.345	.179	
GeoDist <--> FirmSize	.297	.073	4.075	***	
FirmSize <--> InduClus	.102	.044	2.300	.021	
GeoDist <--> InduClus	-.100	.064	-1.554	.120	

Correlations: (Group number 1 - Default model)

			Estimate
EO	<-->	DecisionMaking	.603
DecisionMaking	<-->	TMTSocap	.287
EO	<-->	TMTSocap	.320
FirmAge	<-->	GeoDist	.146
FirmAge	<-->	FirmSize	.599
NatureBus	<-->	FirmSize	.060
GeoDist	<-->	FirmSize	.239
FirmSize	<-->	InduClus	.106
GeoDist	<-->	InduClus	-.088

Variances: (Group number 1 - Default model)

	Estimate	S.E.	C.R.	P	Label
EO	1.324	.107	12.369	***	
DecisionMaking	1.506	.122	12.369	***	
TMTSocap	1.798	.145	12.369	***	
FirmAge	3.975	.321	12.369	***	
NatureBus	.498	.040	12.369	***	
GeoDist	1.465	.118	12.371	***	
FirmSize	1.057	.085	12.437	***	
InduClus	.870	.070	12.369	***	
e2	.788	.064	12.369	***	

Matrices

Residual Covariances (Group number 1 - Default model)

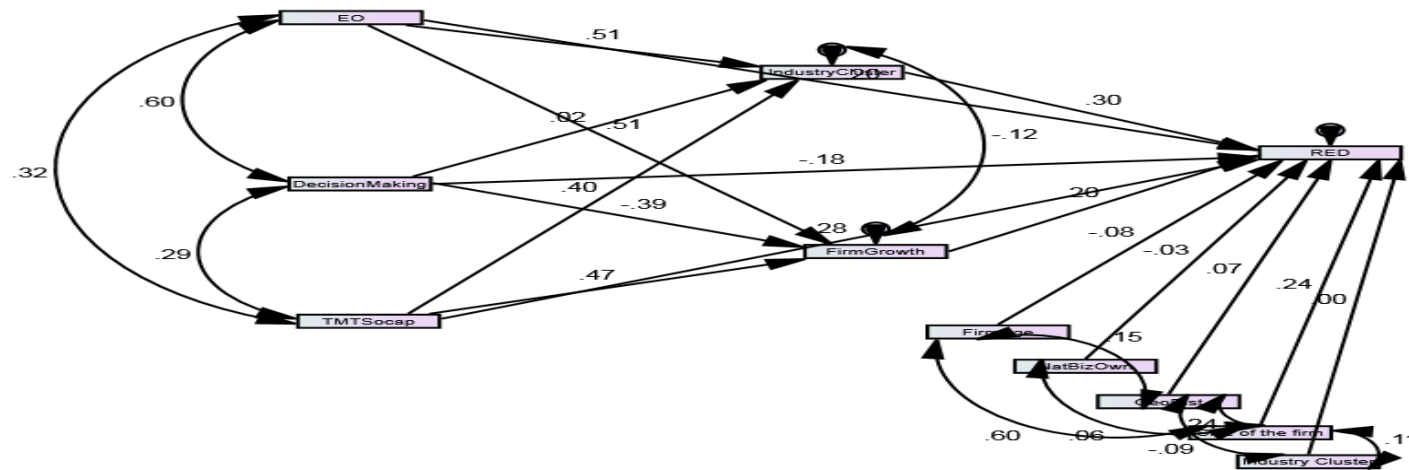
	InduClus	FirmSize	GeoDist	NatureBus	FirmAge	TMTSocap	DecisionMaking	EO	RED
InduClus	.000								
FirmSize	-.014	.012							
GeoDist	-.003	.009	.001						
NatureBus	-.028	.086	.093	.000					
FirmAge	-.037	.018	.004	.257	.000				
TMTSocap	.077	.283	.073	.012	.381	.000			
DecisionMaking	-.059	-.164	.174	-.014	-.163	.000	.000		
EO	-.026	.027	.133	.064	-.091	.000	.000	.000	
RED	.038	.188	.053	.056	.170	.061	-.022	.020	.089

Standardized Residual Covariances (Group number 1 - Default model)

	InduClus	FirmSize	GeoDist	NatureBus	FirmAge	TMTSocap	DecisionMaking	EO	RED
InduClus	.000								
FirmSize	-.252	.143							
GeoDist	-.051	.123	.006						
NatureBus	-.731	2.061	1.897	.000					
FirmAge	-.350	.132	.031	3.197	.000				
TMTSocap	1.083	3.592	.787	.213	2.490	.000			
DecisionMaking	-.901	-2.278	2.044	-.280	-1.164	.000	.000		
EO	-.422	.393	1.670	1.382	-.695	.000	.000	.000	
RED	.570	2.511	.603	1.111	1.186	.554	-.252	.221	.697

APPENDIX 16: ALL MEDIATION ITEMS INCLUDED EFFECT OF INDUSTRY CLUSTER INVOLVEMENT AND FIRM GROWTH MODIFIED MODEL

Appendix 16 (a) Standardised Mediation Model with coefficients



Measurements of Model fit Summary

RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	.095	.961	.911	.422
Saturated model	.000	1.000		
Independence model	.405	.569	.483	.475

Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.935	.877	.960	.923	.959
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.070	.050	.090	.053
Independence model	.251	.238	.264	.000

Regression Weights: (Group number 1 - Default model)

	Estimate	S.E.	C.R.	P	Label
FirmGrowth <--- EO	.514	.055	9.418	***	
IndustryCluster <--- EO	.588	.056	10.489	***	
FirmGrowth <--- DecisionMaking	-.371	.051	-7.334	***	
IndustryCluster <--- DecisionMaking	.017	.052	.322	.747	
FirmGrowth <--- TMTSocap	.404	.039	10.352	***	
IndustryCluster <--- TMTSocap	.392	.040	9.772	***	
RED <--- IndustryCluster	.288	.054	5.287	***	
RED <--- FirmGrowth	.218	.056	3.900	***	
RED <--- FirmAge	-.051	.030	-1.706	.088	
RED <--- NatureBus	-.057	.068	-.845	.398	

		Estimate	S.E.	C.R.	P	Label
RED	<--- GeoDist	.070	.041	1.700	.089	
RED	<--- FirmSize	.291	.060	4.837	***	
RED	<--- InduClus	.000	.052	.004	.997	
RED	<--- EO	.218	.070	3.121	.002	
RED	<--- TMTSocap	.261	.050	5.201	***	
RED	<--- DecisionMaking	-.187	.053	-3.494	***	

Standardized Regression Weights: (Group number 1 - Default model)

		Estimate
FirmGrowth	<--- EO	.513
IndustryCluster	<--- EO	.509
FirmGrowth	<--- DecisionMaking	-.395
IndustryCluster	<--- DecisionMaking	.015
FirmGrowth	<--- TMTSocap	.470
IndustryCluster	<--- TMTSocap	.395
RED	<--- IndustryCluster	.305
RED	<--- FirmGrowth	.200
RED	<--- FirmAge	-.081
RED	<--- NatureBus	-.032
RED	<--- GeoDist	.067
RED	<--- FirmSize	.238
RED	<--- InduClus	.000
RED	<--- EO	.200
RED	<--- TMTSocap	.279
RED	<--- DecisionMaking	-.182

Covariances: (Group number 1 - Default model)

			Estimate	S.E.	C.R.	P	Label
EO	<-->	DecisionMaking	.851	.094	9.029	***	
DecisionMaking	<-->	TMTSocap	.472	.098	4.822	***	
EO	<-->	TMTSocap	.494	.093	5.337	***	
FirmAge	<-->	GeoDist	.351	.139	2.529	.011	
FirmAge	<-->	FirmSize	1.228	.136	9.040	***	
NatureBus	<-->	FirmSize	.043	.032	1.345	.179	
GeoDist	<-->	FirmSize	.297	.073	4.075	***	
FirmSize	<-->	InduClus	.102	.044	2.300	.021	
GeoDist	<-->	InduClus	-.100	.064	-1.554	.120	
e1	<-->	e3	-.088	.044	-2.012	.044	

Variances: (Group number 1 - Default model)

	Estimate	S.E.	C.R.	P	Label
EO	1.324	.107	12.369	***	
DecisionMaking	1.506	.122	12.369	***	
TMTSocap	1.798	.145	12.369	***	
FirmAge	3.975	.321	12.369	***	
NatureBus	.498	.040	12.369	***	
GeoDist	1.465	.118	12.371	***	
FirmSize	1.057	.085	12.437	***	
InduClus	.870	.070	12.369	***	
e1	.739	.060	12.369	***	
e3	.781	.063	12.369	***	
e2	.700	.057	12.369	***	

Matrices

Residual Covariances (Group number 1 - Default model)

	InduCl us	FirmSiz e	GeoDi st	NatureB us	FirmAg e	TMTSoc ap	DecisionMaki ng	EO	FirmGrow th	IndustryClust er	RE D
InduClus	.000										
FirmSize	-.014	.012									
GeoDist	-.003	.009	.001								
NatureBus	-.028	.086	.093	.000							
FirmAge	-.037	.018	.004	.257	.000						
TMTSocap	.077	.283	.073	.012	.381	.000					
DecisionMaki ng	-.059	-.164	.174	-.014	-.163	.000	.000				
EO	-.026	.027	.133	.064	-.091	.000	.000	.00 0			
FirmGrowth	.024	.243	.048	.078	.042	.000	.000	.00 0	.000		
IndustryClust er	.046	.018	.107	.031	.042	.000	.000	.00 0	.000	.000	
RED	.043	.167	.054	.064	.122	.067	-.027	.01 8	.067	.009	.086

Standardized Residual Covariances (Group number 1 - Default model)

	InduClus	FirmSize	GeoDist	NatureBus	FirmAge	TMTSocap	DecisionMaking	EO	FirmGrowth	IndustryCluster	RED
InduClus	.000										
FirmSize	-.252	.143									
GeoDist	-.051	.123	.006								
NatureBus	-.731	2.061	1.897	.000							
FirmAge	-.350	.132	.031	3.197	.000						
TMTSocap	1.083	3.592	.787	.213	2.490	.000					
DecisionMaking	-.901	-2.278	2.044	-.280	-1.164	.000	.000				
EO	-.422	.393	1.670	1.382	-.695	.000	.000	.000			
FirmGrowth	.392	3.592	.607	1.684	.318	.000	.000	.000	.000		
IndustryCluster	.652	.234	1.167	.584	.279	.000	.000	.000	.000	.000	
RED	.647	2.218	.621	1.260	.849	.607	-.297	.198	.719	.080	.675

Standardised direct effects with Bootstrapping

Standardized Total Effects - Two Tailed Significance (BC) (Group number 1 - Default model)

	InduClus	FirmSize	GeoDist	NatureBus	FirmAge	TMTSocap	DecisionMaking	EO	FirmGrowth	IndustryCluster
FirmGrowth	...	...	...	...	...	.001	.001	.001	...	...
IndustryCluster	...	...	...	...	...	.001	.801	.002	...	...
RED	.993	.001	.074	.360	.107	.001	.001	.002	.001	.001

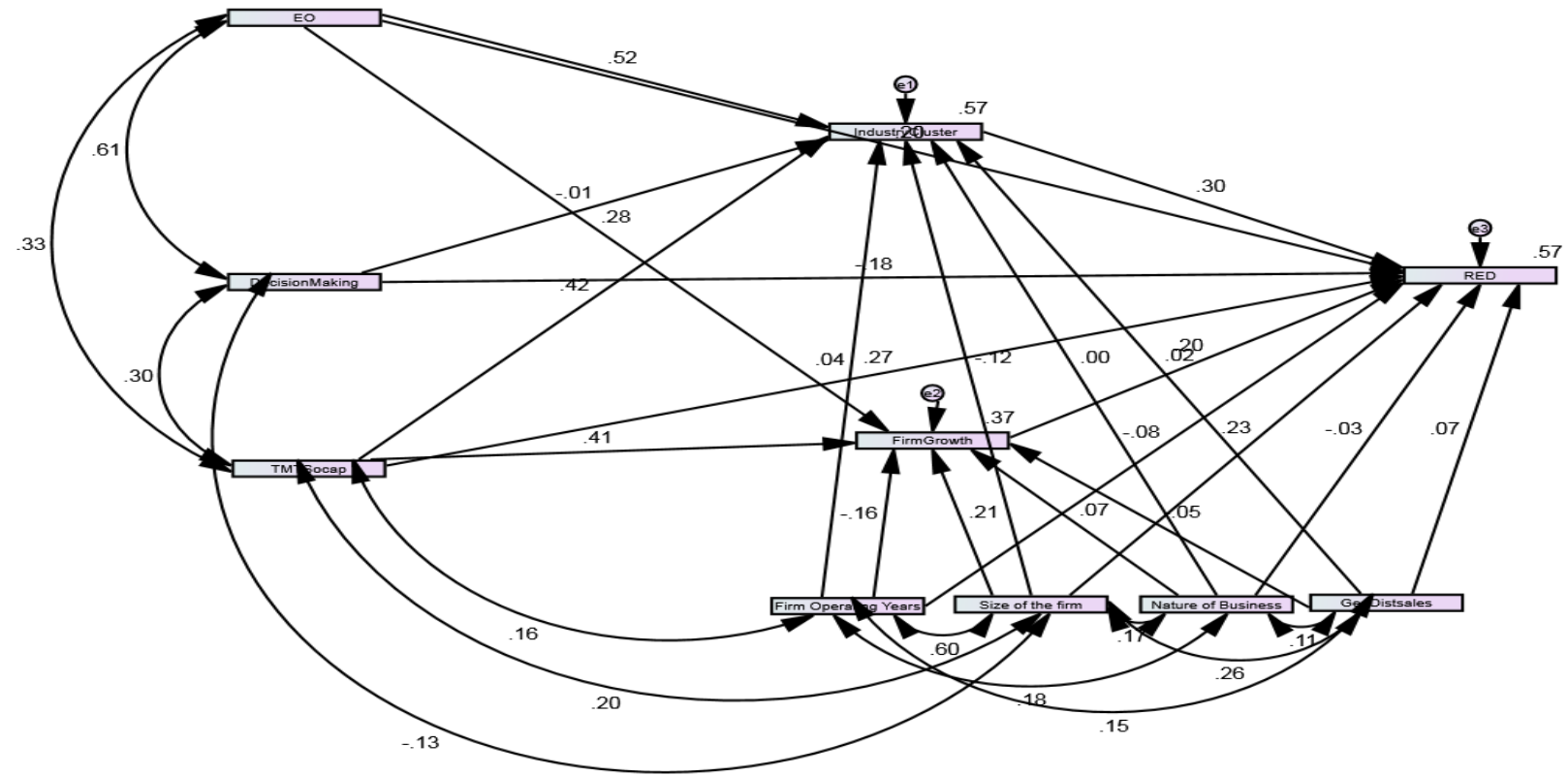
Standardised indirect effects with Bootstrapping

Standardized Indirect Effects - Two Tailed Significance (BC) (Group number 1 - Default model)

	InduClus	FirmSize	GeoDist	NatureBus	FirmAge	TMTSocap	DecisionMaking	EO	FirmGrowth	IndustryCluster
FirmGrowth
IndustryCluster
RED001	.006	.001	...	...

APPENDIX 17: EFFECTS OF FAMILY INVOLVEMENT ON THE RELATIONSHIP BETWEEN FIRM-LEVEL STRATEGIC BEHAVIOURS AND REGIONAL DEVELOPMENT DIMENSIONS

Appendix 17 (a): Measurement Model



Measurement Model Fit Summary

RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	.062	.986	.925	.179
Saturated model	.000	1.000		
Independence model	.448	.541	.439	.443

Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.981	.914	.996	.979	.995
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.018	.000	.029	1.000
Independence model	.124	.120	.128	.000

Scalar Estimates –Maximum Likelihood Estimates

Regression Weights: (All - Default model)

	Estimate	S.E.	C.R.	P	Label
FirmGrowth <--- GeoDist	-.005	.042	-.130	.897	par_7
IndustryCluster <--- GeoDist	.024	.043	.560	.575	par_8
FirmGrowth <--- NatureBus	.081	.070	1.151	.250	par_9
IndustryCluster <--- NatureBus	-.006	.073	-.079	.937	par_11
FirmGrowth <--- FirmSize	.141	.062	2.260	.024	par_12
IndustryCluster <--- FirmSize	-.150	.065	-2.324	.020	par_13
IndustryCluster <--- FirmAge	.030	.032	.934	.350	par_15
FirmGrowth <--- FirmAge	-.080	.031	-2.590	.010	par_17
IndustryCluster <--- TMTSocap	.412	.041	10.037	***	par_25

			Estimate	S.E.	C.R.	P	Label
FirmGrowth	<---	EO	.488	.054	9.004	***	par_28
IndustryCluster	<---	EO	.603	.056	10.767	***	par_29
IndustryCluster	<---	DecisionMaking	-.014	.053	-.268	.789	par_30
FirmGrowth	<---	TMTSocap	.399	.040	10.030	***	par_31
FirmGrowth	<---	DecisionMaking	-.347	.051	-6.757	***	par_35
RED	<---	EO	.218	.069	3.176	.001	par_1
RED	<---	DecisionMaking	-.187	.054	-3.434	***	par_2
RED	<---	TMTSocap	.261	.051	5.165	***	par_3
RED	<---	IndustryCluster	.288	.055	5.268	***	par_4
RED	<---	FirmGrowth	.218	.056	3.867	***	par_5
RED	<---	GeoDist	.070	.041	1.692	.091	par_6
RED	<---	NatureBus	-.057	.070	-.825	.409	par_10
RED	<---	FirmSize	.291	.063	4.634	***	par_14
RED	<---	FirmAge	-.051	.031	-1.669	.095	par_16

Standardized Regression Weights: (All - Default model)

			Estimate
FirmGrowth	<---	GeoDist	-.006
IndustryCluster	<---	GeoDist	.022
FirmGrowth	<---	NatureBus	.050
IndustryCluster	<---	NatureBus	-.003
FirmGrowth	<---	FirmSize	.127
IndustryCluster	<---	FirmSize	-.116
IndustryCluster	<---	FirmAge	.044
FirmGrowth	<---	FirmAge	-.139
IndustryCluster	<---	TMTSocap	.416
FirmGrowth	<---	EO	.490
IndustryCluster	<---	EO	.521
IndustryCluster	<---	DecisionMaking	-.013
FirmGrowth	<---	TMTSocap	.468
FirmGrowth	<---	DecisionMaking	-.373
RED	<---	EO	.195
RED	<---	DecisionMaking	-.178
RED	<---	TMTSocap	.273
RED	<---	IndustryCluster	.298
RED	<---	FirmGrowth	.195
RED	<---	GeoDist	.066
RED	<---	NatureBus	-.031
RED	<---	FirmSize	.233
RED	<---	FirmAge	-.080

Covariances: (All - Default model)

			Estimate	S.E.	C.R.	P	Label
EO	<-->	DecisionMaking	.859	.094	9.144	***	par_18
EO	<-->	TMTSocap	.505	.091	5.533	***	par_19
DecisionMaking	<-->	TMTSocap	.492	.098	5.046	***	par_20
FirmSize	<-->	FirmAge	1.228	.135	9.087	***	par_21
NatureBus	<-->	FirmSize	.120	.041	2.972	.003	par_22
GeoDist	<-->	NatureBus	.093	.049	1.883	.060	par_23
GeoDist	<-->	FirmSize	.320	.071	4.507	***	par_24
NatureBus	<-->	FirmAge	.258	.081	3.199	.001	par_26
GeoDist	<-->	FirmAge	.353	.138	2.570	.010	par_27
TMTSocap	<-->	FirmSize	.274	.073	3.734	***	par_32
DecisionMaking	<-->	FirmSize	-.160	.046	-3.477	***	par_33
TMTSocap	<-->	FirmAge	.433	.142	3.043	.002	par_34

Correlations: (All - Default model)

			Estimate
EO	<-->	DecisionMaking	.606
EO	<-->	TMTSocap	.326
DecisionMaking	<-->	TMTSocap	.297
FirmSize	<-->	FirmAge	.598
NatureBus	<-->	FirmSize	.166
GeoDist	<-->	NatureBus	.108
GeoDist	<-->	FirmSize	.256
NatureBus	<-->	FirmAge	.183
GeoDist	<-->	FirmAge	.146
TMTSocap	<-->	FirmSize	.198
DecisionMaking	<-->	FirmSize	-.126
TMTSocap	<-->	FirmAge	.162

Variiances: (All - Default model)

	Estimate	S.E.	C.R.	P	Label
EO	1.324	.107	12.356	***	par_176
DecisionMaking	1.516	.122	12.476	***	par_177
TMTSocap	1.810	.146	12.422	***	par_178
GeoDist	1.466	.119	12.356	***	par_179
NatureBus	.498	.040	12.356	***	par_180
FirmSize	1.062	.085	12.537	***	par_181
FirmAge	3.975	.321	12.374	***	par_182
e1	.766	.062	12.356	***	par_183
e2	.718	.058	12.356	***	par_184
e3	.700	.057	12.356	***	par_185

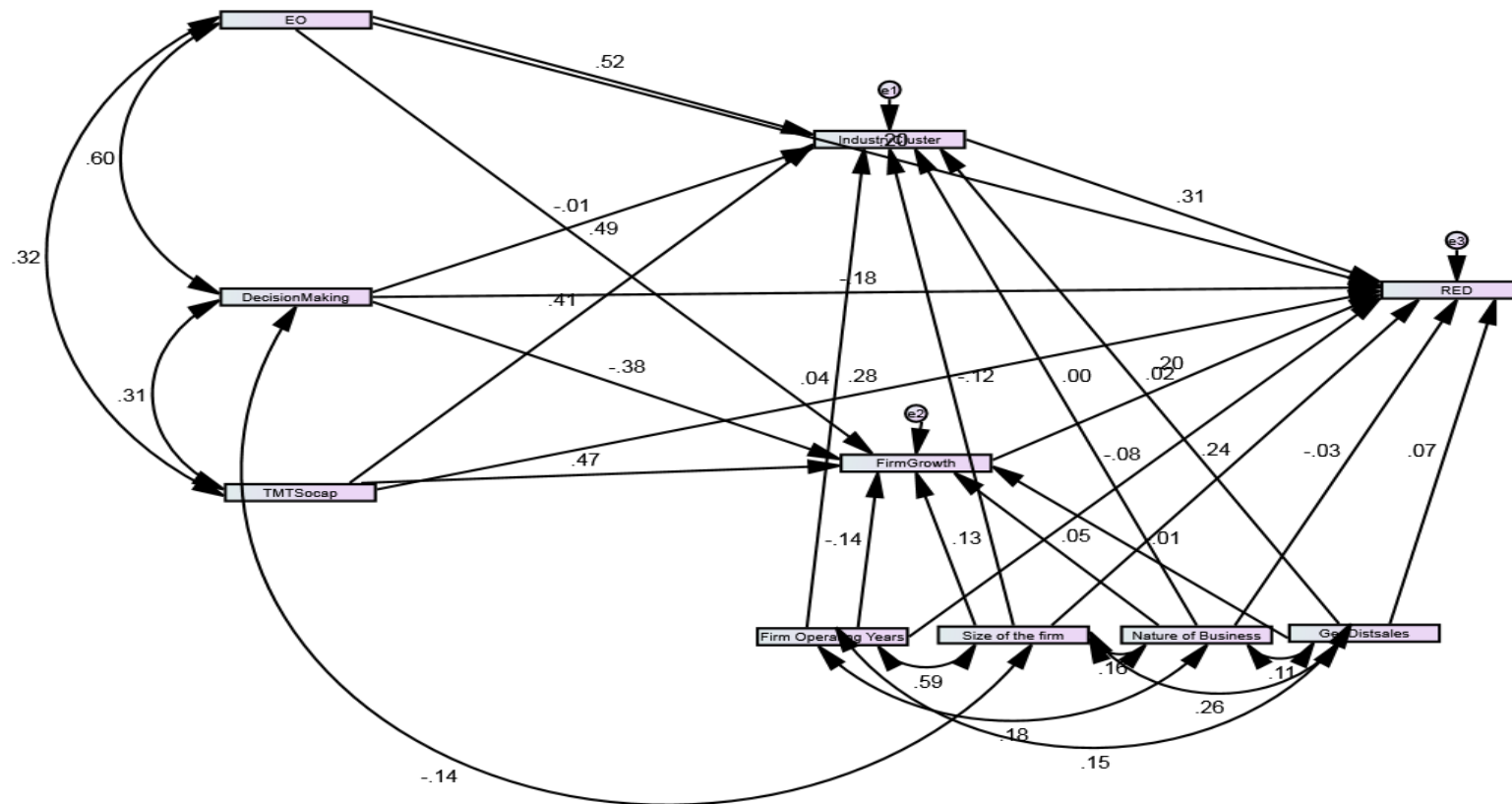
Residual Covariances (All - Default model)

	FirmAge	FirmSize	NatureBus	GeoDist	TMTSocap	DecisionMaking	EO	FirmGrowth	IndustryCluster	RED
FirmAge	.000									
FirmSize	.018	.007								
NatureBus	-.001	.009	.000							
GeoDist	.002	-.013	.000	.000						
TMTSocap	-.053	.009	.012	.073	-.012					
DecisionMaking	-.163	-.004	-.014	.174	-.021	-.010				
EO	-.091	.027	.064	.133	-.010	-.007	.000			
FirmGrowth	-.007	.018	.042	.032	.003	.002	.014	.014		
IndustryCluster	-.077	.019	.042	.110	-.012	-.013	-.008	-.069	-.012	
RED	-.022	.018	.044	.050	.006	.012	.017	-.008	-.006	.007

Standardized Residual Covariances (All - Default model)

	FirmAge	FirmSize	NatureBus	GeoDist	TMTSocap	DecisionMaking	EO	FirmGrowth	IndustryCluster	RED
FirmAge	.000									
FirmSize	.128	.087								
NatureBus	-.011	.205	.000							
GeoDist	.014	-.179	.000	.000						
TMTSocap	-.339	.113	.213	.785	-.080					
DecisionMaking	-1.161	-.056	-.279	2.037	-.208	-.079				
EO	-.695	.393	1.382	1.669	-.111	-.078	.000			
FirmGrowth	-.051	.269	.908	.401	.034	.023	.171	.131		
IndustryCluster	-.506	.241	.787	1.191	-.102	-.124	-.077	-.729	-.086	
RED	-.146	.230	.838	.562	.049	.127	.187	-.079	-.057	.052

Appendix 17 (b): Structural Model



Measurement Model Fit summary

RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	.108	.973	.874	.212
Saturated model	.000	1.000		
Independence model	.448	.541	.439	.443

Baseline Comparisons

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Default model	.961	.852	.978	.913	.977
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

RMSEA

Model	RMSEA	LO 90	HI 90	PCLOSE
Default model	.037	.028	.045	.997
Independence model	.124	.120	.128	.000

Family Involvement is Low

Regression Weights: (FamilyInvLow - Default model)

			Estimate	S.E.	C.R.	P	Label
FirmGrowth	<---	GeoDist	-.038	.047	-.823	.410	par_106
IndustryCluster	<---	GeoDist	-.015	.050	-.303	.762	par_107
FirmGrowth	<---	NatureBus	.092	.075	1.217	.224	par_108
IndustryCluster	<---	NatureBus	.007	.081	.080	.936	par_110
FirmGrowth	<---	FirmSize	.079	.071	1.114	.265	par_111
IndustryCluster	<---	FirmSize	-.061	.076	-.806	.421	par_112
IndustryCluster	<---	FirmAge	-.003	.039	-.069	.945	par_114
FirmGrowth	<---	FirmAge	-.033	.036	-.906	.365	par_116
IndustryCluster	<---	TMTSocap	.356	.048	7.433	***	par_124
FirmGrowth	<---	EO	.596	.068	8.756	***	par_127
IndustryCluster	<---	EO	.675	.073	9.219	***	par_128
IndustryCluster	<---	DecisionMaking	-.035	.071	-.497	.619	par_129
FirmGrowth	<---	TMTSocap	.354	.044	7.964	***	par_130
FirmGrowth	<---	DecisionMaking	-.329	.066	-5.003	***	par_132
RED	<---	EO	.159	.094	1.694	.090	par_100
RED	<---	DecisionMaking	-.162	.072	-2.239	.025	par_101
RED	<---	TMTSocap	.291	.058	5.031	***	par_102
RED	<---	IndustryCluster	.298	.067	4.475	***	par_103
RED	<---	FirmGrowth	.171	.072	2.379	.017	par_104
RED	<---	GeoDist	.083	.049	1.708	.088	par_105
RED	<---	NatureBus	-.093	.079	-1.187	.235	par_109
RED	<---	FirmSize	.339	.074	4.591	***	par_113
RED	<---	FirmAge	-.058	.037	-1.555	.120	par_115

Standardized Regression Weights: (FamilyInvLow - Default model)

			Estimate
FirmGrowth	<---	GeoDist	-.043
IndustryCluster	<---	GeoDist	-.015
FirmGrowth	<---	NatureBus	.063
IndustryCluster	<---	NatureBus	.004
FirmGrowth	<---	FirmSize	.076
IndustryCluster	<---	FirmSize	-.050
IndustryCluster	<---	FirmAge	-.004
FirmGrowth	<---	FirmAge	-.059
IndustryCluster	<---	TMTSocap	.376
FirmGrowth	<---	EO	.556
IndustryCluster	<---	EO	.540
IndustryCluster	<---	DecisionMaking	-.030
FirmGrowth	<---	TMTSocap	.437

			Estimate
FirmGrowth	<---	DecisionMaking	-.327
RED	<---	EO	.133
RED	<---	DecisionMaking	-.143
RED	<---	TMTSocap	.319
RED	<---	IndustryCluster	.310
RED	<---	FirmGrowth	.152
RED	<---	GeoDist	.083
RED	<---	NatureBus	-.057
RED	<---	FirmSize	.290
RED	<---	FirmAge	-.094

Covariances: (FamilyInvLow - Default model)

			Estimate	S.E.	C.R.	P	Label
EO	<-->	DecisionMaking	.670	.090	7.462	***	par_117
EO	<-->	TMTSocap	.498	.103	4.834	***	par_118
DecisionMaking	<-->	TMTSocap	.553	.108	5.100	***	par_119
FirmSize	<-->	FirmAge	1.317	.170	7.733	***	par_120
NatureBus	<-->	FirmSize	.190	.056	3.369	***	par_121
GeoDist	<-->	NatureBus	.126	.066	1.923	.055	par_122
GeoDist	<-->	FirmSize	.359	.092	3.883	***	par_123
NatureBus	<-->	FirmAge	.370	.109	3.412	***	par_125
GeoDist	<-->	FirmAge	.388	.173	2.240	.025	par_126
DecisionMaking	<-->	FirmSize	-.173	.050	-3.467	***	par_131

Correlations: (FamilyInvLow - Default model)

			Estimate
EO	<-->	DecisionMaking	.590
EO	<-->	TMTSocap	.354
DecisionMaking	<-->	TMTSocap	.369
FirmSize	<-->	FirmAge	.620
NatureBus	<-->	FirmSize	.235
GeoDist	<-->	NatureBus	.134
GeoDist	<-->	FirmSize	.273
NatureBus	<-->	FirmAge	.242
GeoDist	<-->	FirmAge	.157
DecisionMaking	<-->	FirmSize	-.148

Variances: (FamilyInvLow - Default model)

	Estimate	S.E.	C.R.	P	Label
EO	1.067	.104	10.243	***	par_196
DecisionMaking	1.211	.116	10.393	***	par_197
TMTSocap	1.856	.181	10.243	***	par_198
GeoDist	1.530	.149	10.243	***	par_199
NatureBus	.583	.057	10.243	***	par_200
FirmSize	1.126	.108	10.399	***	par_201
FirmAge	4.006	.391	10.243	***	par_202
e1	.743	.073	10.243	***	par_203
e2	.642	.063	10.243	***	par_204
e3	.694	.068	10.243	***	par_205

Residual Covariances (FamilyInvLow - Default model)

	Firm Age	Firm Size	NatureBus	Geo Dist	TMT Socap	Decision Making	E O	FirmGrowth	Industry Cluster	RED
FirmAge	.000									
FirmSize	.024	.011								
NatureBus	.000	.008	.000							
GeoDist	.000	.018	.000	.000						
TMTSocap	.674	.444	.012	.044	.000					
Decision Making	.099	.103	-.018	.137	-.061	-.061				
EO	.166	.110	.029	.093	.000	-.038	.000			
FirmGrowth	.175	.191	.028	.025	.033	-.020	.026	.044		
Industry Cluster	.130	.228	.024	.075	-.027	-.054	.006	-.090	-.027	
RED	.263	.231	.026	.026	.121	.020	.000	.051	.050	.1

	Firm Age	Firm Size	NatureBus	Geo Dist	TMT Socap	Decision Making	EO	FirmGrowth	Industry Cluster	RED
							61			28

Standardized Residual Covariances (FamilyInvLow - Default model)

	Firm Age	Firm Size	NatureBus	Geo Dist	TMT Socap	Decision Making	EO	FirmGrowth	Industry Cluster	RED
FirmAge	.000									
FirmSize	.141	.101								
NatureBus	.000	.141	.000							
GeoDist	.000	-.190	.000	.000						
TMT Socap	3.584	4.455	.173	.380	.000					
Decision Making	-.649	1.266	-.304	1.456	-.555	-.514				
EO	-.1160	1.456	.526	1.059	.000	-.419	.000			
FirmGrowth	1.144	2.346	.477	.264	.279	-.235	.289	.372		
Industry Cluster	.731	2.415	.351	.681	-.198	-.502	-.056	-.834	-.169	
RED	1.528	2.459	.392	.245	.904	.211	.627	.479	.392	.851

Family Involvement is high

Regression Weights: (FamilyInvHigh - Default model)

			Estimate	S.E.	C.R.	P	Label
FirmGrowth	<---	GeoDist	.093	.083	1.123	.261	par_139
IndustryCluster	<---	GeoDist	.097	.079	1.228	.219	par_140
FirmGrowth	<---	NatureBus	.053	.164	.324	.746	par_141
IndustryCluster	<---	NatureBus	-.024	.155	-.157	.875	par_143
FirmGrowth	<---	FirmSize	.182	.123	1.484	.138	par_144
IndustryCluster	<---	FirmSize	-.334	.116	-2.873	.004	par_145
IndustryCluster	<---	FirmAge	.144	.053	2.700	.007	par_147
FirmGrowth	<---	FirmAge	-.149	.056	-2.640	.008	par_149
IndustryCluster	<---	TMTSocap	.528	.070	7.586	***	par_157
FirmGrowth	<---	EO	.407	.088	4.610	***	par_160
IndustryCluster	<---	EO	.441	.083	5.283	***	par_161
IndustryCluster	<---	DecisionMaking	.035	.077	.456	.649	par_162
FirmGrowth	<---	TMTSocap	.440	.074	5.980	***	par_163
FirmGrowth	<---	DecisionMaking	-.355	.081	-4.364	***	par_165
RED	<---	EO	.260	.098	2.644	.008	par_133
RED	<---	DecisionMaking	-.203	.081	-2.519	.012	par_134
RED	<---	TMTSocap	.144	.094	1.537	.124	par_135
RED	<---	IndustryCluster	.296	.098	3.021	.003	par_136
RED	<---	FirmGrowth	.356	.093	3.833	***	par_137
RED	<---	GeoDist	.018	.077	.232	.817	par_138
RED	<---	NatureBus	.011	.149	.076	.939	par_142
RED	<---	FirmSize	.211	.117	1.795	.073	par_146
RED	<---	FirmAge	-.046	.055	-.839	.402	par_148

Standardized Regression Weights: (FamilyInvHigh - Default model)

			Estimate
FirmGrowth	<---	GeoDist	.088
IndustryCluster	<---	GeoDist	.081
FirmGrowth	<---	NatureBus	.024
IndustryCluster	<---	NatureBus	-.010
FirmGrowth	<---	FirmSize	.132
IndustryCluster	<---	FirmSize	-.214
IndustryCluster	<---	FirmAge	.192
FirmGrowth	<---	FirmAge	-.224
IndustryCluster	<---	TMTSocap	.497
FirmGrowth	<---	EO	.445
IndustryCluster	<---	EO	.429
IndustryCluster	<---	DecisionMaking	.037
FirmGrowth	<---	TMTSocap	.466

			Estimate
FirmGrowth	<---	DecisionMaking	-.422
RED	<---	EO	.270
RED	<---	DecisionMaking	-.229
RED	<---	TMTSocap	.145
RED	<---	IndustryCluster	.316
RED	<---	FirmGrowth	.336
RED	<---	GeoDist	.016
RED	<---	NatureBus	.005
RED	<---	FirmSize	.144
RED	<---	FirmAge	-.065

Covariances: (FamilyInvHigh - Default model)

			Estimate	S.E.	C.R.	P	Label
EO	<-->	DecisionMaking	1.160	.227	5.108	***	par_150
EO	<-->	TMTSocap	.446	.181	2.465	.014	par_151
DecisionMaking	<-->	TMTSocap	.379	.192	1.980	.048	par_152
FirmSize	<-->	FirmAge	.718	.177	4.056	***	par_153
NatureBus	<-->	FirmSize	-.035	.049	-.705	.481	par_154
GeoDist	<-->	NatureBus	.018	.066	.268	.789	par_155
GeoDist	<-->	FirmSize	.280	.105	2.664	.008	par_156
NatureBus	<-->	FirmAge	.014	.104	.133	.894	par_158
GeoDist	<-->	FirmAge	.359	.217	1.655	.098	par_159
DecisionMaking	<-->	FirmSize	-.191	.092	-2.080	.038	par_164

Correlations: (FamilyInvHigh - Default model)

			Estimate
EO	<-->	DecisionMaking	.604
EO	<-->	TMTSocap	.261
DecisionMaking	<-->	TMTSocap	.204
FirmSize	<-->	FirmAge	.448
NatureBus	<-->	FirmSize	-.071
GeoDist	<-->	NatureBus	.027
GeoDist	<-->	FirmSize	.278
NatureBus	<-->	FirmAge	.014
GeoDist	<-->	FirmAge	.172
DecisionMaking	<-->	FirmSize	-.150

Variances: (FamilyInvHigh - Default model)

	Estimate	S.E.	C.R.	P	Label
EO	1.766	.256	6.909	***	par_206
DecisionMaking	2.089	.299	6.987	***	par_207
TMTSocap	1.658	.240	6.909	***	par_208
GeoDist	1.314	.190	6.909	***	par_209
NatureBus	.312	.045	6.909	***	par_210
FirmSize	.772	.111	6.972	***	par_211
FirmAge	3.326	.481	6.909	***	par_212
e1	.711	.103	6.909	***	par_213
e2	.795	.115	6.909	***	par_214
e3	.653	.095	6.909	***	par_215

Residual Covariances (FamilyInvHigh - Default model)

	Firm Age	Firm Size	NatureBus	Geo Dist	TMT Socap	Decision Making	E O	FirmGrowth	Industry Cluster	RED
FirmAge	.000									
FirmSize	.031	.004								
NatureBus	.000	.014	.000							
GeoDist	.000	-.013	.000	.000						
TMTSocap	-.179	-.029	.009	.126	.000					
Decision Making	-.002	-.032	-.008	.216	.004	.044				
EO	.342	-.023	.140	.186	.000	.034	.000			
FirmGrowth	.067	-.015	.066	.052	.032	.014	.042	-.012		
Industry Cluster	.046	-.025	.061	.160	-.004	.050	.073	-.001	.061	
RED	.107	-.025	.084	.086	.014	.017	-.018	.022	-.022	-.022

	Firm Age	Firm Size	NatureBus	Geo Dist	TMT Socap	Decision Making	EO	FirmGrowth	Industry Cluster	RED
		.017					.016			.012

Standardized Residual Covariances (FamilyInvHigh - Default model)

	Firm Age	Firm Size	NatureBus	Geo Dist	TMT Socap	Decision Making	EO	FirmGrowth	Industry Cluster	RED
FirmAge	.000									
FirmSize	.170	.038								
NatureBus	.000	.282	.000							
GeoDist	.000	-.120	.000	.000						
TMT Socap	-.742	-.247	.120	.829	.000					
Decision Making	-.008	-.239	-.102	1.270	.020	.145				
EO	1.373	-.195	1.837	1.187	.000	.147	.000			
FirmGrowth	.290	-.137	.954	.361	.180	.079	-.244	-.058		
Industry Cluster	.179	-.203	.782	.993	-.019	.226	.337	-.003	.223	
RED	.447	-.147	1.144	.564	.072	.092	-.084	-.097	.107	-.050

Appendix 17 (c): Hypothesis testing when family involvement is high and low

			FamilyInvLow		FamilyInvHigh		z-score
			Estimate	P	Estimate	P	
FirmGrowth	<---	GeoDist	-0.038	0.410	0.093	0.261	1.383
IndustryCluster	<---	GeoDist	-0.015	0.762	0.097	0.219	1.198
FirmGrowth	<---	NatureBus	0.092	0.224	0.053	0.746	-0.214
IndustryCluster	<---	NatureBus	0.007	0.936	-0.024	0.875	-0.176
FirmGrowth	<---	FirmSize	0.079	0.265	0.182	0.138	0.730
IndustryCluster	<---	FirmSize	-0.061	0.421	-0.334	0.004	-1.963**
IndustryCluster	<---	FirmAge	-0.003	0.945	0.144	0.007	2.227**
FirmGrowth	<---	FirmAge	-0.033	0.365	-0.149	0.008	-1.739*
IndustryCluster	<---	TMTSocap	0.356	0.000	0.528	0.000	2.036**
FirmGrowth	<---	EO	0.596	0.000	0.407	0.000	-1.695*
IndustryCluster	<---	EO	0.675	0.000	0.441	0.000	-2.106**
IndustryCluster	<---	DecisionMaking	-0.035	0.619	0.035	0.649	0.672
FirmGrowth	<---	TMTSocap	0.354	0.000	0.440	0.000	0.995
FirmGrowth	<---	DecisionMaking	-0.329	0.000	-0.355	0.000	-0.248
RED	<---	EO	0.159	0.090	0.260	0.008	0.742
RED	<---	DecisionMaking	-0.162	0.025	-0.203	0.012	-0.384
RED	<---	TMTSocap	0.291	0.000	0.144	0.124	-1.334
RED	<---	IndustryCluster	0.298	0.000	0.296	0.003	-0.018
RED	<---	FirmGrowth	0.171	0.017	0.356	0.000	1.577
RED	<---	GeoDist	0.083	0.088	0.018	0.817	-0.721
RED	<---	NatureBus	-0.093	0.235	0.011	0.939	0.622
RED	<---	FirmSize	0.339	0.000	0.211	0.073	-0.926
RED	<---	FirmAge	-0.058	0.120	-0.046	0.402	0.184

Notes: *** p-value < 0.01; ** p-value < 0.05; * p-value < 0.10

Firm EO and Growth and INduCluster

There is a strong positive relationship between firm EO and Firm Growth for both family and nonfamily firms, however there is a significant difference between firms where firms with low family involvement (0.619) have twice as strong as those firms high family involvement (0.384), ($z=0.02058^{**}$)

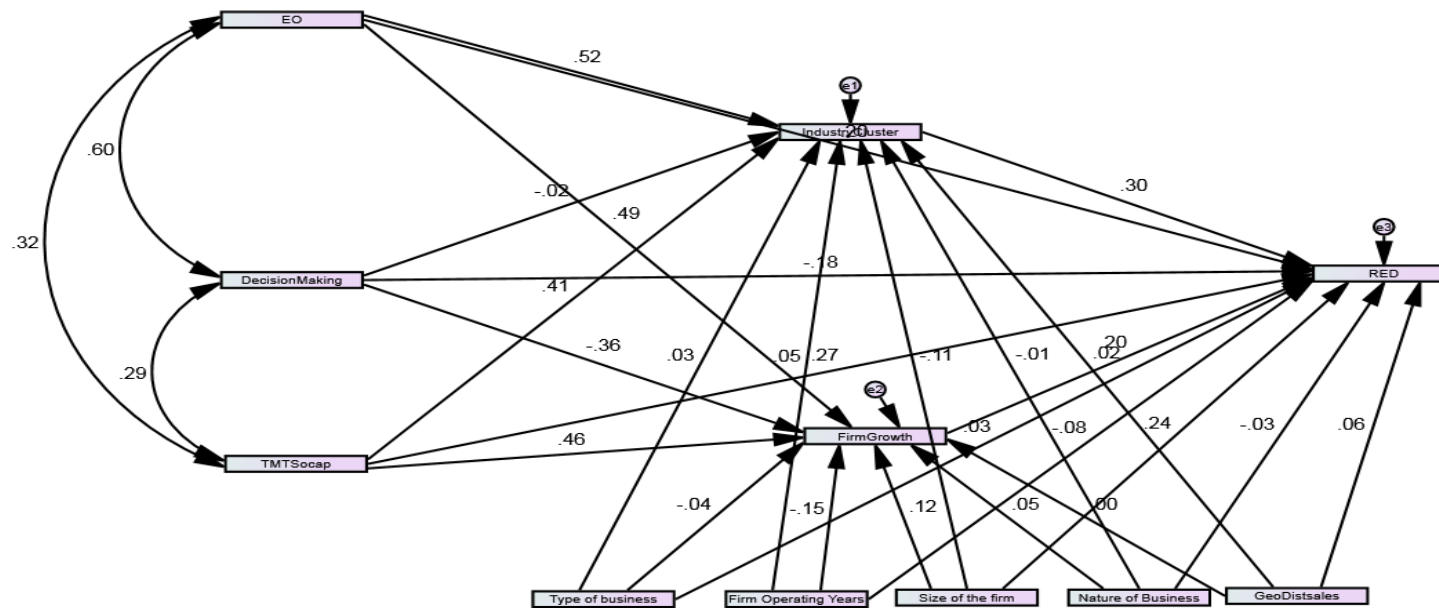
There is a strong positive relationship between firms TMT EO and firm Involvement in Industry cluster, there is a significant difference between firms with low family involvement have twice as a stronger relationship (0.668) compared to that of firms with a high level of family involvement (0.461) where ($z=1.815^*$)

There is a significant difference between firms with high family involvement and those with low family involvement, where TMT with a high family involvement (0.511) the TMT are more likely to engage interpersonal and social networking members twice as higher than those with low family involvement (0.338) within the firms ($Z=1.979^{**}$).

There is a positive relationship between firm growth and RED, this was significantly different as firms with a high family involvement (0.361) contributed twice as much as firms with a low family involvement (0.169), with ($z=1.677^*$)

1 **APPENDIX 18: INTERACTION EFFECTS**

2 Appendix 18 (a) Iteration model

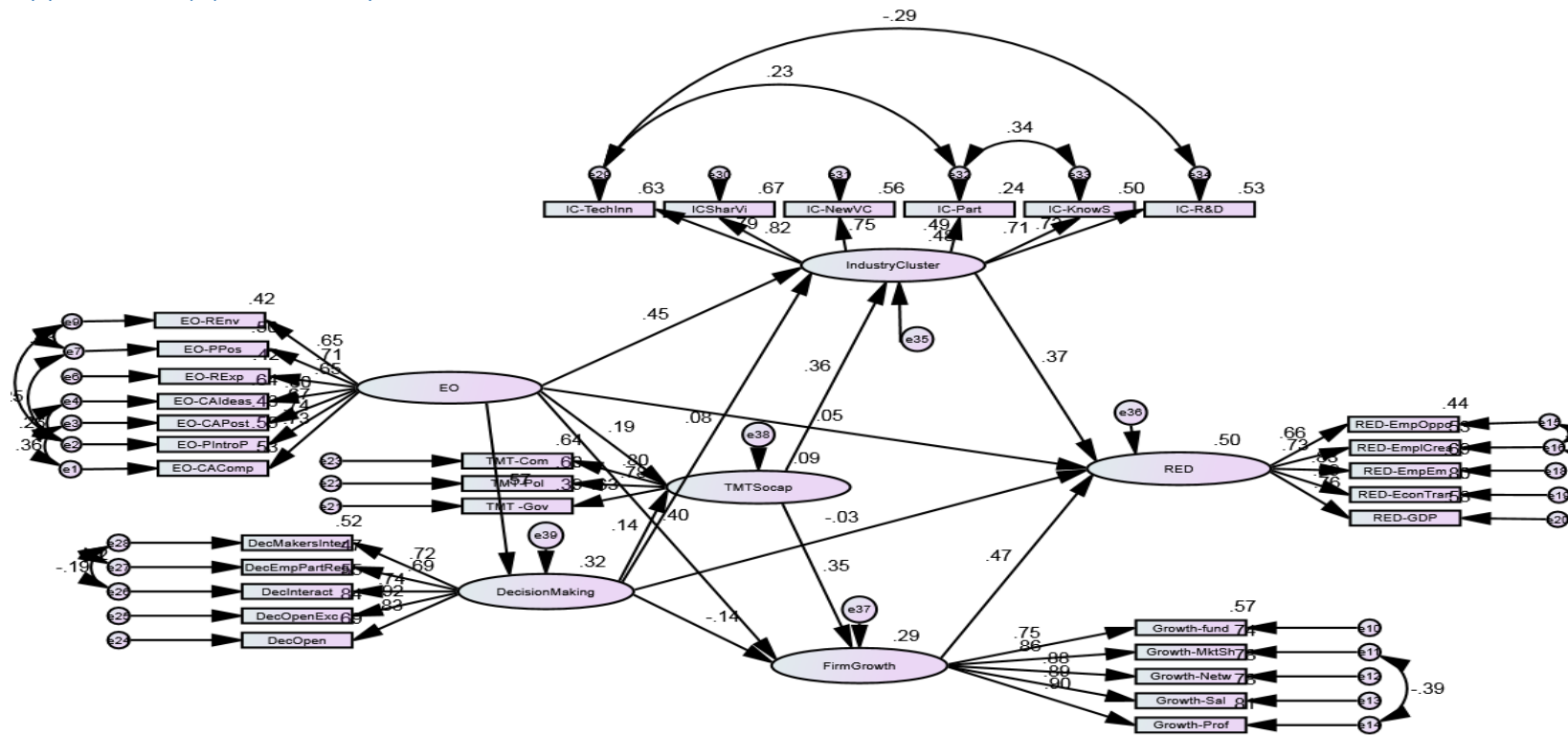


3

4

5

6 Appendix 18 (b): Path Analysis



7

The moderation effects of the Independent Variables (Moderation-Interactions effects)

IndustryCluster	<---	DecMak_TMTSocap	.012	.065	.181	.856	par_41
FirmGrowth	<---	DecMak_TMTSocap	-.174	.063	-2.752	.006	par_42
IndustryCluster	<---	EO_TMTSocap	-.147	.062	-2.393	.017	par_43
FirmGrowth	<---	EO_TMTSocap	.109	.060	1.800	.072	par_44
RED	<---	IndustryCluster	.278	.056	5.003	***	par_1
RED	<---	FirmGrowth	.221	.057	3.892	***	par_2
RED	<---	FirmAge	-.052	.030	-1.720	.085	par_3
RED	<---	NatureBus	-.061	.068	-.894	.371	par_4
RED	<---	GeoDist	.065	.041	1.587	.113	par_5
RED	<---	FirmSize	.297	.060	4.950	***	par_7
RED	<---	InduClus	-.002	.052	-.030	.976	par_8
RED	<---	EO	.223	.074	3.012	.003	par_15
RED	<---	TMTSocap	.260	.050	5.200	***	par_16
RED	<---	DecisionMaking	-.179	.057	-3.167	.002	par_17
RED	<---	EO_TMTSocap	-.071	.060	-1.184	.236	par_45
RED	<---	DecMak_TMTSocap	.029	.063	.457	.648	par_46
RED	<---	EO_DecMak	.012	.042	.281	.779	par_47

Regression Weights: (All - Default model)

			Estimate	S.E.	C.R.	P	Label
FirmGrowth	<---	EO	.540	.056	9.613	***	par_18
IndustryCluster	<---	EO	.622	.057	10.840	***	par_19
FirmGrowth	<---	DecisionMaking	-.368	.048	-7.740	***	par_20
IndustryCluster	<---	DecisionMaking	.058	.049	1.203	.229	par_21
FirmGrowth	<---	TMTSocap	.390	.039	10.041	***	par_22
IndustryCluster	<---	TMTSocap	.372	.040	9.395	***	par_23
IndustryCluster	<---	EO_DecMak	.111	.037	2.981	.003	par_37
FirmGrowth	<---	EO_DecMak	.049	.037	1.354	.176	par_38
IndustryCluster	<---	DecMak_TMTSocap	.012	.064	.182	.856	par_39
FirmGrowth	<---	DecMak_TMTSocap	-.174	.063	-2.761	.006	par_40
IndustryCluster	<---	EO_TMTSocap	-.147	.062	-2.393	.017	par_41
FirmGrowth	<---	EO_TMTSocap	.109	.060	1.800	.072	par_42
RED	<---	IndustryCluster	.278	.056	5.003	***	par_1
RED	<---	FirmGrowth	.221	.057	3.892	***	par_2
RED	<---	FirmAge	-.052	.030	-1.720	.085	par_3
RED	<---	NatureBus	-.061	.068	-.894	.371	par_4
RED	<---	GeoDist	.065	.041	1.587	.113	par_5
RED	<---	FirmSize	.297	.060	4.950	***	par_7
RED	<---	InduClus	-.002	.052	-.030	.976	par_8
RED	<---	EO	.223	.074	3.012	.003	par_15
RED	<---	TMTSocap	.260	.050	5.217	***	par_16
RED	<---	DecisionMaking	-.179	.051	-3.498	***	par_17
RED	<---	EO_TMTSocap	-.071	.060	-1.184	.236	par_43
RED	<---	DecMak_TMTSocap	.029	.063	.458	.647	par_44
RED	<---	EO_DecMak	.012	.037	.319	.750	par_45

APPENDIX 19: RESEARCH PAPER ABSTRACTS

How does national culture enable or constrain entrepreneurship? Exploring the role of Harambee in Kenya

Abstract:

Purpose

The purpose of this paper is to conceptualise how various value dimensions of Harambee, the Kenyan culture, affect the fostering of entrepreneurial behaviours. Theoretically, we draw upon perspectives that view culture as a toolkit and use cultural variables provided by Hofstede to examine the links between national culture and entrepreneurial endeavours in an African context.

Design/methodology/approach

The paper is based on review and synthesis of accessible secondary sources (published research, country-specific reports, policy documents, firm-level empirical evidences, etc.) on the topic and related areas to understand and advance research propositions on the link between enterprising efforts and national culture specific to the Kenyan context.

Findings

Several theoretical propositions are offered on themes of collective reliance, social responsibility, enterprising, resource mobilisation and political philanthropy to establish relationships, both positive and negative, between values of Harambee and entrepreneurial behaviours. Further, the study provides initial insights into how actors blend both collectivistic and emergent individualistic orientations and display collective identity in the process of mobilising resources and engaging in entrepreneurship.

Research limitations/implications

The conceptual framework presented bears a considerable relevance to the advancing theory, policy and practice associated with the national culture and entrepreneurial behaviour in the African context and has potential to generate valuable insights.

Originality/value

This original study provides a springboard for studying the relationship between African cultural context and entrepreneurial behaviours.

Keywords:

[Kenya](#), [Toolkit](#), [Entrepreneurship](#), [National culture](#), [Harambee](#)

Where less is more: institutional voids and business families in Sub-Saharan Africa

Abstract:

Purpose

The purpose of this paper is to offer a conceptual interpretation of the role business families play in the institutional context of sub-Saharan Africa, characterised by voids within the formal institutional setting. Responding to calls to take a holistic perspective of the institutional environment, we develop a conceptual model, showcasing the emergence of relational familial logics within business families that enable these enterprising organisations to navigate the political, economic and socio-cultural terrain of this institutional context.

Design/methodology/approach

The authors undertake a review of extant literature on institutional theory, institutional voids, family business and business families and examine the relevance of these theoretical constructs in relation to the institutional environment of Sub-Saharan Africa. The authors offer tentative propositions within our conceptualisation, which the authors discuss in an inductive fashion.

Findings

The review underlines the relevance of informal political, economic and socio-cultural institutions within the sub-Saharan context, within which the family as an institution drives business families engagement in institutional entrepreneurship. In doing so, the authors argue business families are best positioned to navigate the existing Sub-Saharan African institutional context. The authors underline the critical relevance of the embeddedness of social relationships that underpin relational familial logic within the sub-Saharan African collectivist socio-cultural system.

Originality/value

By challenging the assumptions that institutional voids are empty spaces devoid of institutions, the authors offer an alternative view that institutional voids are spaces where there exists a misalignment of formal and informal institutions. The authors argue that in such contexts within Sub-Saharan Africa, business families are best placed to harness their embeddedness within extended family and community for entrepreneurial activity. The authors argue that family and business logics may complement each other rather than compete. The discussions and propositions have implications for future research on business families and more inclusive forms of family organisations.

Keywords: [Institutional theory](#), [Family firms](#), [Sub-Saharan Africa](#), [Institutions](#), [Institutional voids](#)

Do Family and Nonfamily Firms Contribute differently to Regional Economic Development? Exploring Some Underlying Firms Behaviours

Abstract

Drawing on entrepreneurial orientation (EO), family business, strategic decision-making (SDM) and social capital (SC) literatures, we investigated whether the family and non-family firms contribute differently to regional economic development (RED). Using survey research design and data from 307 Kenyan firms, the findings of the study showed that: a) Firms' EO positively influences RED, but the effect of family firms' EO on RED is twice that of nonfamily firms; b) the relationship between strategic decision-making and RED is negative and this is more pronounced in family firms than nonfamily firms; c) Bridging social capital's (BSC) influence on firms' contributions to RED is positive, but nonfamily firms' BSC effect is twice that of family firms; d) family involvement moderates the effects of firms' contribution to RED. The overall conclusion of this study is that better understanding of firms' effect on RED can be achieved by using a range of theories in combination, as such use would help to unpack the underlying mechanisms through which firms influence RED. Finally, theoretical and practical implications are discussed.

Keywords: decision-making; entrepreneurial orientation; firms; family involvement; regional economic development; social capital